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DOCUMENT # 95-PCA-365

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SECTION 2 OF 2

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DATA VALIDATION REPORT
for
RCRA Closure of 304 Concretion Facility
SDG LK3706-LAS-030
LATA VW403.28

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

April 21, 1995

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Table of Contents

RCRA Closure of 304 Concretion Facility
Data Validation Narrative

INTRODUCTION

All samples in Sample Delivery Group (SDG) LK3706-LAS-030 (VW403.28) were validated at level "D" as defined in the Data Validation Procedures for Chemical Analysis (WHC-SD-EN-SPP-002) and/or Data Validation Procedures for Radiochemical Analyses (WHC-SD-EN-SPP-001).

The analyses were performed by Lockheed Analytical Services.

ANALYSES REQUESTED

See Table 1

DATA QUALITY OBJECTIVES

Precision: Goals for precision were met.

Accuracy: Goals for accuracy were met with the exception of those items discussed in the "**Qualification Summary Table**".

Sample Result Verification: All sample results were supported in the raw data.

Detection Limits: Detection limits goals were met for all sample results as specified in the *Phase I Sampling and Analysis for the 304 Concretion Facility Closure Activity*, WHC-SD-EN-AP-177, Rev. 1.

Completeness: The data package was 100% complete for all requested analyses.

Data qualifiers are assigned to any results that have been determined to be deficient. These are discussed in the Qualification Summary Table.

Table 1
Chain-of-Custody
Analysis Request

LATA ID #: VW403.28 SDG: LK3706-LAS-030

Sample Information							Analyses Requested								
SAMPLE NO.	DATE COLLECTED	MATRIX	SAF	SAMPLING LOCATION	QC INFO[1]	TEMP °C	1	2	3	4	5	6	7	8	9
B0D290	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2								X	
B0D291	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2								X	
B0D292	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2								X	
B0D293	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2								X	
B0D294	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2								X	
B0D295	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2								X	
B0D296	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2								X	
B0D297	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2								X	
B0D298	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2								X	
B0D2B1	23-Jan-95	SOLIDS	94-402	S EXPANSION JOINT		3°C	X	X	X	X	X	X	X	X	X
B0D2B3	23-Jan-95	SOLIDS	94-402	S EXPANSION JOINT		3°C	X	X	X	X	X	X	X	X	X
B0D2B5	25-Jan-95	SOLIDS	94-402	S EXTENSION JOINT		NOTE 3	X	X	X	X	X	X	X	X	X
B0D2B8	25-Jan-95	SOLIDS	94-402	S EXTENSION JOINT		NOTE 3	X	X	X	X	X	X	X	X	X
B0D2B9	25-Jan-95	SOLIDS	94-402	S EXTENSION JOINT		NOTE 3	X	X	X	X	X	X	X	X	X
B0D2F0	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2	X	X	X	X	X	X	X		
B0D2F1	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2	X	X	X	X	X	X	X		
B0D2F2	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2	X	X	X	X	X	X	X		
B0D2F3	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2	X	X	X	X	X	X	X		
B0D2F4	19-Jan-95	SOLIDS	94-402	SOIL 1		NOTE 2	X	X	X	X	X	X	X		
B0D2F5	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2	X	X	X	X	X	X	X		
B0D2F6	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2	X	X	X	X	X	X	X		
B0D2F7	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2	X	X	X	X	X	X	X		
B0D2F8	19-Jan-95	SOLIDS	94-402	SOIL 6		NOTE 2	X	X	X	X	X	X	X		

Method References:

	Analysis	Method
1.	ICP Metals - TAL	6010
2.	Arsenic	7060
3.	Lead	7421
4.	Selenium	7740
5.	Thallium	7841
6.	Mercury	7471
7.	Total Uranium	LAL-91-0168
8.	VOA (ethyl acetate, methyl ethyl ketone)	8240
9.	VOA	8260

NOTE 1: There were no QC samples identified in this SDG.

NOTE 2: There were two coolers in this login batch (L3689) received at 2° and 14°C. There is no way to identify which samples were received at which temperature from the COC and "Sample Check-in List".

NOTE 3: There were two coolers in this login batch (L3748) received at 2° and 15° C. There is no way to identify which samples were received at which temperature from the COC and "Sample Check-in List".

REFERENCES

EPA July 1992, *Test Methods for Evaluating Solid Waste (SW-846)*, Third Edition; U.S. Environmental Protection Agency, Washington, D.C.

WHC 1993, *Data Validation Procedures for Chemical Analyses*, WHC-SD-EN-SPP-002, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

WHC 1993, *Data Validation Procedures for Radiochemical Analyses*, WHC-SD-EN-SPP-001, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

WHC 1994, *Phase I Sampling and Analysis for the 304 Concretion Facility Closure Activity*, WHC-SD-EN-AP-177, Rev. 1., Westinghouse Hanford Company, Richland, Washington.

GLOSSARY OF VALIDATION APPLIED QUALIFIERS (CHEMISTRY)

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows.

U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ- Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a QC deficiency identified during data validation, the associated quantitation limit is an estimate.

J- Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate, but the data are usable for decision making purposes.

BJ- Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R- Indicates the compound or analyte was analyzed for, detected, and due to an identified QC deficiency the data are unusable.

UR- Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data are unusable due to an identified QC deficiency.

JN- Indicates a tentatively identified compound (TIC) that has been determined to be valid in terms of identification and quantitation.

UJN- Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.

NJ- Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific application (i.e., usable for decision making purposes).

N- Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision making purposes).

GLOSSARY OF VALIDATION APPLIED QUALIFIERS (RADIOCHEMISTRY)

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows.

U- The constituent was analyzed for, but was not detected. The value reported is the minimum detectable activity (MDA) corrected for sample dilution and moisture content by the laboratory. The data should be considered usable for decision making purposes.

UJ- The constituent was analyzed for, but was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDA. The data should be considered usable for decision making purposes.

J- Indicates a constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during validation. The data should be considered usable for decision making purposes.

R- Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision making purposes.

UR- Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision making purposes.

GLOSSARY OF LABORATORY APPLIED QUALIFIERS

Qualifiers which may be applied by the laboratory in compliance with applicable requirements are as follows.

Organic Data Qualifiers

U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

J- Indicates an estimated value. This flag is used when estimating concentrations of tentatively identified compounds (TICs) or when the presence of a TCL compound is confirmed at a concentration of less than the CRQL but greater than the IDL.

N- Indicates presumptive evidence of a compound. This flag is used only by the laboratory for TIC results when the identification is based on a mass spectral library search.

P- This flag is used for pesticide/Aroclor target analytes when there is greater than 25% difference for detected values between the quantitation and confirmation GC columns. The lower of the two concentrations is reported on the report form and the result is flagged with a "P".

C- This flag applies to pesticide results where the identification has been confirmed by GC/MS. This flag should not be used by the laboratory if GC/MS confirmation was attempted but unsuccessful, in which case, the laboratory should use an "X" flag as defined below. The "X" flag is then defined in the SDG narrative.

B- This flag applies to results in which the analyte was detected in both the sample and the associated blank. The combination of the "B" flag with the "U" flag ("BU" or "UB") is expressly prohibited in the analytical SOW.

E- This flag identifies compounds whose concentrations exceed the calibrated range of the GC/MS instrument.

D- This flag identifies compounds identified in an analysis at a secondary dilution factor.

A- Indicates a TIC which is a suspected aldol-condensate product.

X- This is a non-specific flag used to properly define the results. If used, this flag must be properly defined within the body of the SDG.

GLOSSARY OF LABORATORY APPLIED QUALIFIERS (continued)

Inorganic Qualifiers

U- Indicates the analyte was analyzed for but not detected in the sample.

B- Indicates the analyte concentration is less than the CRDL but greater than the IDL.

E- Indicates the value reported is estimated due to the presence of interference.

M- Indicates duplicate injection precision criteria were not met during graphite furnace (GFAA) analysis.

N- Indicates spiked sample recovery was not within the control limits.

S- Indicates the reported value was determined by the Method of Standard Additions (MSA).

W- Indicates post-digestion spike for GFAA analysis is outside control limits and the sample absorbance is less than 50% of the spike absorbance.

*- Indicates duplicate analysis was not within control limits.

+- Indicates the correlation coefficient (r) for the MSA was less than 0.995.

Qualification Summary Table

Qualification Summary Table

Inorganics (Metals)

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Aluminum	MINOR	J	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	No matrix spike performed.
Calcium	MINOR	J	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	No matrix spike performed.
Iron	MINOR	J	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	No matrix spike performed.
Magnesium	MINOR	J	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	No matrix spike performed.
Potassium	MINOR	J/BJ	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	No matrix spike performed.
Sodium	MINOR	BJ	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	Laboratory control standard recoveries are outside acceptance criteria.
Sodium	MINOR	BJ	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	No matrix spike performed.

Qualification Summary Table

Inorganics (Metals) continued

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Thallium	MINOR	UJ	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	ACCURACY	Matrix spike and/or matrix spike duplicate recoveries are outside acceptance criteria.
Antimony	MINOR	UJ	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	BLANKS	Calibration blank value(s) are negative and outside acceptance criteria.
Cobalt	MINOR	U	B0D2B5, B0D2B8	BLANKS	Calibration blank value(s) are positive and outside acceptance criteria.
Silver	MINOR	UJ	B0D2B1, B0D2B3 B0D2B5, B0D2B8 B0D2B9, B0D2F0 B0D2F1, B0D2F2 B0D2F3, B0D2F4 B0D2F5, B0D2F6 B0D2F7, B0D2F8	BLANKS	Preparation blank value(s) are negative and outside acceptance criteria.

Comments:

1. Any temperature variation noted will not affect the analyses.
2. The mercury digestion and analyses were done in triplicate for these samples. The laboratory did not report a duplicate. Comparison of the first two results is acceptable as a duplicate analysis since different digestions were used.

Radiochemistry

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
No qualifiers applied by the validator					

Comments:

1. The case narrative included with this data package is for SDG # LK3723-LAS-025.
2. The raw data (pgs. 24 -28) included in this package is out of order. This makes it difficult to locate and examine the appropriate sample results.
3. Any temperature variation noted upon sample receipt will not affect the analyses.

Qualification Summary Table

Volatiles by 8240

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
1,1,1-Trichloroethane	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
Carbon Tetrachloride	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
Bromodichloromethane	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
Trichloroethene	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
Dibromochloromethane	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
1,1,2-Trichloroethane	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
Tetrachloroethene	MINOR	J/UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
1,1,2,2-Tetrachloroethane	MINOR	UJ	B0D2B3, B0D290, B0D292, B0D293, B0D294, B0D296, B0D297, B0D298	ACCURACY	Matrix spike and matrix spike duplicate recoveries are outside acceptance criteria.
Acetone	MINOR	U	B0D2B3, B0D2B5	BLANKS	Preparation blank is positive with sample results less than 10 times the blank value.

Volatiles by 8260

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Acetone	MINOR	U	B0D2B1, B0D296	BLANKS	Preparation blank is positive with sample results less than 10 times the blank value.

Comments:

1. An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.
2. VOA results could be biased low for samples in the coolers that were received at 14° and 15° C. No qualifiers were applied as a result of this condition.
3. The analysis of ethyl acetate was requested on the Chain-of-Custody as part of 8240. According to the DSI on page 200 of this report, ethyl acetate was "looked for" as a TIC.

Data Summary Tables

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.28	HEIS #:	B0D2B1		B0D2B3		B0D2B5		B0D2B8		B0D2B9		B0D2F0	
	Date:	23-Jan-95		23-Jan-95		25-Jan-95		25-Jan-95		25-Jan-95		19-Jan-95	
	Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	mg/Kg	6920	J	6530	J	8330	J	8120	J	8010	J	6910	J
Antimony	7440-36-0	mg/Kg	10.2	UJ	11.4	UJ	9.8	UJ	9.8	UJ	10.1	UJ	10.6	UJ
Arsenic	7440-38-2	mg/Kg	3.2		2.7		3.9		3.4		3.7		3.2	
Barium	7440-39-3	mg/Kg	99.3		96.6		106		104		106		71.1	
Beryllium	7440-41-7	mg/Kg	0.38	B	0.33	B	0.40	B	0.38	B	0.37	B	0.28	B
Cadmium	7440-43-9	mg/Kg	1.3		0.76	U	0.69	B	0.65	U	0.90	B	1.0	B
Calcium	7440-70-2	mg/Kg	8650	J	6030	J	5150	J	5500	J	6920	J	3370	J
Chromium	7440-47-3	mg/Kg	19.8		8.5		12.4		11.3		12.8		9.5	
Cobalt	7440-48-4	mg/Kg	131		24.4		9.2	U	8.4	U	32.8		73.3	
Copper	7440-50-8	mg/Kg	136		15.6		15.8		15.2		17.9		21.8	
Iron	7439-89-6	mg/Kg	26200	J	24700	J	25700	J	23700	J	24900	J	18400	J
Lead	7439-92-1	mg/Kg	19.0		6.4		7.5		10.8		108		20.4	
Magnesium	7439-95-4	mg/Kg	3880	J	4410	J	4800	J	4670	J	4680	J	4060	J
Manganese	7439-96-5	mg/Kg	324		308		393		384		386		320	
Mercury	7439-97-6	mg/Kg	0.14		0.13	U	0.10	U	0.11		0.09		0.12	
Nickel	7440-02-0	mg/Kg	89.5		23.3		17.8		15.3		60.3		45.5	
Potassium	7440-09-7	mg/Kg	1110	BJ	894	BJ	1640	J	1650	J	1650	J	1060	BJ
Selenium	7782-49-2	mg/Kg	0.68	U	0.77	U	0.65	U	0.65	U	0.67	U	0.71	U
Silver	7440-22-4	mg/Kg	0.91	UJ	1.0	UJ	0.87	UJ	0.87	UJ	0.90	UJ	0.94	UJ
Sodium	7440-23-5	mg/Kg	552	BJ	580	BJ	508	BJ	543	BJ	558	BJ	506	BJ
Thallium	7440-28-0	mg/Kg	0.90	UJ	1.0	UJ	0.87	UJ	0.86	UJ	0.89	UJ	0.94	UJ
Vanadium	7440-62-2	mg/Kg	52.8		53.9		48.9		45.1		45.8		54.0	
Zinc	7440-66-6	mg/Kg	201		50.9		48.5		45.6		52.1		252	

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.28	HEIS #:	B0D2F1		B0D2F2		B0D2F3		B0D2F4		B0D2F5		B0D2F6	
	Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95	
	Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	mg/Kg	7480	J	7260	J	7400	J	7160	J	8040	J	7170	J
Antimony	7440-36-0	mg/Kg	10.9	UJ	10.8	UJ	10.1	UJ	10	UJ	10.9	UJ	10.0	UJ
Arsenic	7440-38-2	mg/Kg	3.5		2.7		3.2		3.5		3.1		3.1	
Barium	7440-39-3	mg/Kg	91.3		85.2		95.0		85.1		99.5		90.6	
Beryllium	7440-41-7	mg/Kg	0.33	B	0.33	B	0.34	B	0.33	B	0.34	B	0.33	B
Cadmium	7440-43-9	mg/Kg	0.73	U	0.72	U	1.0	B	0.67	U	1.0	B	1.0	B
Calcium	7440-70-2	mg/Kg	3820	J	3780	J	4060	J	3730	J	4100	J	4050	J
Chromium	7440-47-3	mg/Kg	9.8		9.0		8.9		10.2		9.6		11.9	
Cobalt	7440-48-4	mg/Kg	13.5		10.7	B	278		47.8		20.4		70.5	
Copper	7440-50-8	mg/Kg	14.1		13.2		17.0		14.1		17.8		14.7	
Iron	7439-89-6	mg/Kg	18500	J	18600	J	23000	J	21300	J	21800	J	21200	J
Lead	7439-92-1	mg/Kg	5.5		4.9		8.9		5.4		6.8		8.8	
Magnesium	7439-95-4	mg/Kg	4100	J	4030	J	4380	J	4280	J	4350	J	4040	J
Manganese	7439-96-5	mg/Kg	324		332		342		330		342		333	
Mercury	7439-97-6	mg/Kg	0.11	U	0.12		0.12		0.11		0.14		0.12	
Nickel	7440-02-0	mg/Kg	13.8		12.5		15.7		14.2		14.0		11.7	
Potassium	7440-09-7	mg/Kg	1460	J	1320	J	1120	J	1290	J	1530	J	1280	J
Selenium	7782-49-2	mg/Kg	0.73	U	0.71	U	0.67	U	0.67	U	0.73	U	0.67	U
Silver	7440-22-4	mg/Kg	0.97	UJ	0.96	UJ	0.89	UJ	0.89	UJ	0.97	UJ	0.89	UJ
Sodium	7440-23-5	mg/Kg	462	BJ	498	BJ	447	BJ	380	BJ	451	BJ	428	BJ
Thallium	7440-28-0	mg/Kg	0.97	UJ	0.95	UJ	0.89	UJ	0.89	UJ	0.97	UJ	0.89	UJ
Vanadium	7440-62-2	mg/Kg	38.1		39.3		49.8		42.1		41.8		38.3	
Zinc	7440-66-6	mg/Kg	50.7		43.0		164		49.6		48.5		45.8	

Shaded areas indicate changes by the validator.

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.28		HEIS #:	B0D2F7		B0D2F8	
		Date:	19-Jan-95		19-Jan-95	
		Matrix:	SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q
Aluminum	7429-90-5	mg/Kg	6970	J	7790	J
Antimony	7440-36-0	mg/Kg	9.7	UJ	10.1	UJ
Arsenic	7440-38-2	mg/Kg	2.9		4.1	
Barium	7440-39-3	mg/Kg	87.1		104	
Beryllium	7440-41-7	mg/Kg	0.32	B	0.38	B
Cadmium	7440-43-9	mg/Kg	0.65	U	0.68	U
Calcium	7440-70-2	mg/Kg	4400	J	4920	J
Chromium	7440-47-3	mg/Kg	9.8		10.6	
Cobalt	7440-48-4	mg/Kg	204		24.6	
Copper	7440-50-8	mg/Kg	14.1		17.3	
Iron	7439-89-6	mg/Kg	21300	J	23000	J
Lead	7439-92-1	mg/Kg	7.0		6.8	
Magnesium	7439-95-4	mg/Kg	4140	J	4530	J
Manganese	7439-96-5	mg/Kg	342		357	
Mercury	7439-97-6	mg/Kg	0.09	U	0.12	
Nickel	7440-02-0	mg/Kg	12.9		11.8	
Potassium	7440-09-7	mg/Kg	1220	J	1470	J
Selenium	7782-49-2	mg/Kg	0.65	U	0.68	U
Silver	7440-22-4	mg/Kg	0.86	UJ	0.90	UJ
Sodium	7440-23-5	mg/Kg	402	BJ	419	BJ
Thallium	7440-28-0	mg/Kg	0.87	UJ	0.90	UJ
Vanadium	7440-62-2	mg/Kg	41.1		42.3	
Zinc	7440-66-6	mg/Kg	45.5		46.3	

RADIOCHEMISTRY
DATA SUMMARY TABLE

LATA ID#: VW403.28		HEIS #:	B0D2B1		B0D2B3		B0D2B5		B0D2B8		B0D2B9	
		Date:	23-Jan-95		23-Jan-95		25-Jan-95		25-Jan-95		25-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Uranium-Total	7440-61-1	µg/g	256		4.31		83.4		14.0		23.2	

LATA ID#: VW403.28		HEIS #:	B0D2F0		B0D2F1		B0D2F2		B0D2F3		B0D2F4	
		Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Uranium-Total	7440-61-1	µg/g	6.00		0.163		0.0187		0.178		0.0809	

LATA ID#: VW403.28		HEIS #:	B0D2F5		B0D2F6		B0D2F7		B0D2F8	
		Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Uranium-Total	7440-61-1	µg/g	0.497		0.080		1.60		3.28	

VOLATILE ORGANIC
DATA SUMMARY TABLE
METHOD 8240

LATA ID#: VW403.28		HEIS #:	B0D290		B0D291		B0D292		B0D293		B0D294	
		Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Vinyl chloride	75-01-4	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Bromomethane	74-83-9	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Chloroethane	75-00-3	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Trichlorofluoromethane	75-69-4	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Acetone	67-64-1	µg/Kg	12	U	11	J	12	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Carbon disulfide	75-15-0	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Methylene chloride	75-09-2	µg/Kg	5.9	U	6.0	U	5.9	U	1.1	J	5.5	U
Vinyl acetate	108-05-4	µg/Kg	12	U	12	U	12	U	11.0	U	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
2-Butanone	78-93-3	µg/Kg	12	U	12.0	U	12	U	11.0	U	11	U
Chloroform	67-66-3	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
2-Hexanone	591-78-6	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
Carbon tetrachloride	56-23-5	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
1,2-Dichloroethane	107-06-2	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Benzene	71-43-2	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Trichloroethene	79-01-6	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
1,2-Dichloropropane	78-87-5	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Bromodichloromethane	75-27-4	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
2-Chloroethylvinylether	110-75-8	µg/Kg	23	U	24	U	24	U	22	U	22	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	12	U	12	U	12	U	11.0	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Toluene	108-88-3	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
Tetrachloroethene	127-18-4	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	3.2	J	5.5	UJ
Dibromochloromethane	124-48-1	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
Chlorobenzene	108-90-7	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Ethylbenzene	100-41-4	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
m,p-Xylene	1330-20-7	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
o-Xylene	95-47-6	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Styrene	100-42-5	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
Bromoform	75-25-2	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	5.9	UJ	6.0	U	5.9	UJ	5.6	UJ	5.5	UJ
1,3-Dichlorobenzene	541-73-1	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	5.9	U	6.0	U	5.9	U	5.6	U	5.5	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC DATA SUMMARY TABLE METHOD 8240

LATA ID#: VW403.28		HEIS #:	B0D295		B0D296		B0D297		B0D298		B0D2B1	
		Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		23-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Vinyl chloride	75-01-4	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Bromomethane	74-83-9	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Chloroethane	75-00-3	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Trichlorofluoromethane	75-69-4	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Acetone	67-64-1	µg/Kg	12	U	11	U	11	U	11	U	18	
1,1-Dichloroethene	75-35-4	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Carbon disulfide	75-15-0	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Methylene chloride	75-09-2	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Vinyl acetate	108-05-4	µg/Kg	12	U	11	U	11	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
2-Butanone	78-93-3	µg/Kg	12	U	11	U	11	U	11	U	11	U
Chloroform	67-66-3	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
2-Hexanone	591-78-6	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
Carbon tetrachloride	56-23-5	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
1,2-Dichloroethane	107-06-2	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Benzene	71-43-2	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Trichloroethene	79-01-6	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
1,2-Dichloropropane	78-87-5	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Bromodichloromethane	75-27-4	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
2-Chloroethylvinylether	110-75-8	µg/Kg	24	U	22	U	22	U	23	U	22	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	12	U	11	U	11	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Toluene	108-88-3	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
Tetrachloroethene	127-18-4	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
Dibromochloromethane	124-48-1	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
Chlorobenzene	108-90-7	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Ethylbenzene	100-41-4	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
m,p-Xylene	1330-20-7	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
o-Xylene	95-47-6	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Styrene	100-42-5	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
Bromoform	75-25-2	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	6.0	U	5.5	UJ	5.4	UJ	5.6	UJ	5.6	U
1,3-Dichlorobenzene	541-73-1	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	6.0	U	5.5	U	5.4	U	5.6	U	5.6	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC
DATA SUMMARY TABLE
METHOD 8240

LATA ID#: VW403.28		HEIS #:	B0D2B3		B0D2B5		B0D2B8		B0D2B9	
		Date:	23-Jan-95		25-Jan-95		25-Jan-95		25-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Vinyl chloride	75-01-4	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Bromomethane	74-83-9	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Chloroethane	75-00-3	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Trichlorofluoromethane	75-69-4	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Acetone	67-64-1	µg/Kg	13	UJ	11	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Carbon disulfide	75-15-0	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Methylene chloride	75-09-2	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Vinyl acetate	108-05-4	µg/Kg	13	U	11	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
2-Butanone	78-93-3	µg/Kg	13	U	11	U	11	U	11	U
Chloroform	67-66-3	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
2-Hexanone	591-78-6	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
Carbon tetrachloride	56-23-5	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
1,2-Dichloroethane	107-06-2	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Benzene	71-43-2	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Trichloroethene	79-01-6	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
1,2-Dichloropropane	78-87-5	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Bromodichloromethane	75-27-4	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
2-Chloroethylvinylether	110-75-8	µg/Kg	25	U	22	U	22	U	22	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	13	U	11	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Toluene	108-88-3	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
Tetrachloroethene	127-18-4	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
Dibromochloromethane	124-48-1	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
Chlorobenzene	108-90-7	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Ethylbenzene	100-41-4	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
m,p-Xylene	1330-20-7	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
o-Xylene	95-47-6	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Styrene	100-42-5	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
Bromoform	75-25-2	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	6.3	UJ	5.4	U	5.4	U	5.5	U
1,3-Dichlorobenzene	541-73-1	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	6.3	U	5.4	U	5.4	U	5.5	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Shaded areas indicate changes by the validator.

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VOLATILE ORGANIC DATA SUMMARY TABLE METHOD 8260

LATA ID#: VW403.28		HEIS #:	B0D290		B0D291		B0D292		B0D293		B0D293 RE	
		Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	
Chloromethane	74-87-3	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Vinyl chloride	75-01-4	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Bromomethane	74-83-9	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Chloroethane	75-00-3	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Trichlorofluoromethane	75-69-4	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Acetone	67-64-1	µg/Kg	12	U	12	U	12	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Carbon disulfide	75-15-0	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Methylene chloride	75-09-2	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
trans-1,2-Dichloroethene	156-50-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Vinyl acetate	108-05-4	µg/Kg	12	U	12	U	12	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
2-Butanone	78-93-3	µg/Kg	12	U	12	U	12	U	11	U	11	U
cis-1,2-Dichlorethene	156-59-2	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Chloroform	67-66-3	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Carbon tetrachloride	56-23-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,2-Dichloroethane	107-06-2	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Benzene	71-43-2	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Trichloroethene	79-01-6	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,2-Dichloropropane	78-87-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Bromodichloromethane	75-27-4	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	12	U	12	U	12	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Toluene	108-88-3	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Tetrachloroethene	127-18-4	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Dibromochloromethane	124-48-1	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Chlorobenzene	108-90-7	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Ethylbenzene	100-41-4	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
m,p-Xylene	1330-20-7	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
o-Xylene	95-47-6	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Styrene	100-42-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
Bromoform	75-25-2	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,3-Dichlorobenzene	541-73-1	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	6.0	U	6.1	U	5.8	U	5.5	U	5.5	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC
DATA SUMMARY TABLE
METHOD 8260

LATA ID#: VW403.28		HEIS #:	B0D294		B0D294 RE		B0D295		B0D296		B0D297	
		Date:	19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95		19-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Vinyl chloride	75-01-4	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Bromomethane	74-83-9	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Chloroethane	75-00-3	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Trichlorofluoromethane	75-69-4	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Acetone	67-64-1	µg/Kg	11	U	11	U	12	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Carbon disulfide	75-15-0	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Methylene chloride	75-09-2	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
trans-1,2-Dichloroethene	156-50-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Vinyl acetate	108-05-4	µg/Kg	11	U	11	U	12	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
2-Butanone	78-93-3	µg/Kg	11	U	11	U	12	U	11	U	11	U
cis-1,2-Dichlorethene	156-59-2	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Chloroform	67-66-3	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Carbon tetrachloride	56-23-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,2-Dichloroethane	107-06-2	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Benzene	71-43-2	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Trichloroethene	79-01-6	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,2-Dichloropropane	78-87-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Bromodichloromethane	75-27-4	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	11	U	11	U	12	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Toluene	108-88-3	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Tetrachloroethene	127-18-4	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Dibromochloromethane	124-48-1	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Chlorobenzene	108-90-7	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Ethylbenzene	100-41-4	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
m,p-Xylene	1330-20-7	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
o-Xylene	95-47-6	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Styrene	100-42-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
Bromoform	75-25-2	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,3-Dichlorobenzene	541-73-1	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	5.4	U	5.5	U	6.0	U	5.6	U	5.4	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC DATA SUMMARY TABLE METHOD 8260

LATA ID#: VW403.28		HEIS #:	B0D298		B0D2B1		B0D2B3		B0D2B5		B0D2B8	
		Date:	19-Jan-95		23-Jan-95		23-Jan-95		25-Jan-95		25-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Vinyl chloride	75-01-4	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Bromomethane	74-83-9	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Chloroethane	75-00-3	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Trichlorofluoromethane	75-69-4	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Acetone	67-64-1	µg/Kg	11	U	15	U	13	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Carbon disulfide	75-15-0	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Methylene chloride	75-09-2	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
trans-1,2-Dichloroethene	156-50-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Vinyl acetate	108-05-4	µg/Kg	11	U	11	U	13	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
2-Butanone	78-93-3	µg/Kg	11	U	11	U	13	U	11	U	11	U
cis-1,2-Dichlorethene	156-59-2	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Chloroform	67-66-3	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Carbon tetrachloride	56-23-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,2-Dichloroethane	107-06-2	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Benzene	71-43-2	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Trichloroethene	79-01-6	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,2-Dichloropropane	78-87-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Bromodichloromethane	75-27-4	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	11	U	11	U	13	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Toluene	108-88-3	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Tetrachloroethene	127-18-4	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Dibromochloromethane	124-48-1	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Chlorobenzene	108-90-7	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Ethylbenzene	100-41-4	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
m,p-Xylene	1330-20-7	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
o-Xylene	95-47-6	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Styrene	100-42-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
Bromoform	75-25-2	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,3-Dichlorobenzene	541-73-1	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	5.6	U	5.6	U	6.3	U	5.4	U	5.4	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC
DATA SUMMARY TABLE
METHOD 8260

LATA ID#: VW403.28		HEIS #:	B0D2B9	
		Date:	25-Jan-95	
		Matrix:	SOLIDS	
Constituent	CAS #	Units	Results	Q
Chloromethane	74-87-3	µg/Kg	5.6	U
Vinyl chloride	75-01-4	µg/Kg	5.6	U
Bromomethane	74-83-9	µg/Kg	5.6	U
Chloroethane	75-00-3	µg/Kg	5.6	U
Trichlorofluoromethane	75-69-4	µg/Kg	5.6	U
Acetone	67-64-1	µg/Kg	11	U
1,1-Dichloroethene	75-35-4	µg/Kg	5.6	U
Carbon disulfide	75-15-0	µg/Kg	5.6	U
Methylene chloride	75-09-2	µg/Kg	5.6	U
trans-1,2-Dichloroethene	156-50-5	µg/Kg	5.6	U
Vinyl acetate	108-05-4	µg/Kg	11	U
1,1-Dichloroethane	75-34-3	µg/Kg	5.6	U
2-Butanone	78-93-3	µg/Kg	11	U
cis-1,2-Dichlorethene	156-59-2	µg/Kg	5.6	U
Chloroform	67-66-3	µg/Kg	5.6	U
1,1,1-Trichloroethane	71-55-6	µg/Kg	5.6	U
Carbon tetrachloride	56-23-5	µg/Kg	5.6	U
1,2-Dichloroethane	107-06-2	µg/Kg	5.6	U
Benzene	71-43-2	µg/Kg	5.6	U
Trichloroethene	79-01-6	µg/Kg	5.6	U
1,2-Dichloropropane	78-87-5	µg/Kg	5.6	U
Bromodichloromethane	75-27-4	µg/Kg	5.6	U
4-Methyl-2-pentanone	108-10-1	µg/Kg	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	5.6	U
Toluene	108-88-3	µg/Kg	5.6	U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	5.6	U
1,1,2-Trichloroethane	79-00-5	µg/Kg	5.6	U
Tetrachloroethene	127-18-4	µg/Kg	5.6	U
Dibromochloromethane	124-48-1	µg/Kg	5.6	U
Chlorobenzene	108-90-7	µg/Kg	5.6	U
Ethylbenzene	100-41-4	µg/Kg	5.6	U
m,p-Xylene	1330-20-7	µg/Kg	5.6	U
o-Xylene	95-47-6	µg/Kg	5.6	U
Styrene	100-42-5	µg/Kg	5.6	U
Bromoform	75-25-2	µg/Kg	5.6	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	5.6	U
1,3-Dichlorobenzene	541-73-1	µg/Kg	5.6	U
1,4-Dichlorobenzene	106-46-7	µg/Kg	5.6	U
1,2-Dichlorobenzene	95-50-1	µg/Kg	5.6	U

NOTE 1: The analytes listed in Method 8260 and 8240 are different.

NOTE 2: An upward adjustment to meet the laboratory detection limit for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Sample Results (Form I's)

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2B1

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3723-1___

Level (low/med): LOW__ Date Received: 01/27/95

% Solids: _88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6920			P	J
7440-36-0	Antimony	10.2	~~U~~		P	UJ
7440-38-2	Arsenic	3.2			F	
7440-39-3	Barium	99.3			P	
7440-41-7	Beryllium	0.38	B		P	
7440-43-9	Cadmium	1.3			P	
7440-70-2	Calcium	8650			P	J
7440-47-3	Chromium	19.8			P	
7440-48-4	Cobalt	131			P	
7440-50-8	Copper	136			P	
7439-89-6	Iron	26200			P	J
7439-92-1	Lead	19.0		*	F	
7439-95-4	Magnesium	3880			P	J
7439-96-5	Manganese	324			P	
7439-97-6	Mercury	0.14		+0.04	AV	
7440-02-0	Nickel	89.5			P	
7440-09-7	Potassium	1110	~~B~~		P	BJ
7782-49-2	Selenium	0.68	U		F	
7440-22-4	Silver	0.91	~~U~~		P	UJ
7440-23-5	Sodium	552	~~B~~		P	BJ
7440-28-0	Thallium	0.90	~~U~~	N	F	UJ
7440-62-2	Vanadium	52.8			P	
7440-66-6	Zinc	201			P	

Color Before: BROWN____ Clarity Before: _____ MP 3/14/95. Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

WATERY_____

MW 4-13-95

A-2

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2B3

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3723-9___

Level (low/med): LOW__ Date Received: 01/27/95

% Solids: _78.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6530			P	J
7440-36-0	Antimony	11.4	U		P	UJ
7440-38-2	Arsenic	2.7			F	
7440-39-3	Barium	96.6			P	
7440-41-7	Beryllium	0.33	B		P	
7440-43-9	Cadmium	0.76	U		P	
7440-70-2	Calcium	6030			P	J
7440-47-3	Chromium	8.5			P	
7440-48-4	Cobalt	24.4			P	
7440-50-8	Copper	15.6			P	
7439-89-6	Iron	24700			P	J
7439-92-1	Lead	6.4		*	F	
7439-95-4	Magnesium	4410			P	J
7439-96-5	Manganese	308			P	
7439-97-6	Mercury	0.13	U		AV	
7440-02-0	Nickel	23.3			P	
7440-09-7	Potassium	894	B		P	BJ
7782-49-2	Selenium	0.77	U		F	
7440-22-4	Silver	1.0	U		P	UJ
7440-23-5	Sodium	580	B		P	BJ
7440-28-0	Thallium	1.0	U	N	F	UJ
7440-62-2	Vanadium	53.9			P	
7440-66-6	Zinc	50.9			P	

Color Before: BROWN___ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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CLP

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2B5

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3748-1___

Level (low/med): LOW__ Date Received: 02/02/95

% Solids: _92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8330			P	J
7440-36-0	Antimony	9.8	U		P	UJ
7440-38-2	Arsenic	3.9			F	
7440-39-3	Barium	106			P	
7440-41-7	Beryllium	0.40	B		P	
7440-43-9	Cadmium	0.69	B		P	
7440-70-2	Calcium	5150			P	J
7440-47-3	Chromium	12.4			P	
7440-48-4	Cobalt	9.2	B		P	U
7440-50-8	Copper	15.8			P	
7439-89-6	Iron	25700			P	J
7439-92-1	Lead	7.5		*	F	
7439-95-4	Magnesium	4800			P	J
7439-96-5	Manganese	393			P	
7439-97-6	Mercury	0.10	U		AV	
7440-02-0	Nickel	17.8			P	
7440-09-7	Potassium	1640			P	J
7782-49-2	Selenium	0.65	U		F	
7440-22-4	Silver	0.87	U		P	UJ
7440-23-5	Sodium	508	B		P	BJ
7440-28-0	Thallium	0.87	U	N	F	UJ
7440-62-2	Vanadium	48.9			P	
7440-66-6	Zinc	48.5			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2B8

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3748-2___

Level (low/med): LOW__ Date Received: 02/02/95

% Solids: _92.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8120			P	J
7440-36-0	Antimony	9.8	B		P	UJ
7440-38-2	Arsenic	3.4			F	
7440-39-3	Barium	104			P	
7440-41-7	Beryllium	0.38	B		P	
7440-43-9	Cadmium	0.65	U		P	
7440-70-2	Calcium	5500			P	J
7440-47-3	Chromium	11.3			P	
7440-48-4	Cobalt	8.4	B		P	U
7440-50-8	Copper	15.2			P	
7439-89-6	Iron	23700			P	J
7439-92-1	Lead	10.8		S*	F	
7439-95-4	Magnesium	4670			P	J
7439-96-5	Manganese	384			P	
7439-97-6	Mercury	0.11		±0.16	AV	
7440-02-0	Nickel	15.3			P	
7440-09-7	Potassium	1650			P	J
7782-49-2	Selenium	0.65	U		F	
7440-22-4	Silver	0.87	B		P	UJ
7440-23-5	Sodium	543	B		P	BJ
7440-28-0	Thallium	0.86	B	N	F	UJ
7440-62-2	Vanadium	45.1			P	
7440-66-6	Zinc	45.6			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/14/95 Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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CLP

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2B9

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3748-9___

Level (low/med): LOW__ Date Received: 02/02/95

% Solids: _89.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8010			P	J
7440-36-0	Antimony	10.1	U		P	UJ
7440-38-2	Arsenic	3.7			F	
7440-39-3	Barium	106			P	
7440-41-7	Beryllium	0.37	B		P	
7440-43-9	Cadmium	0.90	B		P	
7440-70-2	Calcium	6920			P	J
7440-47-3	Chromium	12.8			P	
7440-48-4	Cobalt	32.8			P	
7440-50-8	Copper	17.9			P	
7439-89-6	Iron	24900			P	J
7439-92-1	Lead	108		*	F	
7439-95-4	Magnesium	4680			P	J
7439-96-5	Manganese	386			P	
7439-97-6	Mercury	0.09		±0.04	AV	
7440-02-0	Nickel	60.3			P	
7440-09-7	Potassium	1650			P	J
7782-49-2	Selenium	0.67	U		F	
7440-22-4	Silver	0.90	U		P	UJ
7440-23-5	Sodium	558	B		P	BJ
7440-28-0	Thallium	0.89	U	N	F	UJ
7440-62-2	Vanadium	45.8			P	
7440-66-6	Zinc	52.1			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/14/95. Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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CLP

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F0

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-1___

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _84.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6910			P	J
7440-36-0	Antimony	10.6	U		P	UJ
7440-38-2	Arsenic	3.2			F	
7440-39-3	Barium	71.1			P	
7440-41-7	Beryllium	0.28	B		P	
7440-43-9	Cadmium	1.0	B		P	
7440-70-2	Calcium	3370			P	J
7440-47-3	Chromium	9.5			P	
7440-48-4	Cobalt	73.3			P	
7440-50-8	Copper	21.8			P	
7439-89-6	Iron	18400			P	J
7439-92-1	Lead	20.4		*	F	
7439-95-4	Magnesium	4060			P	J
7439-96-5	Manganese	320			P	
7439-97-6	Mercury	0.12		± 0.07	AV	
7440-02-0	Nickel	45.5			P	
7440-09-7	Potassium	1060	B		P	BJ
7782-49-2	Selenium	0.71	U		F	
7440-22-4	Silver	0.94	U		P	UJ
7440-23-5	Sodium	506	B		P	BJ
7440-28-0	Thallium	0.94	U	N	F	UJ
7440-62-2	Vanadium	54.0			P	
7440-66-6	Zinc	252			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F1

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-3___

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7480			P	J
7440-36-0	Antimony	10.9	U		P	UJ
7440-38-2	Arsenic	3.5			F	
7440-39-3	Barium	91.3			P	
7440-41-7	Beryllium	0.33	B		P	
7440-43-9	Cadmium	0.73	U		P	
7440-70-2	Calcium	3820			P	J
7440-47-3	Chromium	9.8			P	
7440-48-4	Cobalt	13.5			P	
7440-50-8	Copper	14.1			P	
7439-89-6	Iron	18500			P	J
7439-92-1	Lead	5.5		*	F	
7439-95-4	Magnesium	4100			P	J
7439-96-5	Manganese	324			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	13.8			P	
7440-09-7	Potassium	1460			P	J
7782-49-2	Selenium	0.73	U		F	
7440-22-4	Silver	0.97	U		P	UJ
7440-23-5	Sodium	462	B		P	BJ
7440-28-0	Thallium	0.97	U	WN	F	UJ
7440-62-2	Vanadium	38.1			P	
7440-66-6	Zinc	50.7			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F2

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-5___

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _83.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7260			P	J
7440-36-0	Antimony	10.8	U		P	UJ
7440-38-2	Arsenic	2.7			F	
7440-39-3	Barium	85.2			P	
7440-41-7	Beryllium	0.33	B		P	
7440-43-9	Cadmium	0.72	U		P	
7440-70-2	Calcium	3780			P	J
7440-47-3	Chromium	9.0			P	
7440-48-4	Cobalt	10.7	B		P	
7440-50-8	Copper	13.2			P	
7439-89-6	Iron	18600			P	J
7439-92-1	Lead	4.9		*	F	
7439-95-4	Magnesium	4030			P	J
7439-96-5	Manganese	332			P	
7439-97-6	Mercury	0.12		± 0.01	AV	
7440-02-0	Nickel	12.5			P	
7440-09-7	Potassium	1320			P	J
7782-49-2	Selenium	0.71	U		F	
7440-22-4	Silver	0.96	U		P	UJ
7440-23-5	Sodium	498	B		P	BJ
7440-28-0	Thallium	0.95	U	WN	F	UJ
7440-62-2	Vanadium	39.3			P	
7440-66-6	Zinc	43.0			P	

NP 3/14/95

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2F3

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-7___

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _89.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7400			P	J
7440-36-0	Antimony	10.1	U		P	UJ
7440-38-2	Arsenic	3.2			F	
7440-39-3	Barium	95.0			P	
7440-41-7	Beryllium	0.34	B		P	
7440-43-9	Cadmium	1.0	B		P	
7440-70-2	Calcium	4060			P	J
7440-47-3	Chromium	8.9			P	
7440-48-4	Cobalt	278			P	
7440-50-8	Copper	17.0			P	
7439-89-6	Iron	23000			P	J
7439-92-1	Lead	8.9		*	F	
7439-95-4	Magnesium	4380			P	J
7439-96-5	Manganese	342			P	
7439-97-6	Mercury	0.12		± 0.06	AV	
7440-02-0	Nickel	15.7			P	
7440-09-7	Potassium	1120			P	J
7782-49-2	Selenium	0.67	U		F	
7440-22-4	Silver	0.89	U		P	UJ
7440-23-5	Sodium	447	B		P	BJ
7440-28-0	Thallium	0.89	U	WN	F	UJ
7440-62-2	Vanadium	49.8			P	
7440-66-6	Zinc	164			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/14/95. Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F4

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-9___

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _89.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7160			P	J
7440-36-0	Antimony	10	U		P	UJ
7440-38-2	Arsenic	3.5			F	
7440-39-3	Barium	85.1			P	
7440-41-7	Beryllium	0.33	B		P	
7440-43-9	Cadmium	0.67	U		P	
7440-70-2	Calcium	3730			P	J
7440-47-3	Chromium	10.2			P	
7440-48-4	Cobalt	47.8			P	
7440-50-8	Copper	14.1			P	
7439-89-6	Iron	21300			P	J
7439-92-1	Lead	5.4		*	F	
7439-95-4	Magnesium	4280			P	J
7439-96-5	Manganese	330			P	
7439-97-6	Mercury	0.11		±0.04	AV	
7440-02-0	Nickel	14.2			P	
7440-09-7	Potassium	1290			P	J
7782-49-2	Selenium	0.67	U		F	
7440-22-4	Silver	0.89	U		P	UJ
7440-23-5	Sodium	380	B		P	BJ
7440-28-0	Thallium	0.89	U	N	F	UJ
7440-62-2	Vanadium	42.1			P	
7440-66-6	Zinc	49.6			P	

NP 3/14/95

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F5

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-11__

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _82.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8040			P	J
7440-36-0	Antimony	10.9	U		P	UJ
7440-38-2	Arsenic	3.1			F	
7440-39-3	Barium	99.5			P	
7440-41-7	Beryllium	0.34	B		P	
7440-43-9	Cadmium	1.0	B		P	
7440-70-2	Calcium	4100			P	J
7440-47-3	Chromium	9.6			P	
7440-48-4	Cobalt	20.4			P	
7440-50-8	Copper	17.8			P	
7439-89-6	Iron	21800			P	J
7439-92-1	Lead	6.8		*	F	
7439-95-4	Magnesium	4350			P	J
7439-96-5	Manganese	342			P	
7439-97-6	Mercury	0.14		± 0.05	AV	
7440-02-0	Nickel	14.0			P	
7440-09-7	Potassium	1530			P	J
7782-49-2	Selenium	0.73	U		F	
7440-22-4	Silver	0.97	U		P	UJ
7440-23-5	Sodium	451	B		P	BJ
7440-28-0	Thallium	0.97	U	N	F	UJ
7440-62-2	Vanadium	41.8			P	
7440-66-6	Zinc	48.5			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/14/95 Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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CLP

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2F6

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-13__

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _89.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7170			P	J
7440-36-0	Antimony	10.0	U		P	UJ
7440-38-2	Arsenic	3.1			F	
7440-39-3	Barium	90.6			P	
7440-41-7	Beryllium	0.33	B		P	
7440-43-9	Cadmium	1.0	B		P	
7440-70-2	Calcium	4050			P	J
7440-47-3	Chromium	11.9			P	
7440-48-4	Cobalt	70.5			P	
7440-50-8	Copper	14.7			P	
7439-89-6	Iron	21200			P	J
7439-92-1	Lead	8.8		*	F	
7439-95-4	Magnesium	4040			P	J
7439-96-5	Manganese	333			P	
7439-97-6	Mercury	0.12		T0.04	AV	
7440-02-0	Nickel	11.7			P	
7440-09-7	Potassium	1280			P	J
7782-49-2	Selenium	0.67	U		F	
7440-22-4	Silver	0.89	U		P	UJ
7440-23-5	Sodium	428	B		P	BJ
7440-28-0	Thallium	0.89	U	N	F	UJ
7440-62-2	Vanadium	38.3			P	
7440-66-6	Zinc	45.8			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/14/95 Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F7

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-15__

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6970			P	J
7440-36-0	Antimony	9.7	U		P	UJ
7440-38-2	Arsenic	2.9			F	
7440-39-3	Barium	87.1			P	
7440-41-7	Beryllium	0.32	B		P	
7440-43-9	Cadmium	0.65	U		P	
7440-70-2	Calcium	4400			P	J
7440-47-3	Chromium	9.8			P	
7440-48-4	Cobalt	204			P	
7440-50-8	Copper	14.1			P	
7439-89-6	Iron	21300			P	J
7439-92-1	Lead	7.0		*	F	
7439-95-4	Magnesium	4140			P	J
7439-96-5	Manganese	342			P	
7439-97-6	Mercury	0.09	U		AV	
7440-02-0	Nickel	12.9			P	
7440-09-7	Potassium	1220			P	J
7782-49-2	Selenium	0.65	U		F	
7440-22-4	Silver	0.86	U		P	UJ
7440-23-5	Sodium	402	B		P	BJ
7440-28-0	Thallium	0.87	U	N	F	UJ
7440-62-2	Vanadium	41.1			P	
7440-66-6	Zinc	45.5			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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4-13-95

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2F8

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Lab Sample ID: L3706-17__

Level (low/med): LOW__ Date Received: 01/25/95

% Solids: _88.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7790			P	J
7440-36-0	Antimony	10.1	~~U~~		P	UJ
7440-38-2	Arsenic	4.1			F	
7440-39-3	Barium	104			P	
7440-41-7	Beryllium	0.38	B		P	
7440-43-9	Cadmium	0.68	U		P	
7440-70-2	Calcium	4920			P	J
7440-47-3	Chromium	10.6			P	
7440-48-4	Cobalt	24.6			P	
7440-50-8	Copper	17.3			P	
7439-89-6	Iron	23000			P	J
7439-92-1	Lead	6.8		*	F	
7439-95-4	Magnesium	4530			P	J
7439-96-5	Manganese	357			P	
7439-97-6	Mercury	0.12		±0.02	AV	
7440-02-0	Nickel	11.8			P	
7440-09-7	Potassium	1470			P	J
7782-49-2	Selenium	0.68	U		F	
7440-22-4	Silver	0.90	~~U~~		P	UJ
7440-23-5	Sodium	419	~~B~~		P	BJ
7440-28-0	Thallium	0.90	~~U~~	WN	F	UJ
7440-62-2	Vanadium	42.3			P	
7440-66-6	Zinc	46.3			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/14/95 Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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4-13-95

015

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2B1 LAL Sample ID: L3723-3

Date Collected: 23-JAN-95 Date Received: 27-JAN-95

Matrix: Soil Login Number: L3723

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Datatype	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	256.	17.	0.000060		ug/g

AF 4/11/95

006

0000-40

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B002B3 LAL Sample ID: L3723-10

Date Collected: 23-JAN-95 Date Received: 27-JAN-95

Matrix: Soil Login Number: L3723

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Datadual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	4.31	0.28	0.0012		ug/g

AJ 4/11/95

014

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B00285 — LAL Sample ID: L3748-3

Date Collected: 25-JAN-95 — Date Received: 02-FEB-95

Matrix: Soil — Login Number: L3748

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	83.4	4.8	0.0000097		ug/g

AS 4/11/95

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B00288 LAL Sample ID: L3748-4

Date Collected: 25-JAN-95 Date Received: 02-FEB-95

Matrix: Soil Login Number: L3748

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	14.0	2.1	0.000048		ug/g

AJ 4/11/95

008

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2B9 LAL Sample ID: L3748-10

Date Collected: 25-JAN-95 Date Received: 02-FEB-95

Matrix: Soil Login Number: L3748

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	23.2	1.6	0.000046		ug/g

AJ 4/11/95

015

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B002F0 LAL Sample ID: L3706-2

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Data Qual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	6.00	0.42	0.00025		ug/g

AJ 4/11/95

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000045

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B002F1 LAL Sample ID: L3706-4

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Data Qual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	0.163	0.016	0.0072		ug/g

AJ 4/11/95

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F2 LAL Sample ID: L3706-6

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Datacal	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	0.0187	0.0014	0.0061		ug/g

AJ 4/11/95

004

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F3 | LAL Sample ID: L3706-8

Date Collected: 19-JAN-95 | Date Received: 25-JAN-95

Matrix: Soil | Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Data Qual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	0.178	0.015	0.011		ug/g

AJ 4/11/95

005

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F4 LAL Sample ID: L3706-10

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	0.0809	0.0057	0.0057		ug/g

AJ 4/11/96

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F5 LAL Sample ID: L3706-12

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Datadual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	0.497	0.035	0.0011		ug/g

AJ 4/11/96

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F6 LAL Sample ID: L3706-14

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	0.0800	0.0070	0.0057		ug/g

AF 4/11/95
011

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F7 LAL Sample ID: L3706-16

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	1.60	0.12	0.0011		ug/g

AF 4/11/95

012

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RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2F8 LAL Sample ID: L3706-18

Date Collected: 19-JAN-95 Date Received: 25-JAN-95

Matrix: Soil Login Number: L3706

SDG: LK3706

Constituent	Analyzed	Batch	Activity	Error	MDA	Data Qual	Units
Uranium	27-FEB-95	U TOTAL KPA LAL-0168_18607	3.28	0.24	0.00023		ug/g

AJ 4/11/95 013

000053

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D290	LAL Sample ID:	L3706-19
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	15.54	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	99	70-121
Toluene-d8	107	81-117
Bromofluorobenzene	80	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTICATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.9	5.9	
Vinyl Chloride	75-01-4	<5.9	5.9	
Bromomethane	74-83-9	<5.9	5.9	
Chloroethane	75-00-3	<5.9	5.9	
Trichlorofluoromethane	75-69-4	<5.9	5.9	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<5.9	5.9	
Carbon Disulfide	75-15-0	<5.9	5.9	
Methylene Chloride	75-09-2	<5.9	5.9	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<5.9	5.9	
2-Butanone	78-93-3	<12.	12.	
Chloroform	67-66-3	<5.9	5.9	
2-Hexanone	591-78-6	<5.9	5.9	
1,1,1-Trichloroethane	71-55-6	<5.9 UJ	5.9	
Carbon tetrachloride	56-23-5	<5.9 UJ	5.9	
1,2-Dichloroethane	107-06-2	<5.9	5.9	
Benzene	71-43-2	<5.9	5.9	
Trichloroethene	79-01-6	<5.9 UJ	5.9	
1,2-Dichloropropane	78-87-5	<5.9	5.9	
Bromodichloromethane	75-27-4	<5.9 UJ	5.9	
2-Chloroethylvinylether	110-75-8	<23.	23.	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<5.9	5.9	
Toluene	108-88-3	<5.9	5.9	
trans-1,3-Dichloropropene	10061-02-6	<5.9	5.9	
1,1,2-Trichloroethane	79-00-5	<5.9 UJ	5.9	
Tetrachloroethene	127-18-4	<5.9 UJ	5.9	
Dibromochloromethane	124-48-1	<5.9 UJ	5.9	
Chlorobenzene	108-90-7	<5.9	5.9	
Ethylbenzene	100-41-4	<5.9	5.9	
m,p-Xylene	1330-20-7	<5.9	5.9	
o-Xylene	95-47-6	<5.9	5.9	
Styrene	100-42-5	<5.9	5.9	
Bromoform	75-25-2	<5.9	5.9	
1,1,2,2-Tetrachloroethane	79-34-5	<5.9 UJ	5.9	
1,3-Dichlorobenzene	541-73-1	<5.9	5.9	
1,4-Dichlorobenzene	106-46-7	<5.9	5.9	
1,2-Dichlorobenzene	95-50-1	<5.9	5.9	

4-7-95 WSC

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD290	LAL Sample ID: L3706-19
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 0.992
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7 FB (WSC)

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D291	LAL Sample ID:	L3706-20
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	01-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013195-8240-E2
Percent Moisture:	18	Preparation Dilution:	0.990

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	103	70-121
Toluene-d8	117	81-117
Bromofluorobenzene	92	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.0	6.0	
Vinyl Chloride	75-01-4	<6.0	6.0	
Bromomethane	74-83-9	<6.0	6.0	
Chloroethane	75-00-3	<6.0	6.0	
Trichlorofluoromethane	75-69-4	<6.0	6.0	
Acetone	67-64-1	11.	12.	J
1,1-Dichloroethene	75-35-4	<6.0	6.0	
Carbon Disulfide	75-15-0	<6.0	6.0	
Methylene Chloride	75-09-2	<6.0	6.0	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.0	6.0	
2-Butanone	78-93-3	<12.	12.	
Chloroform	67-66-3	<6.0	6.0	
2-Hexanone	591-78-6	<6.0	6.0	
1,1,1-Trichloroethane	71-55-6	<6.0	6.0	
Carbon tetrachloride	56-23-5	<6.0	6.0	
1,2-Dichloroethane	107-06-2	<6.0	6.0	
Benzene	71-43-2	<6.0	6.0	
Trichloroethene	79-01-6	<6.0	6.0	
1,2-Dichloropropane	78-87-5	<6.0	6.0	
Bromodichloromethane	75-27-4	<6.0	6.0	
2-Chloroethylvinylether	110-75-8	<24.	24.	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.0	6.0	
Toluene	108-88-3	<6.0	6.0	
trans-1,3-Dichloropropene	10061-02-6	<6.0	6.0	
1,1,2-Trichloroethane	79-00-5	<6.0	6.0	
Tetrachloroethene	127-18-4	<6.0	6.0	
Dibromochloromethane	124-48-1	<6.0	6.0	
Chlorobenzene	108-90-7	<6.0	6.0	
Ethylbenzene	100-41-4	<6.0	6.0	
m,p-Xylene	1330-20-7	<6.0	6.0	
o-Xylene	95-47-6	<6.0	6.0	
Styrene	100-42-5	<6.0	6.0	
Bromoform	75-25-2	<6.0	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	<6.0	6.0	
1,3-Dichlorobenzene	541-73-1	<6.0	6.0	
1,4-Dichlorobenzene	106-46-7	<6.0	6.0	
1,2-Dichlorobenzene	95-50-1	<6.0	6.0	

4-17-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD291	LAL Sample ID: L3706-20
Date Received: 25-JAN-95	Date Analyzed: 01-FEB-95
Matrix: SOIL	Dilution Factor: 0.990
Analytical Batch: 013195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4/7/95

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D292	LAL Sample ID:	L3706-21
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	16.25	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	97	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	83	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.9	5.9	
Vinyl Chloride	75-01-4	<5.9	5.9	
Bromomethane	74-83-9	<5.9	5.9	
Chloroethane	75-00-3	<5.9	5.9	
Trichlorofluoromethane	75-69-4	<5.9	5.9	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<5.9	5.9	
Carbon Disulfide	75-15-0	<5.9	5.9	
Methylene Chloride	75-09-2	<5.9	5.9	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<5.9	5.9	
2-Butanone	78-93-3	<12.	12.	
Chloroform	67-66-3	<5.9	5.9	
2-Hexanone	591-78-6	<5.9	5.9	
1,1,1-Trichloroethane	71-55-6	<5.9 UJ	5.9	
Carbon tetrachloride	56-23-5	<5.9 UJ	5.9	
1,2-Dichloroethane	107-06-2	<5.9	5.9	
Benzene	71-43-2	<5.9	5.9	
Trichloroethene	79-01-6	<5.9 UJ	5.9	
1,2-Dichloropropane	78-87-5	<5.9	5.9	
Bromodichloromethane	75-27-4	<5.9 UJ	5.9	
2-Chloroethylvinylether	110-75-8	<24.	24.	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<5.9	5.9	
Toluene	108-88-3	<5.9	5.9	
trans-1,3-Dichloropropene	10061-02-6	<5.9	5.9	
1,1,2-Trichloroethane	79-00-5	<5.9 UJ	5.9	
Tetrachloroethene	127-18-4	<5.9 UJ	5.9	
Dibromochloromethane	124-48-1	<5.9 UJ	5.9	
Chlorobenzene	108-90-7	<5.9	5.9	
Ethylbenzene	100-41-4	<5.9	5.9	
m,p-Xylene	1330-20-7	<5.9	5.9	
o-Xylene	95-47-6	<5.9	5.9	
Styrene	100-42-5	<5.9	5.9	
Bromoform	75-25-2	<5.9	5.9	
1,1,2,2-Tetrachloroethane	79-34-5	<5.9 UJ	5.9	
1,3-Dichlorobenzene	541-73-1	<5.9	5.9	
1,4-Dichlorobenzene	106-46-7	<5.9	5.9	
1,2-Dichlorobenzene	95-50-1	<5.9	5.9	

4-7-95 (dje)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD292	LAL Sample ID: L3706-21
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 0.992
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 LWC

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D293	LAL Sample ID:	L3706-22
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	10.13	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	86	70-121
Toluene-d8	105	81-117
Bromofluorobenzene	74	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	1.1	5.6	J
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.6	5.6	
2-Hexanone	591-78-6	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6 UJ	5.6	
Carbon tetrachloride	56-23-5	<5.6 UJ	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6 UJ	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6 UJ	5.6	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6 UJ	5.6	
Tetrachloroethene	127-18-4	3.2 J	5.6	
Dibromochloromethane	124-48-1	<5.6 UJ	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6 UJ	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

4-7-95 (MJC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD293	LAL Sample ID: L3706-22
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 0.998
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 (WJC)

LOCKHEED ANALYTICAL SERVICES

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D294	LAL Sample ID:	L3706-23
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	10.35	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	94	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	83	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.5	5.5	
2-Hexanone	591-78-6	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5 UJ	5.5	
Carbon tetrachloride	56-23-5	<5.5 UJ	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5 UJ	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5 UJ	5.5	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5 UJ	5.5	
Tetrachloroethene	127-18-4	<5.5 UJ	5.5	
Dibromochloromethane	124-48-1	<5.5 UJ	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5 UJ	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95 (WJC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD294	LAL Sample ID: L3706-23
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 0.994
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 cdc

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D295	LAL Sample ID:	L3706-24
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	01-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013195-8240-E2
Percent Moisture:	17.11	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	96	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	85	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<6.0	6.0	
Vinyl Chloride	75-01-4	<6.0	6.0	
Bromomethane	74-83-9	<6.0	6.0	
Chloroethane	75-00-3	<6.0	6.0	
Trichlorofluoromethane	75-69-4	<6.0	6.0	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<6.0	6.0	
Carbon Disulfide	75-15-0	<6.0	6.0	
Methylene Chloride	75-09-2	<6.0	6.0	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.0	6.0	
2-Butanone	78-93-3	<12.	12.	
Chloroform	67-66-3	<6.0	6.0	
2-Hexanone	591-78-6	<6.0	6.0	
1,1,1-Trichloroethane	71-55-6	<6.0	6.0	
Carbon tetrachloride	56-23-5	<6.0	6.0	
1,2-Dichloroethane	107-06-2	<6.0	6.0	
Benzene	71-43-2	<6.0	6.0	
Trichloroethene	79-01-6	<6.0	6.0	
1,2-Dichloropropane	78-87-5	<6.0	6.0	
Bromodichloromethane	75-27-4	<6.0	6.0	
2-Chloroethylvinylether	110-75-8	<24.	24.	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.0	6.0	
Toluene	108-88-3	<6.0	6.0	
trans-1,3-Dichloropropene	10061-02-6	<6.0	6.0	
1,1,2-Trichloroethane	79-00-5	<6.0	6.0	
Tetrachloroethene	127-18-4	<6.0	6.0	
Dibromochloromethane	124-48-1	<6.0	6.0	
Chlorobenzene	108-90-7	<6.0	6.0	
Ethylbenzene	100-41-4	<6.0	6.0	
m,p-Xylene	1330-20-7	<6.0	6.0	
o-Xylene	95-47-6	<6.0	6.0	
Styrene	100-42-5	<6.0	6.0	
Bromoform	75-25-2	<6.0	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	<6.0	6.0	
1,3-Dichlorobenzene	541-73-1	<6.0	6.0	
1,4-Dichlorobenzene	106-46-7	<6.0	6.0	
1,2-Dichlorobenzene	95-50-1	<6.0	6.0	

4-17-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD295	**LAL Sample ID: L3706-24**
Date Received: 25-JAN-95	**Date Analyzed: 01-FEB-95**
Matrix: SOIL	**Dilution Factor: 0.994**
Analytical Batch: 013195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D296	LAL Sample ID:	L3706-25
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	10.14	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	114	81-117
Bromofluorobenzene	90	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.5	5.5	
2-Hexanone	591-78-6	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	UJ
Carbon tetrachloride	56-23-5	<5.5	5.5	UJ
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	UJ
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	UJ
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	UJ
Tetrachloroethene	127-18-4	<5.5	5.5	UJ
Dibromochloromethane	124-48-1	<5.5	5.5	UJ
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	UJ
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

5-6-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD296	LAL Sample ID: L3706-25
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 0.994
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
UNKNOWN	9	8.05	J

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D297	LAL Sample ID:	L3706-26
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	7.86	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	96	70-121
Toluene-d8	104	81-117
Bromofluorobenzene	82	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.4	5.4	
2-Hexanone	591-78-6	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4 UJ	5.4	
Carbon tetrachloride	56-23-5	<5.4 UJ	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4 UJ	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4 UJ	5.4	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4 UJ	5.4	
Tetrachloroethene	127-18-4	<5.4 UJ	5.4	
Dibromochloromethane	124-48-1	<5.4 UJ	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4 UJ	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

4-7-95 (VC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD297	LAL Sample ID: L3706-26
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 0.998
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 (JS)

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D298	LAL Sample ID:	L3706-27
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	11.42	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	97	70-121
Toluene-d8	105	81-117
Bromofluorobenzene	84	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.6	5.6	
2-Hexanone	591-78-6	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	UJ
Carbon tetrachloride	56-23-5	<5.6	5.6	UJ
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	UJ
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	UJ
2-Chloroethylvinylether	110-75-8	<23.	23.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6	5.6	UJ
Tetrachloroethene	127-18-4	<5.6	5.6	UJ
Dibromochloromethane	124-48-1	<5.6	5.6	UJ
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	UJ
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

4-7-95 (WDL)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD298	LAL Sample ID: L3706-27
Date Received: 25-JAN-95	Date Analyzed: 02-FEB-95
Matrix: SOIL	Dilution Factor: 1.00
Analytical Batch: 020195-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 (JC)

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2B1	LAL Sample ID:	L3723-5
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	06-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8240-E1
Percent Moisture:	11.7	Preparation Dilution:	0.990

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	92	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	88	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	18.	11.	
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.6	5.6	
2-Hexanone	591-78-6	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	
Carbon tetrachloride	56-23-5	<5.6	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropr[illegible]	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichl[illegible]	10061-02-6	<5.6	5.6	
1,1,2-Trichlor[illegible]	79-00-5	<5.6	5.6	
Tetrachloroethe[illegible]	127-18-4	<5.6	5.6	
Dibromochlorom[illegible]	124-48-1	<5.6	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

dw 4/20/95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B1	LAL Sample ID: L3723-5
Date Received: 27-JAN-95	Date Analyzed: 06-FEB-95
Matrix: SOIL	Dilution Factor: 0.990
Analytical Batch: 020695-8240-E1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2B3	LAL Sample ID:	L3723-11
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020295-8240-E2
Percent Moisture:	21.49	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	101	70-121
Toluene-d8	112	81-117
Bromofluorobenzene	90	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER
Chloromethane	74-87-3	<6.3	6.3	
Vinyl Chloride	75-01-4	<6.3	6.3	
Bromomethane	74-83-9	<6.3	6.3	
Chloroethane	75-00-3	<6.3	6.3	
Trichlorofluoromethane	75-69-4	<6.3	6.3	
Acetone	67-64-1	13~~10~~. U	13.	
1,1-Dichloroethene	75-35-4	<6.3	6.3	
Carbon Disulfide	75-15-0	<6.3	6.3	
Methylene Chloride	75-09-2	<6.3	6.3	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.3	6.3	
2-Butanone	78-93-3	<13.	13.	
Chloroform	67-66-3	<6.3	6.3	
2-Hexanone	591-78-6	<6.3	6.3	
1,1,1-Trichloroethane	71-55-6	<6.3 UJ	6.3	
Carbon tetrachloride	56-23-5	<6.3 UJ	6.3	
1,2-Dichloroethane	107-06-2	<6.3	6.3	
Benzene	71-43-2	<6.3	6.3	
Trichloroethene	79-01-6	<6.3 UJ	6.3	
1,2-Dichloropropane	78-87-5	<6.3	6.3	
Bromodichloromethane	75-27-4	<6.3 UJ	6.3	
2-Chloroethylvinylether	110-75-8	<25.	25.	
4-Methyl-2-Pentanone	108-10-1	<13.	13.	
cis-1,3-Dichlo[redacted]	10061-01-5	<6.3	6.3	
Toluene	108-88-3	<6.3	6.3	
trans-1,3-Dic[redacted]	10061-02-6	<6.3	6.3	
1,1,2-Trichlo[redacted]	79-00-5	<6.3 UJ	6.3	
Tetrachloroeth[redacted]	127-18-4	<6.3 UJ	6.3	
Dibromochlorom[redacted]	124-48-1	<6.3 UJ	6.3	
Chlorobenzene	108-90-7	<6.3	6.3	
Ethylbenzene	100-41-4	<6.3	6.3	
m,p-Xylene	1330-20-7	<6.3	6.3	
o-Xylene	95-47-6	<6.3	6.3	
Styrene	100-42-5	<6.3	6.3	
Bromoform	75-25-2	<6.3	6.3	
1,1,2,2-Tetrachloroethane	79-34-5	<6.3 UJ	6.3	
1,3-Dichlorobenzene	541-73-1	<6.3	6.3	
1,4-Dichlorobenzene	106-46-7	<6.3	6.3	
1,2-Dichlorobenzene	95-50-1	<6.3	6.3	

GAA 5/5/95

4-7-95 WJC

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B3	LAL Sample ID: L3723-11
Date Received: 27-JAN-95	Date Analyzed: 03-FEB-95
Matrix: SOIL	Dilution Factor: 0.992
Analytical Batch: 020295-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2B5	LAL Sample ID:	L3748-5
Date Collected:	25-JAN-95	Date Received:	02-FEB-95
Date Analyzed:	08-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020895-8240-E2
Percent Moisture:	7.92	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	91	70-121
Toluene-d8	104	81-117
Bromofluorobenzene	87	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	11~~8~~	11.	B
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.4	5.4	
2-Hexanone	591-78-6	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

47-95 (WSC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B5	**LAL Sample ID: L3748-5**
Date Received: 02-FEB-95	**Date Analyzed: 08-FEB-95**
Matrix: SOIL	**Dilution Factor: 0.994**
Analytical Batch: 020895-8240-E2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

152

4-7-95 WJC

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2B8	LAL Sample ID:	L3748-6
Date Collected:	25-JAN-95	Date Received:	02-FEB-95
Date Analyzed:	08-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020795-8240-E3
Percent Moisture:	7.85	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	94	70-121
Toluene-d8	113	81-117
Bromofluorobenzene	97	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.4	5.4	
2-Hexanone	591-78-6	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

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4-7-95
WJC

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B8	LAL Sample ID: L3748-6
Date Received: 02-FEB-95	Date Analyzed: 08-FEB-95
Matrix: SOIL	Dilution Factor: 0.992
Analytical Batch: 020795-8240-E3	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

154

4-7-95

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2B9	LAL Sample ID:	L3748-11
Date Collected:	25-JAN-95	Date Received:	02-FEB-95
Date Analyzed:	08-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020795-8240-E3
Percent Moisture:	10.43	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	92	70-121
Toluene-d8	104	81-117
Bromofluorobenzene	89	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.5	5.5	
2-Hexanone	591-78-6	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
2-Chloroethylvinylether	110-75-8	<22.	22.	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B9	LAL Sample ID: L3748-11
Date Received: 02-FEB-95	Date Analyzed: 08-FEB-95
Matrix: SOIL	Dilution Factor: 0.994
Analytical Batch: 020795-8240-E3	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

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4-7-95 ubc

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D290	LAL Sample ID:	L3706-19
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	30-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013095-8260-J1
Percent Moisture:	15.54	Preparation Dilution:	1.01

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	101	70-121
Toluene-d8	98	81-117
Bromofluorobenzene	94	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.0	6.0	
Vinyl Chloride	75-01-4	<6.0	6.0	
Bromomethane	74-83-9	<6.0	6.0	
Chloroethane	75-00-3	<6.0	6.0	
Trichlorofluoromethane	75-69-4	<6.0	6.0	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<6.0	6.0	
Carbon Disulfide	75-15-0	<6.0	6.0	
Methylene Chloride	75-09-2	<6.0	6.0	
trans-1,2-Dichloroethene	156-50-5	<6.0	6.0	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.0	6.0	
2-Butanone	78-93-3	<12.	12.	
cis-1,2-Dichloroethene	156-59-2	<6.0	6.0	
Chloroform	67-66-3	<6.0	6.0	
1,1,1-Trichloroethane	71-55-6	<6.0	6.0	
Carbon tetrachloride	56-23-5	<6.0	6.0	
1,2-Dichloroethane	107-06-2	<6.0	6.0	
Benzene	71-43-2	<6.0	6.0	
Trichloroethene	79-01-6	<6.0	6.0	
1,2-Dichloropropane	78-87-5	<6.0	6.0	
Bromodichloromethane	75-27-4	<6.0	6.0	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.0	6.0	
Toluene	108-88-3	<6.0	6.0	
trans-1,3-Dichloropropene	10061-02-6	<6.0	6.0	
1,1,2-Trichloroethane	79-00-5	<6.0	6.0	
Tetrachloroethene	127-18-4	<6.0	6.0	
Dibromochloromethane	124-48-1	<6.0	6.0	
Chlorobenzene	108-90-7	<6.0	6.0	
Ethylbenzene	100-41-4	<6.0	6.0	
m,p-Xylene	1330-20-7	<6.0	6.0	
o-Xylene	95-47-6	<6.0	6.0	
Styrene	100-42-5	<6.0	6.0	
Bromoform	75-25-2	<6.0	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	<6.0	6.0	
1,3-Dichlorobenzene	541-73-1	<6.0	6.0	
1,4-Dichlorobenzene	106-46-7	<6.0	6.0	
1,2-Dichlorobenzene	95-50-1	<6.0	6.0	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD290	LAL Sample ID: L3706-19
Date Received: 25-JAN-95	Date Analyzed: 30-JAN-95
Matrix: SOIL	Dilution Factor: 1.01
Analytical Batch: 013095-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 WOC

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D291	LAL Sample ID:	L3706-20
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	30-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013095-8260-J1
Percent Moisture:	18	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	93	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S
Chloromethane	74-87-3	<6.1	6.1	
Vinyl Chloride	75-01-4	<6.1	6.1	
Bromomethane	74-83-9	<6.1	6.1	
Chloroethane	75-00-3	<6.1	6.1	
Trichlorofluoromethane	75-69-4	<6.1	6.1	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<6.1	6.1	
Carbon Disulfide	75-15-0	<6.1	6.1	
Methylene Chloride	75-09-2	<6.1	6.1	
trans-1,2-Dichloroethene	156-50-5	<6.1	6.1	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.1	6.1	
2-Butanone	78-93-3	<12.	12.	
cis-1,2-Dichloroethene	156-59-2	<6.1	6.1	
Chloroform	67-66-3	<6.1	6.1	
1,1,1-Trichloroethane	71-55-6	<6.1	6.1	
Carbon tetrachloride	56-23-5	<6.1	6.1	
1,2-Dichloroethane	107-06-2	<6.1	6.1	
Benzene	71-43-2	<6.1	6.1	
Trichloroethene	79-01-6	<6.1	6.1	
1,2-Dichloropropane	78-87-5	<6.1	6.1	
Bromodichloromethane	75-27-4	<6.1	6.1	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1	
Toluene	108-88-3	<6.1	6.1	
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1	
1,1,2-Trichloroethane	79-00-5	<6.1	6.1	
Tetrachloroethene	127-18-4	<6.1	6.1	
Dibromochloromethane	124-48-1	<6.1	6.1	
Chlorobenzene	108-90-7	<6.1	6.1	
Ethylbenzene	100-41-4	<6.1	6.1	
m,p-Xylene	1330-20-7	<6.1	6.1	
o-Xylene	95-47-6	<6.1	6.1	
Styrene	100-42-5	<6.1	6.1	
Bromoform	75-25-2	<6.1	6.1	
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1	
1,3-Dichlorobenzene	541-73-1	<6.1	6.1	
1,4-Dichlorobenzene	106-46-7	<6.1	6.1	
1,2-Dichlorobenzene	95-50-1	<6.1	6.1	

4-7-95
(WSC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD291	LAL Sample ID: L3706-20
Date Received: 25-JAN-95	Date Analyzed: 30-JAN-95
Matrix: SOIL	Dilution Factor: 1.00
Analytical Batch: 013095-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95
WGC
LOCKHEED ANALYTICAL SERVICES

2/28/95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D292	LAL Sample ID:	L3706-21
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	27-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	012795-8260-E1
Percent Moisture:	16.25	Preparation Dilution:	0.975

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	121	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	100	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.8	5.8	
Vinyl Chloride	75-01-4	<5.8	5.8	
Bromomethane	74-83-9	<5.8	5.8	
Chloroethane	75-00-3	<5.8	5.8	
Trichlorofluoromethane	75-69-4	<5.8	5.8	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<5.8	5.8	
Carbon Disulfide	75-15-0	<5.8	5.8	
Methylene Chloride	75-09-2	<5.8	5.8	
trans-1,2-Dichloroethene	156-50-5	<5.8	5.8	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<5.8	5.8	
2-Butanone	78-93-3	<12.	12.	
cis-1,2-Dichloroethene	156-59-2	<5.8	5.8	
Chloroform	67-66-3	<5.8	5.8	
1,1,1-Trichloroethane	71-55-6	<5.8	5.8	
Carbon tetrachloride	56-23-5	<5.8	5.8	
1,2-Dichloroethane	107-06-2	<5.8	5.8	
Benzene	71-43-2	<5.8	5.8	
Trichloroethene	79-01-6	<5.8	5.8	
1,2-Dichloropropane	78-87-5	<5.8	5.8	
Bromodichloromethane	75-27-4	<5.8	5.8	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<5.8	5.8	
Toluene	108-88-3	<5.8	5.8	
trans-1,3-Dichloropropene	10061-02-6	<5.8	5.8	
1,1,2-Trichloroethane	79-00-5	<5.8	5.8	
Tetrachloroethene	127-18-4	<5.8	5.8	
Dibromochloromethane	124-48-1	<5.8	5.8	
Chlorobenzene	108-90-7	<5.8	5.8	
Ethylbenzene	100-41-4	<5.8	5.8	
m,p-Xylene	1330-20-7	<5.8	5.8	
o-Xylene	95-47-6	<5.8	5.8	
Styrene	100-42-5	<5.8	5.8	
Bromoform	75-25-2	<5.8	5.8	
1,1,2,2-Tetrachloroethane	79-34-5	<5.8	5.8	
1,3-Dichlorobenzene	541-73-1	<5.8	5.8	
1,4-Dichlorobenzene	106-46-7	<5.8	5.8	
1,2-Dichlorobenzene	95-50-1	<5.8	5.8	

4-7-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD292	LAL Sample ID: L3706-21
Date Received: 25-JAN-95	Date Analyzed: 27-JAN-95
Matrix: SOIL	Dilution Factor: 0.975
Analytical Batch: 012795-8260-E1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 WOC

LOCKHEED ANALYTICAL SERVICES

A154

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D293	LAL Sample ID:	L3706-22
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	27-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	012795-8260-E1
Percent Moisture:	10.13	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	124 *	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	97	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
trans-1,2-Dichloroethene	156-50-5	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.5	5.5	
Chloroform	67-66-3	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95 (WJC)

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD293	LAL Sample ID: L3706-22
Date Received: 25-JAN-95	Date Analyzed: 27-JAN-95
Matrix: SOIL	Dilution Factor: 0.994
Analytical Batch: 012795-8260-E1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 (WJC)

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	BOD293	LAL Sample ID:	L3706-22-RE
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	28-JAN-95	Analytical Dilution:	1
Matrix:	SolidWaste	Analytical Batch ID:	012895-8260-E1
Percent Moisture:	10.13	Preparation Dilution:	0.986

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	126 *	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	104	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
trans-1,2-Dichloroethene	156-50-5	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.5	5.5	
Chloroform	67-66-3	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95 (MCC)

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D294	LAL Sample ID:	L3706-23
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	27-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	012795-8260-E1
Percent Moisture:	10.35	Preparation Dilution:	0.973

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	128 *	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	102	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

4-2-95
WJC

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD294	LAL Sample ID: L3706-23
Date Received: 25-JAN-95	Date Analyzed: 27-JAN-95
Matrix: SOIL	Dilution Factor: 0.973
Analytical Batch: 012795-8260-E1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 WTC

LOCKHEED ANALYTICAL SERVICES

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LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	BOD294	LAL Sample ID:	L3706-23-RE
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	28-JAN-95	Analytical Dilution:	1
Matrix:	SolidWaste	Analytical Batch ID:	012895-8260-E1
Percent Moisture:	10.35	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	127 *	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	101	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
trans-1,2-Dichloroethene	156-50-5	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.5	5.5	
Chloroform	67-66-3	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95
WTC

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D295	LAL Sample ID:	L3706-24
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	30-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013095-8260-J1
Percent Moisture:	17.11	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	100	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	96	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S
Chloromethane	74-87-3	<6.0	6.0	
Vinyl Chloride	75-01-4	<6.0	6.0	
Bromomethane	74-83-9	<6.0	6.0	
Chloroethane	75-00-3	<6.0	6.0	
Trichlorofluoromethane	75-69-4	<6.0	6.0	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<6.0	6.0	
Carbon Disulfide	75-15-0	<6.0	6.0	
Methylene Chloride	75-09-2	<6.0	6.0	
trans-1,2-Dichloroethene	156-50-5	<6.0	6.0	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.0	6.0	
2-Butanone	78-93-3	<12.	12.	
cis-1,2-Dichloroethene	156-59-2	<6.0	6.0	
Chloroform	67-66-3	<6.0	6.0	
1,1,1-Trichloroethane	71-55-6	<6.0	6.0	
Carbon tetrachloride	56-23-5	<6.0	6.0	
1,2-Dichloroethane	107-06-2	<6.0	6.0	
Benzene	71-43-2	<6.0	6.0	
Trichloroethene	79-01-6	<6.0	6.0	
1,2-Dichloropropane	78-87-5	<6.0	6.0	
Bromodichloromethane	75-27-4	<6.0	6.0	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.0	6.0	
Toluene	108-88-3	<6.0	6.0	
trans-1,3-Dichloropropene	10061-02-6	<6.0	6.0	
1,1,2-Trichloroethane	79-00-5	<6.0	6.0	
Tetrachloroethene	127-18-4	<6.0	6.0	
Dibromochloromethane	124-48-1	<6.0	6.0	
Chlorobenzene	108-90-7	<6.0	6.0	
Ethylbenzene	100-41-4	<6.0	6.0	
m,p-Xylene	1330-20-7	<6.0	6.0	
o-Xylene	95-47-6	<6.0	6.0	
Styrene	100-42-5	<6.0	6.0	
Bromoform	75-25-2	<6.0	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	<6.0	6.0	
1,3-Dichlorobenzene	541-73-1	<6.0	6.0	
1,4-Dichlorobenzene	106-46-7	<6.0	6.0	
1,2-Dichlorobenzene	95-50-1	<6.0	6.0	

4-7-95 (WJE)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD295	**LAL Sample ID: L3706-24**
Date Received: 25-JAN-95	**Date Analyzed: 30-JAN-95**
Matrix: SOIL	**Dilution Factor: 0.994**
Analytical Batch: 013095-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95
WSC
LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D296	LAL Sample ID:	L3706-25
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	30-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013095-8260-J1
Percent Moisture:	10.14	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	96	70-121
Toluene-d8	96	81-117
Bromofluorobenzene	84	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	II ~~7.5~~ U	11.	~~B~~
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
trans-1,2-Dichloroethene	156-50-5	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.6	5.6	
Chloroform	67-66-3	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	
Carbon tetrachloride	56-23-5	<5.6	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6	5.6	
Tetrachloroethene	127-18-4	<5.6	5.6	
Dibromochloromethane	124-48-1	<5.6	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

4-7-95 (WOC)

00006 A83

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD296	LAL Sample ID: L3706-25
Date Received: 25-JAN-95	Date Analyzed: 30-JAN-95
Matrix: SOIL	Dilution Factor: 0.998
Analytical Batch: 013095-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95
WJC
LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D297	LAL Sample ID:	L3706-26
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	31-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013195-8260-J1
Percent Moisture:	7.86	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	100	70-121
Toluene-d8	99	81-117
Bromofluorobenzene	88	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

4-7-95 (WOC)

065

9513357.1612

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD297	**LAL Sample ID: L3706-26**
Date Received: 25-JAN-95	**Date Analyzed: 31-JAN-95**
Matrix: SOIL	**Dilution Factor: 1**
Analytical Batch: 013195-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95

LOCKHEED ANALYTICAL SERVICES

000194

AB

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D298	LAL Sample ID:	L3706-27
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	31-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013195-8260-J1
Percent Moisture:	11.42	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	101	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	90	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
trans-1,2-Dichloroethene	156-50-5	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.6	5.6	
Chloroform	67-66-3	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	
Carbon tetrachloride	56-23-5	<5.6	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6	5.6	
Tetrachloroethene	127-18-4	<5.6	5.6	
Dibromochloromethane	124-48-1	<5.6	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

4-2-95

087

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD298	LAL Sample ID: L3706-27
Date Received: 25-JAN-95	Date Analyzed: 31-JAN-95
Matrix: SOIL	Dilution Factor: 0.994
Analytical Batch: 013195-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 (WJC)

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2B1	LAL Sample ID:	L3723-7
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	30-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013095-8260-J1
Percent Moisture:	11.7	Preparation Dilution:	0.988

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	95	81-117
Bromofluorobenzene	81	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	15. U	11.	B
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
trans-1,2-Dichloroethene	156-50-5	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.6	5.6	
Chloroform	67-66-3	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	
Carbon tetrachloride	56-23-5	<5.6	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6	5.6	
Tetrachloroethene	127-18-4	<5.6	5.6	
Dibromochloromethane	124-48-1	<5.6	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

2-7-95 (NJC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B1	**LAL Sample ID: L3723-7**
Date Received: 27-JAN-95	**Date Analyzed: 30-JAN-95**
Matrix: SOIL	**Dilution Factor: 0.988**
Analytical Batch: 013095-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
UNKNOWN HYDROCARBON	6	23.17	J

4-7-95
(WOC)

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2B3	LAL Sample ID:	L3723-12
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	31-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013195-8260-J1
Percent Moisture:	21.49	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	102	70-121
Toluene-d8	102	81-117
Bromofluorobenzene	94	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.3	6.3	
Vinyl Chloride	75-01-4	<6.3	6.3	
Bromomethane	74-83-9	<6.3	6.3	
Chloroethane	75-00-3	<6.3	6.3	
Trichlorofluoromethane	75-69-4	<6.3	6.3	
Acetone	67-64-1	<13.	13.	
1,1-Dichloroethene	75-35-4	<6.3	6.3	
Carbon Disulfide	75-15-0	<6.3	6.3	
Methylene Chloride	75-09-2	<6.3	6.3	
trans-1,2-Dichloroethene	156-50-5	<6.3	6.3	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.3	6.3	
2-Butanone	78-93-3	<13.	13.	
cis-1,2-Dichloroethene	156-59-2	<6.3	6.3	
Chloroform	67-66-3	<6.3	6.3	
1,1,1-Trichloroethane	71-55-6	<6.3	6.3	
Carbon tetrachloride	56-23-5	<6.3	6.3	
1,2-Dichloroethane	107-06-2	<6.3	6.3	
Benzene	71-43-2	<6.3	6.3	
Trichloroethene	79-01-6	<6.3	6.3	
1,2-Dichloropropane	78-87-5	<6.3	6.3	
Bromodichloromethane	75-27-4	<6.3	6.3	
4-Methyl-2-Pentanone	108-10-1	<13.	13.	
cis-1,3-Dichloropropene	10061-01-5	<6.3	6.3	
Toluene	108-88-3	<6.3	6.3	
trans-1,3-Dichloropropene	10061-02-6	<6.3	6.3	
1,1,2-Trichloroethane	79-00-5	<6.3	6.3	
Tetrachloroethene	127-18-4	<6.3	6.3	
Dibromochloromethane	124-48-1	<6.3	6.3	
Chlorobenzene	108-90-7	<6.3	6.3	
Ethylbenzene	100-41-4	<6.3	6.3	
m,p-Xylene	1330-20-7	<6.3	6.3	
o-Xylene	95-47-6	<6.3	6.3	
Styrene	100-42-5	<6.3	6.3	
Bromoform	75-25-2	<6.3	6.3	
1,1,2,2-Tetrachloroethane	79-34-5	<6.3	6.3	
1,3-Dichlorobenzene	541-73-1	<6.3	6.3	
1,4-Dichlorobenzene	106-46-7	<6.3	6.3	
1,2-Dichlorobenzene	95-50-1	<6.3	6.3	

4-7-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B3	LAL Sample ID: L3723-12
Date Received: 27-JAN-95	Date Analyzed: 31-JAN-95
Matrix: SOIL	Dilution Factor: 0.992
Analytical Batch: 013195-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

4-7-95 (WDC)

LOCKHEED ANALYTICAL SERVICES

02

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	BOD2B5	LAL Sample ID:	L3748-7
Date Collected:	25-JAN-95	Date Received:	02-FEB-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020395-8260-J1
Percent Moisture:	7.92	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	96	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	92	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

~~032~~
4-7-95
(WSC)

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B5	LAL Sample ID: L3748-7
Date Received: 02-FEB-95	Date Analyzed: 03-FEB-95
Matrix: SOIL	Dilution Factor: 1.00
Analytical Batch: 020395-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

033

4-7-95
WTC

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2B8	LAL Sample ID:	L3748-8
Date Collected:	25-JAN-95	Date Received:	02-FEB-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020395-8260-J1
Percent Moisture:	7.85	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

034

4-7-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B8	LAL Sample ID: L3748-8
Date Received: 02-FEB-95	Date Analyzed: 03-FEB-95
Matrix: SOIL	Dilution Factor: 1.00
Analytical Batch: 020395-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

035

4-7-95
WOC

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2B9	LAL Sample ID:	L3748-12
Date Collected:	25-JAN-95	Date Received:	02-FEB-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020395-8260-J1
Percent Moisture:	10.43	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	100	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
trans-1,2-Dichloroethene	156-50-5	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.6	5.6	
Chloroform	67-66-3	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	
Carbon tetrachloride	56-23-5	<5.6	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6	5.6	
Tetrachloroethene	127-18-4	<5.6	5.6	
Dibromochloromethane	124-48-1	<5.6	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

~~036~~

4-7-95

000110

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: BOD2B9	LAL Sample ID: L3748-12
Date Received: 02-FEB-95	Date Analyzed: 03-FEB-95
Matrix: SOIL	Dilution Factor: 1.00
Analytical Batch: 020395-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

037

4-7-95 (WSC)

LOCKHEED ANALYTICAL SERVICES

Checklists

LATA INORGANIC (METALS) DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
VALIDATION PROCEDURE:	☐ WHC-CM-5-3, Rev. 0			☒ WHC-SD-EN-SPP-002, Rev. 2	

PROJECT:	304 CONCRETION FACILITY CLOSURE		SDG:	LK3706-LAS-030	
VALIDATOR:	M WEBB 4-19-95	LATA NO:	VW403.28	DATE:	13-Apr-95
REVIEWER:	A FREIER 4-18-95	LAB:	LAS	CASE:	N/A
SAF NO:	94-402	QAPP NO:	N/A	SAP NO:	WHC-SD-EN-AP-177

ANALYSES REQUESTED

☒ ICP SW-846 TAL 6010	☒ GFAA SW-846 Arsenic 7060	☒ GFAA SW-846 Lead 7421	☒ GFAA SW-846 Selenium 7740	☒ GFAA SW-846 Thallium 7841	☒ SW-846 Mercury 7471

SAMPLE NO.	MATRIX
B0D2B1 B0D2B3	SOLID
B0D2B5 B0D2B8	
B0D2B9 B0D2F0	
B0D2F1 B0D2F2	
B0D2F3 B0D2F4	
B0D2F5 B0D2F6	
B0D2F7 B0D2F8	

COMMENTS:

Any temperature variation at the time of receipt will not affect the analyses.

	YES	NO	N/A
1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE			
Is technical verification documentation present?	☒	☐	☐
Is a case narrative present?	☒	☐	☐
2. HOLDING TIMES			
Are sample holding times acceptable?	☒	☐	☐

See HOLDING TIME SUMMARY form

	YES	NO	N/A
3. INSTRUMENT PERFORMANCE AND CALIBRATIONS			
Were initial calibrations performed on all instruments?	☒	☐	☐
Are initial calibrations acceptable?	☒	☐	☐
Are ICP interference checks acceptable?	☒	☐	☐
Were ICV and CCV checks performed on all instruments?	☒	☐	☐
Are ICV and CCV checks acceptable?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

4. BLANKS	YES	NO	N/A
Were ICB and CCB checks performed for all applicable analyses?	X		
Are ICB and CCB results acceptable?		X	
Were preparation blanks analyzed?	X		
Are preparation blank results acceptable?		X	

If NO(s) are checked, see BLANK AND SAMPLE DATA SUMMARY form

5. ACCURACY	YES	NO	N/A
Were spike samples analyzed at the proper frequency?	X		
Are all spike sample recoveries acceptable?		X	
Are all elements spiked at an appropriate level?	X		
Was a post digestion spike analyzed?			X
Are all post digestion spike recoveries acceptable?			X
Were laboratory control samples (LCS) analyzed at the proper frequency?	X		
Are all LCS recoveries acceptable?		X	
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see ACCURACY DATA SUMMARY form

6. PRECISION	YES	NO	N/A
Were laboratory duplicates analyzed at the proper frequency?	X		
Are all duplicate RPD values acceptable?	X		
Were MS/MSDs analyzed?			X
Are all MS/MSD RPD values acceptable?			X
Were ICP serial dilution samples analyzed at the proper frequency?	X		
Are all ICP serial dilution %D values acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see PRECISION DATA SUMMARY form

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

7. FIELD QC SAMPLES	YES	NO	N/A
Were field QC samples (field/trip blanks, duplicates, splits, performance audit) identified?	☐	☒	☐
Are field/trip blank results acceptable? (see Blank Data Summary form)	☐	☐	☒
Are field duplicate RPD values acceptable? (see Field QC calculations)	☐	☐	☒
Are field split RPD values acceptable? (see Field QC calculations)	☐	☐	☒
Are performance audit sample results acceptable?	☐	☐	☒

Comments:

8. FURNACE AA QUALITY CONTROL	YES	NO	N/A
Were duplicate injections performed if required?	☐	☐	☒
Are all duplicate injection %RSD values acceptable?	☐	☐	☒
Were analytical spikes performed if required?	☐	☐	☒
Are all analytical spike recoveries acceptable?	☐	☐	☒
Was MSA performed if required?	☒	☐	☐
Are all MSA results acceptable?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

Comments: Analytical spikes and duplicate injections are not required by SW-846. Sample results will not be qualified due to analytical spike recovery. Sample B0D2B8 (Lead) was analyzed using the Method of Standard Addition (MSA) due to matrix interference.

9. REPORTED RESULTS AND DETECTION LIMITS	YES	NO	N/A
Are results reported for all requested analyses?	☒	☐	☐
Are all results supported in the raw data?	☒	☐	☐
Are results calculated properly?	☒	☐	☐
Do results meet the CRDLs?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

Comments:

VALIDATION SUMMARY

For deficiencies (major and minor) and comments, please refer to the Qualification Summary Table.

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG:	LK3706-LAS-030	VALIDATOR: M WEBB					DATE: 13-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE	REVIEWER: A FREIER					LATA NO.: VW403.28		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2B1	SOLIDS	ICP	23-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	18	*180*	None
B0D2B1	SOLIDS	Arsenic	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B1	SOLIDS	Lead	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B1	SOLIDS	Thallium	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B1	SOLIDS	Selenium	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B1	SOLIDS	Mercury	23-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	17	*28*	None
B0D2B3	SOLIDS	ICP	23-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	18	*180*	None
B0D2B3	SOLIDS	Arsenic	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B3	SOLIDS	Lead	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B3	SOLIDS	Thallium	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B3	SOLIDS	Selenium	23-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	21	*180*	None
B0D2B3	SOLIDS	Mercury	23-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	17	*28*	None
B0D2B5	SOLIDS	ICP	25-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	16	*180*	None
B0D2B5	SOLIDS	Arsenic	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B5	SOLIDS	Lead	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B5	SOLIDS	Thallium	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B5	SOLIDS	Selenium	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B5	SOLIDS	Mercury	25-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	15	*28*	None
B0D2B8	SOLIDS	ICP	25-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	16	*180*	None
B0D2B8	SOLIDS	Arsenic	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B8	SOLIDS	Lead	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B8	SOLIDS	Thallium	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B8	SOLIDS	Selenium	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B8	SOLIDS	Mercury	25-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	15	*28*	None
B0D2B9	SOLIDS	ICP	25-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	16	*180*	None
B0D2B9	SOLIDS	Arsenic	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B9	SOLIDS	Lead	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B9	SOLIDS	Thallium	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B9	SOLIDS	Selenium	25-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	19	*180*	None
B0D2B9	SOLIDS	Mercury	25-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	15	*28*	None
B0D2F0	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F0	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F0	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F0	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG:	LK3706-LAS-030		VALIDATOR: M WEBB					DATE:	13-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: A FREIER					LATA NO.:	VW403.28	
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2F0	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F0	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F1	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F1	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F1	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F1	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F1	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F1	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F2	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F2	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F2	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F2	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F2	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F2	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F3	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F3	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F3	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F3	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F3	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F3	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F4	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F4	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F4	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F4	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F4	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F4	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F5	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F5	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F5	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F5	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F5	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F5	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F6	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F6	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG:	LK3706-LAS-030		VALIDATOR: M WEBB					DATE:	13-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: A FREIER					LATA NO.:	VW403.28	
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2F6	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F6	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F6	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F6	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F7	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F7	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F7	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F7	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F7	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F7	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None
B0D2F8	SOLIDS	ICP	19-Jan-95	07-Feb-95	10-Feb-95	N/A	*N/A*	22	*180*	None
B0D2F8	SOLIDS	Arsenic	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F8	SOLIDS	Lead	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F8	SOLIDS	Thallium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F8	SOLIDS	Selenium	19-Jan-95	07-Feb-95	13-Feb-95	N/A	*N/A*	25	*180*	None
B0D2F8	SOLIDS	Mercury	19-Jan-95	09-Feb-95	09-Feb-95	N/A	*N/A*	21	*28*	None

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

BLANK DATA SUMMARY

SDG:	LK3706-LAS-030		VALIDATOR:	M WEBB					DATE:	13-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER:	A FREIER					LATA NO.:	VW403.28
BLANK ID	ANALYTE	RESULT	LAB Q	RT	UNITS	2X RESULT mg/Kg	5X RESULT mg/Kg	10X RESULT mg/Kg	SAMPLES AFFECTED	VAL Q
ICB	Antimony	-46.80	B	N/A	µg/L	18.72	N/A	N/A	B0D2B1, B0D2B3, B0D2B5 B0D2B8, B0D2B9, B0D2F0 B0D2F1, B0D2F2, B0D2F3 B0D2F4, B0D2F5, B0D2F6 B0D2F7, B0D2F8	UJ
CCB	Cobalt	9.7	B	N/A	µg/L	N/A	9.7	N/A	B0D2B5, B0D2B8	U
PB	Silver	-1.036	B	N/A	mg/Kg	N/A	N/A	10.36	B0D2B1, B0D2B3, B0D2B5 B0D2B8, B0D2B9, B0D2F0 B0D2F1, B0D2F2, B0D2F3 B0D2F4, B0D2F5, B0D2F6 B0D2F7, B0D2F8	UJ

CLP

3
BLANKS

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	26.0	U	85.7	B	26.0	U	26.0	U	-8.640	B	P
Antimony	-46.8	B	45.0	U	45.0	U	45.0	U	9.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Barium	12.0	U	12.0	U	12.0	U	12.0	U	2.400	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cadmium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Calcium	20.0	U	78.5	B	20.0	U	20.0	U	4.000	U	P
Chromium	3.0	U	7.6	B	3.4	B	3.2	B	0.600	U	P
Cobalt	7.0	U	7.0	U	7.0	U	7.0	U	1.400	U	P
Copper	3.0	U	6.0	B	3.9	B	3.0	U	0.600	U	P
Iron	7.0	B	44.3	B	6.0	U	6.0	U	2.530	B	P
Lead	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Magnesium	37.0	U	115.3	B	37.0	U	37.0	U	7.400	U	P
Manganese	1.0	U	5.3	B	2.8	B	2.8	B	0.200	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	AV
Nickel	12.0	U	12.0	U	12.0	U	12.0	U	2.400	U	P
Potassium	680.0	U	680.0	U	680.0	U	680.0	U	136.000	U	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	F
Silver	4.0	U	4.0	U	4.0	U	4.0	U	-1.036	B	P
Sodium	23.0	U	52.7	B	23.0	U	23.0	U	-9.952	B	P
Thallium	4.0	U	4.0	U	4.0	U	4.0	U	0.800	U	F
Vanadium	3.0	U	6.3	B	3.0	U	3.0	U	0.600	U	P
Zinc	2.0	U	5.7	B	2.4	B	3.2	B	0.400	U	P

4/3-95

024

000120

CLP

3
BLANKS

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			26.0	U	65.3	B					P
Antimony			45.0	U	45.0	U					P
Arsenic			2.0	U	2.0	U					F
Barium			12.0	U	12.0	U					P
Beryllium			1.0	U	1.0	U					P
Cadmium			3.0	U	3.0	U					P
Calcium			20.0	U	75.3	B					P
Chromium			6.7	B	4.1	B					P
Cobalt			9.7	B	7.0	U					P
Copper			6.0	B	4.6	B					P
Iron			19.4	B	41.3	B					P
Lead			2.0	U	2.0	U					F
Magnesium			37.0	U	99.1	B					P
Manganese			7.1	B	4.8	B					P
Mercury			0.2	U	0.2	U	0.2	U			AV
Nickel			12.0	U	12.0	U					P
Potassium			680.0	U	680.0	U					P
Selenium			3.0	U	3.0	U					F
Silver			4.0	U	4.0	U					P
Sodium			99.0	B	51.8	B					P
Thallium			4.0	U	4.0	U					F
Vanadium			6.1	B	4.7	B					P
Zinc			6.3	B	4.9	B					P

4-13-95

025

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

ACCURACY DATA SUMMARY

SDG:	LK3706-LAS-030				VALIDATOR:	M WEBB				DATE:	13-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE				REVIEWER:	A FREIER				LATA NO.:	VW403.28	
							PERCENT RECOVERY (%R)					
HEIS-SN	ANALYTE	RESULTS	Lab Q	Actual Spiking Level	Minimum Required Spiking Level	Difference	Matrix Spike	Matrix Spike Duplicate	Post Digestion Spike	Laboratory Control Standard	SAMPLES AFFECTED	VAL Q
LCS	Sodium			346	136	210				184.3	B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	BJ
B0D2F0	Aluminum				0	0	NONE				B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	J
B0D2F0	Calcium				0	0	NONE				B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	J
B0D2F0	Iron				0	0	NONE				B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	J
B0D2F0	Magnesium				0	0	NONE				B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	J
B0D2F0	Potassium				0	0	NONE				B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	J/BJ
B0D2F0	Sodium				0	0	NONE				B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	BJ
B0D2F0	Thallium	0.9415	U	11.81	0.235375	11.57463	72.6%	N/A	N/A	N/A	B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9 B0D2F0 B0D2F1 B0D2F2 B0D2F3 B0D2F4 B0D2F5 B0D2F6 B0D2F7 B0D2F8	UJ

NOTES:

1. The minimum required spiking level is 25% of the sample concentration or the detection limit, whichever is higher
2. A negative number in the difference column indicates the spiking level for that element was inappropriate for the analyte level in the sample spiked.

CLP

5A
SPIKE SAMPLE RECOVERY

CLIENT ID NO.

BOD2F0S

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL__ Level (low/med): LOW___

% Solids for Sample: _84.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum							(NR)		NR
Antimony	75-125	355.3078		10.6085	U	471.49	75.4		P
Arsenic	75-125	12.7977		3.2245		9.44	101.4		F
Barium	75-125	553.0988		71.0507		471.49	102.2		P
Beryllium	75-125	10.9173		0.2782	B	11.79	90.2		P
Cadmium	75-125	11.4548		1.0491	B	11.79	88.3		P
Calcium							(NR)		NR
Chromium	75-125	57.3493		9.4745		47.15	101.5		P
Cobalt	75-125	179.4055		73.2997		117.87	90.0		P
Copper	75-125	77.1400		21.8016		58.94	93.9		P
Iron							(NR)		NR
Lead		24.7690		20.4064		4.72	92.4		F
Magnesium							(NR)		NR
Manganese	75-125	426.2382		319.6021		117.87	90.5		P
Mercury	75-125	0.5299		0.1151		0.54	76.8		AV
Nickel	75-125	160.1782		45.4820		117.87	97.3		P
Potassium							(NR)		NR
Selenium	75-125	2.8098		0.7061	U	2.36	119.1		F
Silver	75-125	12.0630		0.9430	U	11.79	102.3		P
Sodium							(NR)		NR
Thallium	75-125	8.5711		0.9415	U	11.81	(72.6)	N	F
Vanadium	75-125	171.0036		53.9546		117.87	99.3		P
Zinc	75-125	348.8484		252.1252		117.87	82.1		P

Comments:
WATERY

4-13-95

029

CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Solid LCS Source: ERA LOT #219

Aqueous LCS Source: I.VENTURES__

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				3650.0	3665.1		1930.0	5580.0	100.4
Antimony	2000.0	1906.54	95.3	75.9	35.5		32.0	350.0	46.8
Arsenic	40.0	43.60	109.0	72.1	84.1		35.0	110.0	116.6
Barium	2000.0	2192.38	109.6	64.8	69.9		45.0	88.0	107.9
Beryllium	50.0	45.79	91.6	26.7	26.8		17.0	37.0	100.4
Cadmium	50.0	46.92	93.8	61.6	60.4		36.0	86.0	98.1
Calcium				2330.0	2576.6		1580.0	3170.0	110.6
Chromium	200.0	212.72	106.4	44.1	45.0		26.0	61.0	102.0
Cobalt	500.0	523.00	104.6	177.0	196.6		112.0	246.0	111.1
Copper	250.0	266.03	106.4	78.1	85.1		48.2	110.0	109.0
Iron				7360.0	6190.9		4930.0	11000.0	84.1
Lead	20.0	18.80	94.0	50.9	59.0		27.8	71.0	115.9
Magnesium				2550.0	2702.6		1610.0	3600.0	106.0
Manganese	500.0	523.40	104.7	141.0	145.1		97.0	190.0	102.9
Mercury	1.0	1.01	100.9	32.1	35.0		17.0	48.0	109.0
Nickel	500.0	529.70	105.9	110.0	124.9		65.3	157.0	113.5
Potassium				3310.0	3442.5		2090.0	4400.0	104.0
Selenium	10.0	11.00	110.0	74.2	85.1		36.0	108.0	114.7
Silver	50.0	51.43	102.9	71.7	53.4		29.0	105.0	74.5
Sodium				346.0	637.7	B	180.0	506.0	184.3
Thallium	50.0	46.30	92.6	64.1	62.8		31.0	98.0	98.0
Vanadium	500.0	527.23	105.4	83.0	82.5		56.0	113.0	99.4
Zinc	500.0	499.83	100.0	78.2	84.0		45.0	119.0	107.4

4-13-95

~~0.21~~

LATA INORGANIC (METALS)
DATA VALIDATION CHECKLIST

PRECISION DATA SUMMARY

SDG:	LK3706-LAS-030				VALIDATOR:	M WEBB							DATE:	13-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE				REVIEWER:	A FREIER							LATA NO.:	VW403.28	
HEIS-SN	ANALYTE	RESULTS	LAB Q	IDL µg/L	10*IDL µg/L	50*IDL µg/L	SERIAL DIL %D	CRDL µg/L	2 CRDL mg/Kg	5 CRDL mg/Kg	DUPE RPD	DUPE CRDL	MS/MSD RPD	SAMPLES AFFECTED	VAL Q
B0D2F0	Arsenic	3.2245		N/A	N/A	N/A	N/A	10	4	10	N/A	<2CRDL	N/A	NONE	NONE
B0D2F0	Lead	20.4064		N/A	N/A	N/A	N/A	3	1.2	3	21.8%	N/A	N/A	NONE	NONE
B0D2F0	Mercury	0.1263		N/A	N/A	N/A	N/A	0.2	0.08	0.2	N/A	<2CRDL	N/A	NONE	NONE

Note: The laboratory flagged the RPD for Pb as out of control limits, based on ± 20%. No qualifier was applied since the RPD was within the ± 35% control limit for soil as specified in WHC-SD-EN-SPP-002, Section 8.6.1.

CLP

6
DUPLICATES

CLIENT ID NO.

BOD2F0D

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3706

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

% Solids for Sample: _84.5 % Solids for Duplicate: __84.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		6912.4284		6511.4553		6.0		P
Antimony		10.6085	U	10.6594	U			P
Arsenic	2.4	3.2245		2.6036		21.3		F
Barium	47.1	71.0507		73.5571		3.5		P
Beryllium		0.2782	B	0.2819	B	1.3		P
Cadmium		1.0491	B	0.9143	B	13.7		P
Calcium	1178.7	3372.0762		3278.1823		2.8		P
Chromium	2.4	9.4745		9.4111		0.7		P
Cobalt		73.2997		63.0800		15.0		P
Copper	5.9	21.8016		19.6015		10.6		P
Iron		18373.1606		17909.9114		2.6		P
Lead		20.4064		16.4024		21.8	*	F
Magnesium	1178.7	4056.0079		4059.0247		0.1		P
Manganese		319.6021		319.1382		0.1		P
Mercury		.1263		.1604		23.8		NR
Nickel	9.4	45.4820		41.4272		9.3		P
Potassium		1059.5959	B	1108.9913	B	4.6		P
Selenium		0.7061	U	0.7101	U			F
Silver		0.9430	U	0.9475	U			P
Sodium		506.1058	B	479.6832	B	5.4		P
Thallium		0.9415	U	0.9467	U			F
Vanadium	11.8	53.9546		48.1427		11.4		P
Zinc		252.1252		234.2229		7.4		P

MW 3-14-95

~~030~~

000126

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte/Calibration Date: Arsenic 2-13-95

Concentration x	Absorbance y
10.00	0.017
25.00	0.053
50.00	0.106
100.00	0.205
200.00	0.412

r	r^2
0.9999	0.9998

slope	x intercept
0.0021	0.1226

1/slope	y intercept
484.8	-0.0002

LINEAR REGRESSION ANALYSIS

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte/Calibration Date: Mercury 2-9-95

Concentration x	Absorbance y
0.00	0.0068
0.50	0.5681
1.00	1.058
5.00	4.766
10.00	10.10

r	r^2
0.9995	0.9990

slope	x intercept
0.9990	0.0002

1/slope	y intercept
1.0010	0.0032

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

PERCENT RECOVERY (ICV/CCV)

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte	ICV/CCV ID	Observed Value	True Value	%R
		O	A	
Aluminum	ICV	100624.00	100000.00	100.6%
Aluminum	CCV	26263.95	25000.00	105.1%
Arsenic	ICV	101.40	100.00	101.4%
Arsenic	CCV	100.20	100.00	100.2%
Thallium	ICV	51.00	50.00	102.0%
Thallium	CCV	49.80	50.00	99.6%
Selenium	ICV	50.70	50.00	101.4%
Selenium	CCV	49.40	50.00	98.8%
Lead	ICV	106.50	100.00	106.5%
Lead	CCV	102.00	100.00	102.0%
Mercury	ICV	1.69	2.00	84.5%
Mercury	CCV	5.24	5.00	104.8%

The shaded recovery is within laboratory limits and is acceptable.

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

MATRIX SPIKE RECOVERY (MS)

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte	Sample ID	Spike Sample Result SSR	Sample Result SR	Spike Added SA	%R
Antimony	B0D2F0	355.30	0.00	471.49	75.4%
arsenic	B0D2F0	12.80	3.22	9.44	101.4%
Lead	B0D2F0	24.77	20.41	4.72	92.4%
Thallium	B0D2F0	8.57	0.00	11.81	72.6%
Selenium	B0D2F0	2.81	0.00	2.36	119.1%
Mercury	B0D2F0	0.53	0.12	0.54	76.8%

Aluminum, calcium, iron, magnesium, potassium, and sodium were not spiked in the matrix spike.

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

PERCENT RECOVERY (LCS)

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte	Observed value	True value	%R
	OLCS	ALCS	
Aluminum	3665.10	3650.00	100.4%
Arsenic	84.10	72.10	116.6%
Selenium	53.40	71.70	74.5%
Thallium	62.80	64.10	98.0%
Lead	59.00	50.90	115.9%
Mercury	35.00	32.10	109.0%

The shaded recovery is within the laboratory limits and is acceptable.

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

RELATIVE PERCENT DIFFERENCE

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Arsenic 2-13-95

Analyte	Sample ID	Original (Sample) concentration	Duplicate concentration	RPD
		OS	D	
Aluminum	B0D2F0	6912.43	6511.46	6.0%
Arsenic	B0D2F0	3.22	2.60	21.3%
Selenium	B0D2F0	Undetected	Undetected	NC
Thallium	B0D2F0	Undetected	Undetected	NC
Lead	B0D2F0	20.41	16.40	21.8%
Mercury	B0D2F0	0.13	0.16	23.8%

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

PERCENT DIFFERENCE (ICP SERIAL DILUTION)

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte	Analyte Concentration before Dilution	Analyte Concentration after Serial Dilution	%D
	I	S	
Aluminum B0D2F0	29321.83	29920	2.0%

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

INORGANICS RESULTS CALCULATION, SOIL

SDG: LK3706-LAS-030 Date: 13-Apr-95

LATA No.: VW403.28 Validator: M WEBB

Analyte	Sample Number	Concentration (Cal Curve) CONCS		Run Dilution Factor DFS	Final Volume (mL) VOL	Weight of Sample (g) WS	Dry Weight Conversion (decimal) SS	Con-centration (mg/Kg)
Aluminum	B0D2B1	30.44	mg/L	1	250	1.25	0.883	6895
Selenium	B0D2B1	1.10	µg/L	1	250	1.26	0.883	nondetect
Lead	B0D2B1	42.20	µg/L	2	250	1.26	0.883	19.0
Thallium	B0D2B1	0.70	µg/L	1	250	1.26	0.883	nondetect
Arsenic	B0D2B1	14.00	µg/L	1	250	1.26	0.883	3.2
Mercury	B0D2B1	0.25	µg/L	1	100	0.20	0.883	0.14
Aluminum	B0D2B9	35.81	mg/L	1	250	1.25	0.896	7996
Selenium	B0D2B9	1.10	µg/L	1	250	1.25	0.896	nondetect
Lead	B0D2B9	96.40	µg/L	5	250	1.25	0.896	108
Thallium	B0D2B9	0.80	µg/L	1	250	1.25	0.896	nondetect
Arsenic	B0D2B9	16.60	µg/L	1	250	1.25	0.896	3.7
Mercury	B0D2B9	0.21	µg/L	1	100	0.26	0.896	0.09
Aluminum	B0D2F2	30.24	mg/L	1	250	1.24	0.838	7280
Selenium	B0D2F2	0.70	µg/L	1	250	1.26	0.838	nondetect
Lead	B0D2F2	20.50	µg/L	1	250	1.26	0.838	4.9
Thallium	B0D2F2	0.50	µg/L	1	250	1.26	0.838	nondetect
Arsenic	B0D2F2	11.40	µg/L	1	250	1.26	0.838	2.7
Mercury	B0D2F2	0.21	µg/L	1	100	0.21	0.838	0.12

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E

VALIDATION PROCEDURE: ☐ WHC-CM-5-3, Rev. 0 ☒ WHC-SD-EN-SPP-001, Rev. 1

PROJECT:	304 CONCRETION FACILITY CLOSURE	SDG:	LK3706-LAS-030		
VALIDATOR:	A FREIER 4-11-95	LATA NO:	VW403.28	DATE:	6-Apr-95
REVIEWER:	M WEBB 4-21-95	LAB:	LAS	CASE:	N/A
SAF NO:	94-402	QAPP NO:	N/A	SAP NO:	WHC-SD-EN-AP-177

ANALYSES REQUESTED

☒ Total Uranium LAL-91-0168

SAMPLE NO.	MATRIX
B0D2B1 B0D2B3	SOLID
B0D2B5 B0D2B8	
B0D2B9 B0D2F0	
B0D2F1 B0D2F2	
B0D2F3 B0D2F4	
B0D2F5 B0D2F6	
B0D2F7 B0D2F8	

COMMENTS:

	YES	NO	N/A
1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE			
Is technical verification documentation present?	☒	☐	☐
Is a case narrative present?	☐	☒	☐
2. HOLDING TIMES			
Are sample holding times acceptable?	☒	☐	☐
Are samples preserved correctly?	☐	☐	☒

See HOLDING TIME SUMMARY form

	YES	NO	N/A
3. INSTRUMENT PERFORMANCE AND CALIBRATIONS			
Were instruments/detectors calibrated within one year of sample analysis?	☒	☐	☐
Are initial calibrations acceptable?	☒	☐	☐
Are standards NIST traceable?	☒	☐	☐
Are standards acceptable?	☒	☐	☐

Comments:

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

4. CONTINUING CALIBRATION

	YES	NO	N/A
Background checked at proper frequency?	☐	☐	☒
Background check acceptable?	☐	☐	☒
Efficiency checked at proper frequency?	☐	☐	☒
Efficiency check acceptable?	☐	☐	☒
Calibration check standards NIST traceable?	☒	☐	☐
Calibration check standards acceptable?	☒	☐	☐

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

5. BLANKS

	YES	NO	N/A
Were method blanks analyzed?	☒	☐	☐
Are the method blanks free of analytes?	☒	☐	☐
Were method blank results acceptable?	☒	☐	☐
Validation calculation/transcription checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see BLANK DATA SUMMARY form

6. ACCURACY

	YES	NO	N/A
Were spike samples analyzed at the proper frequency?	☒	☐	☐
Are all spike sample recoveries acceptable?	☒	☐	☐
Were laboratory control standards (LCS) analyzed at the proper frequency?	☒	☐	☐
Are all LCS recoveries acceptable?	☒	☐	☐
Was a tracer/chemical carrier added?	☐	☐	☒
Was the tracer/chemical carrier recovery acceptable?	☐	☐	☒
Are standard sources traceable?	☒	☐	☐
Are standards acceptable?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see ACCURACY DATA SUMMARY form

7. PRECISION

	YES	NO	N/A
Were laboratory duplicates analyzed at the proper frequency?	☒	☐	☐
Are all duplicate RPD values acceptable?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see PRECISION DATA SUMMARY form

8. FIELD QC SAMPLES	YES	NO	N/A
Were field QC samples (field/trip blanks, duplicates, splits, performance audit) identified?	☐	☒	☐
Are field/trip blank results acceptable? (see Blank Data Summary form)	☐	☐	☒
Are field duplicate RPD values acceptable? (see Field QC calculations)	☐	☐	☒
Are field split RPD values acceptable? (see Field QC calculations)	☐	☐	☒
Are performance audit sample results acceptable?	☐	☐	☒

Comments:

9. REPORTED RESULTS AND DETECTION LIMITS	YES	NO	N/A
Are results reported for all requested analyses?	☒	☐	☐
Are all results supported in the raw data?	☒	☐	☐
Are results calculated properly?	☒	☐	☐
Do MDAs meet the RDLs?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

Comments: The raw data (pgs. 24 - 28) included in this package is out of order. This makes it difficult to locate and examine the appropriate sample results.

VALIDATION SUMMARY

For deficiencies (major and minor) and comments, please refer to the Qualification Summary Table.

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG:	LK3706-LAS-030	VALIDATOR: A FREIER	DATE: 06-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE	REVIEWER: M WEBB	LATA NO.: VW403.28

HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2B1	SOLID	Total Uranium	23-Jan-95	N/A	27-Feb-95	N/A	*N/A*	35	*180*	NONE
B0D2B3	SOLID	Total Uranium	23-Jan-95	N/A	27-Feb-95	N/A	*N/A*	35	*180*	NONE
B0D2B5	SOLID	Total Uranium	25-Jan-95	N/A	27-Feb-95	N/A	*N/A*	33	*180*	NONE
B0D2B8	SOLID	Total Uranium	25-Jan-95	N/A	27-Feb-95	N/A	*N/A*	33	*180*	NONE
B0D2B9	SOLID	Total Uranium	25-Jan-95	N/A	27-Feb-95	N/A	*N/A*	33	*180*	NONE
B0D2F0	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F1	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F2	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F3	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F4	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F5	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F6	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F7	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE
B0D2F8	SOLID	Total Uranium	19-Jan-95	N/A	27-Feb-95	N/A	*N/A*	39	*180*	NONE

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

MATRIX SPIKE RECOVERY (MS)

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: A FREIER

Analyte	Sample ID	Spike Sample Result	Sample Result	Spike Added	%R
Total Uranium	B0D2F4	0.259	0.081	0.20	89%

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

PERCENT RECOVERY (LCS)

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: A FREIER

Analyte	Observed value	True value	%R
Total Uranium	95.06	100.00	95%

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

RELATIVE PERCENT DIFFERENCE

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: A FREIER

Analyte	Sample ID	Original (Sample) concentration	Duplicate concentration	RPD
Total Uranium	B0D2F4	0.081	0.09	10%

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

MINIMUM DETECTABLE ACTIVITY (MDA)

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: A FREIER

Analyte	Sample ID	Std Dev of bkgmd	Dilution	RDL	MDA
Total Uranium	B0D2F4	0.025	0.02	1.00	0.0058

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

RESULTS CALCULATION TOTAL URANIUM BY KPA

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: A FREIER

Analyte	Initial sample reading	Dilution factor	Result
B0D2F0	13.19	0.45	6.00

9513357.1634

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E

VALIDATION PROCEDURE:	☐ WHC-CM-5-3, Rev. 0		☒ WHC-SD-EN-SPP-002, Rev. 2		
PROJECT:	304 CONCRETION FACILITY CLOSURE		SDG:	LK3706-LAS-030	
VALIDATOR:	B COWAN (BC)	LATA NO:	VW403.28	DATE:	6-Apr-95
REVIEWER:	M WEBB (MW)	LAB:	LAS	CASE:	N/A
SAF NO:	94-402	QAPP NO:	N/A	SAP NO:	WHC-SD-EN-AP-177

ANALYSES REQUESTED

☒ VOLATILES SW-846 METHOD 8240	☒ VOLATILES SW-846 METHOD 8260	
MATRIX: SOLIDS	MATRIX: SOLIDS	COMMENTS:
SAMPLE NOs:	SAMPLE NOs:	
B0D290 B0D291 B0D292 B0D293 B0D294 B0D295 B0D296 B0D297 B0D298 B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9	B0D2B1 B0D2B3 B0D2B5 B0D2B8 B0D2B9	

	YES	NO	N/A
1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE			
Is technical verification documentation present?	☒	☐	☐
Is a case narrative present?	☒	☐	☐
2. HOLDING TIMES			
Are sample holding times acceptable?	☒	☐	☐

See HOLDING TIME SUMMARY form

	YES	NO	N/A
3. INSTRUMENT TUNING/PERFORMANCE AND CALIBRATIONS			
Is the GC/MS tuning/performance check acceptable?	☒	☐	☐
Were initial calibrations performed on all instruments at the proper frequency?	☒	☐	☐
Are initial calibrations acceptable?	☒	☐	☐
Were continuing calibrations performed on all instruments at the proper frequency?	☒	☐	☐
Are continuing calibrations acceptable?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

	YES	NO	N/A
Are continuing calibrations acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

4. BLANKS	YES	NO	N/A
Were laboratory blanks analyzed?	X		
Are laboratory blank results acceptable?		X	

If NO(s) are checked, see BLANK AND SAMPLE DATA SUMMARY form

5. ACCURACY	YES	NO	N/A
Were surrogates/System Monitoring Compounds analyzed at the proper frequency?	X		
Are all surrogate/System Monitoring Compound recoveries acceptable?		X	
Were spike samples (MS/MSD) analyzed at the proper frequency?	X		
Are all spike sample (MS/MSD) recoveries acceptable?		X	
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see ACCURACY DATA SUMMARY form

6. PRECISION	YES	NO	N/A
Were MS/MSDs analyzed?	X		
Are all MS/MSD RPD values acceptable?		X	
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see PRECISION DATA SUMMARY form

7. FIELD QC SAMPLES	YES	NO	N/A
Were field QC samples (field/trip blanks, duplicates, splits, performance audit) identified?		X	
Are field/trip blank results acceptable? (see Blank Data Summary form)			X
Are field duplicate RPD values acceptable? (see Field QC calculations)			X
Are field split RPD values acceptable? (see Field QC calculations)			X
Are performance audit sample results acceptable?			X

Comments:

DATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

	YES	NO	N/A
Are all internal standard retention times acceptable?	X		

9. COMPOUND IDENTIFICATION AND QUANTITATION	YES	NO	N/A
Is compound identification acceptable?	X		
Is compound quantitation acceptable?	X		
Are all TICs properly identified and coded?	X		

10. REPORTED RESULTS AND QUANTITATION LIMITS	YES	NO	N/A
Are results reported for all requested analyses?		X	
Are all results supported in the raw data?	X		
Do results meet the CRQLs?	X		
Validation calculation checks were performed and are acceptable.	X		

Comments: The analysis of ethyl acetate was requested on the Chain-of-Custody as part of 8240.

According to the DSI on page 200 of this report, ethyl acetate was "looked for" as a TIC.

VALIDATION SUMMARY

For deficiencies (major and minor) and comments, please refer to the Qualification Summary Table.

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG: LK3706-LAS-030			VALIDATOR: B COWAN						DATE: 06-Apr-95	
PROJECT: 304 CONCRETION FACILITY CLOSURE			REVIEWER: M WEBB						LATA NO.: VW403.28	
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2B1	SOLIDS	VOAs by 8260	23-Jan-95	N/A	30-Jan-95	N/A	N/A	7	*14*	NONE
B0D2B3	SOLIDS	VOAs by 8260	23-Jan-95	N/A	31-Jan-95	N/A	N/A	8	*14*	NONE
B0D2B5	SOLIDS	VOAs by 8260	25-Jan-95	N/A	3-Feb-95	N/A	N/A	9	*14*	NONE
B0D2B8	SOLIDS	VOAs by 8260	25-Jan-95	N/A	3-Feb-95	N/A	N/A	9	*14*	NONE
B0D2B9	SOLIDS	VOAs by 8260	25-Jan-95	N/A	8-Feb-95	N/A	N/A	14	*14*	NONE
B0D2B1	SOLIDS	VOAs by 8240	23-Jan-95	N/A	6-Feb-95	N/A	N/A	14	*14*	NONE
B0D2B3	SOLIDS	VOAs by 8240	23-Jan-95	N/A	3-Feb-95	N/A	N/A	11	*14*	NONE
B0D2B5	SOLIDS	VOAs by 8240	25-Jan-95	N/A	8-Feb-95	N/A	N/A	14	*14*	NONE
B0D2B8	SOLIDS	VOAs by 8240	25-Jan-95	N/A	8-Feb-95	N/A	N/A	14	*14*	NONE
B0D2B9	SOLIDS	VOAs by 8240	25-Jan-95	N/A	3-Feb-95	N/A	N/A	9	*14*	NONE

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG: LK3706-LAS-030			VALIDATOR: B COWAN						DATE: 06-Apr-95	
PROJECT: 304 CONCRETION FACILITY CLOSURE			REVIEWER: M WEBB						LATA NO.: VW403.28	
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D290	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D291	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D292	SOLIDS	VOAs by 8260	19-Jan-95	N/A	27-Jan-95	N/A	N/A	8	*14*	NONE
B0D293	SOLIDS	VOAs by 8260	19-Jan-95	N/A	27-Jan-95	N/A	N/A	8	*14*	NONE
B0D293RE	SOLIDS	VOAs by 8260	19-Jan-95	N/A	28-Jan-95	N/A	N/A	9	*14*	NONE
B0D294	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D294RE	SOLIDS	VOAs by 8260	19-Jan-95	N/A	28-Jan-95	N/A	N/A	9	*14*	NONE
B0D295	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D296	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D297	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D298	SOLIDS	VOAs by 8260	19-Jan-95	N/A	25-Jan-95	N/A	N/A	6	*14*	NONE
B0D290	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE
B0D291	SOLIDS	VOAs by 8240	19-Jan-95	N/A	1-Feb-95	N/A	N/A	13	*14*	NONE
B0D292	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE
B0D293	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE
B0D294	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE
B0D295	SOLIDS	VOAs by 8240	19-Jan-95	N/A	1-Feb-95	N/A	N/A	13	*14*	NONE
B0D296	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE
B0D297	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE
B0D298	SOLIDS	VOAs by 8240	19-Jan-95	N/A	2-Feb-95	N/A	N/A	14	*14*	NONE

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

BLANK DATA SUMMARY

SDG:	LK3706-LAS-030		VALIDATOR:	B COWAN				DATE:	06-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER:	M WEBB				LATA NO.:	VW403.28
BLANK ID	ANALYTE	RESULT	LAB Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	VAL Q
19196MB	Acetone by 8240	9.4	N/A	N/A	µg/Kg	N/A	94	B0D2B3	U
19199MB	Acetone by 8240	16	N/A	N/A	µg/Kg	N/A	160	B0D2B5	U
18460MB	Acetone by 8260	16	N/A	N/A	µg/Kg	N/A	160	B0D2B1	U
18460MB	Acetone by 8260	16	N/A	N/A	µg/Kg	N/A	160	B0D296	U

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	Blank	LAL Sample ID:	18460MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	30-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	013095-8260-J1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	88	70-121
Toluene-d8	99	81-117
Bromofluorobenzene	91	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	16.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
trans-1,2-Dichloroethene	156-50-5	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0	
Chloroform	67-66-3	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	1.4	5.0	J
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

4-6-95 CWW

Associated Samples B0D290, 291, 295, 296, B0D2B1

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	Method Blank	LAL Sample ID:	19196MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020295-8240-E2
Percent Moisture:	N/A	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	101	70-121
Toluene-d8	112	81-117
Bromofluorobenzene	92	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	9.4	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
Chloroform	67-66-3	<5.0	5.0	
2-Hexanone	591-78-6	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

Associated Samples BOD203

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	Method Blank	LAL Sample ID:	19199MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	08-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020895-8240-E2
Percent Moisture:	N/A	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	88	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	89	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	16.	9.9	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
Vinyl Acetate	108-05-4	<9.9	9.9	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<9.9	9.9	
Chloroform	67-66-3	<5.0	5.0	
2-Hexanone	591-78-6	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	
4-Methyl-2-Pentanone	108-10-1	<9.9	9.9	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

159

Associated Sample B0D2B5

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST
ACCURACY DATA SUMMARY

SDG:	LK3706-LAS-030	VALIDATOR:	B COWAN	DATE:	06-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE	REVIEWER:	M WEBB	LATA NO.:	VW403.28

HEIS-SN	ANALYSIS	CONSTITUENT	PERCENT RECOVERY (%R) Matrix Spike	Matrix Spike Duplicate	Surrogate/ System Monitoring Compounds	SAMPLES AFFECTED	VAL Q
B0D2B3	8240 VOA Matrix Spike[1,2]	Trichloroethene	73.0%	71.0%		B0D2B3	UJ
B0D298	8240 VOA Matrix Spike[1,2]	Trichloroethene	70.0%	70.0%		B0D290, B0D292 B0D293, B0D294 B0D296, B0D297 B0D298	J/UJ
B0D2B3	8240 VOA Surrogate Spike[3]	Toluene - d8			121.0%	B0D2B3	NONE
B0D293	8260 VOA Surrogate Spike[3]	1,2-Dichloroethane-d4			124.0%	B0D293	NONE
B0D293	8260 VOA Surrogate Spike[3]	1,2-Dichloroethane-d4			124.0%	B0D293	NONE
B0D293-RE	8260 VOA Surrogate Spike[3]	1,2-Dichloroethane-d4			126.0%	B0D293	NONE
B0D294	8260 VOA Surrogate Spike[3]	1,2-Dichloroethane-d4			128.0%	B0D294	NONE
B0D294-RE	8260 VOA Surrogate Spike[3]	1,2-Dichloroethane-d4			127.0%	B0D294	NONE

Note 1: The laboratory case narrative states that matrix spikes for 8240/8260 were performed on a soil matrix. Although the spiking of a solid matrix would have been more technically correct, the situation does not warrant the qualification of data.

Note 2: The compounds associated with trichloroethene are: 1,1,1-Trichlorethane; Carbon Tetrachloride; Bromodichloromethane; Trichloroethene; 1,1,2-Trichloroethane; Tetrachloroethene; and 1,1,2,2-Tetrachloroethane. Each of these compounds was qualified UJ for unacceptable matrix spike recovery.

Note 3: Though surrogate recoveries for samples B0D2B3, B0D293, and B0D294 were out of the upper control limits, no qualifiers were assigned since all results were non-detects. It should also be noted that the laboratory narrative did not mention that the 8260 VOA surrogate recoveries were out of control limits.

LOCKHEED ANALYTICAL SERVICES

MATRIX SPIKE DUPLICATE DATA SUMMARY
GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD2B3	LAL Sample ID:	19196MSD
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020295-8240-E2
Percent Moisture:	21.49	Preparation Dilution:	0.994

Surrogate Recovery		
		QC Limits
1,2-Dichloroethane-d4	87	70-121
Toluene-d8	111	81-117
Bromofluorobenzene	78	74-121

Constituent	Spike Added ug/kg	MSD Concentration ug/kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recovery
1,1-Dichloroethene	63.3	117	184	(46*)	22	1-234
Benzene	63.3	70.8	112	4	21	41-148
Trichloroethene	63.3	45.2	(71*)	3	24	75-137
Toluene	63.3	65.0	103	2	21	51-156
Chlorobenzene	63.3	64.4	102	4	21	41-159

4-7-95 WJE

Associated Samples: BOD2B3

LOCKHEED ANALYTICAL SERVICES

MATRIX SPIKE DATA SUMMARY
GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD298	LAL Sample ID:	19195MS
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	11.42	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	95	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	84	74-121

Constituent	Spike Added ug/kg	Sample Concentration ug/kg	MS Concentration ug/kg	% Recovery	QC Limits % Recovery
1,1-Dichloroethene	56.4	0.000	59.9	106	1-230
Benzene	56.4	0.000	64.8	115	41-148
Trichloroethene	56.4	0.000	39.7	70*	75-137
Toluene	56.4	0.000	51.9	91	51-150
Chlorobenzene	56.4	0.000	55.1	98	41-159

4-7-95 WSC

Associated Samples : BOD290, 292, 293, 294, 296, 297, 298

LOCKHEED ANALYTICAL SERVICES

MATRIX SPIKE DUPLICATE DATA SUMMARY
GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD298	LAL Sample ID:	19195MSD
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	02-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020195-8240-E2
Percent Moisture:	11.42	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	95	70-121
Toluene-d8	109	81-117
Bromofluorobenzene	88	74-121

Constituent	Spike Added ug/kg	MSD Concentration ug/kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recovery
1,1-Dichloroethene	56.4	73.8	131	21	22	1-230
Benzene	56.4	67.5	120	4	21	41-148
Trichloroethene	56.4	39.4	70*	1	24	75-137
Toluene	56.4	54.9	97	6	21	51-150
Chlorobenzene	56.4	59.2	105	7	21	41-159

4-7-95 WJC

Associated Samples: BOD290, 292, 293, 294, 296, 297, 298

LOCKHEED ANALYTICAL SERVICES

MATRIX SPIKE DATA SUMMARY
GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2B3	LAL Sample ID:	19196MS
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020295-8240-E2
Percent Moisture:	21.49	Preparation Dilution:	0.992

Surrogate Recovery (%)		
		QC Limits
1,2-Dichloroethane-d4	108	70-121
Toluene-d8	121 *	81-117
Bromofluorobenzene	99	74-121

Constituent	Spike Added ug/kg	Sample Concentration ug/kg	[illegible]	%	QC Limits
1,1-Dichloroethene	63.2	0.000	73.0	116	1-230
Benzene	63.2	0.000	73.6	116	41-148
Trichloroethene	63.2	0.000	46.3	73*	75-137
Toluene	63.2	0.000	63.8	101	[illegible]-150
Chlorobenzene	63.2	0.000	66.9	106	[illegible]-150

4-7-95 (WOC

Associated Samples: B0D2B3

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D293	LAL Sample ID:	L3706-22
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	27-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	012795-8260-E1
Percent Moisture:	10.13	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	124 *	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	97	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
trans-1,2-Dichloroethene	156-50-5	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.5	5.5	
Chloroform	67-66-3	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95 WJC

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	BOD293	LAL Sample ID:	L3706-22-RE
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	28-JAN-95	Analytical Dilution:	1
Matrix:	SolidWaste	Analytical Batch ID:	012895-8260-E1
Percent Moisture:	10.13	Preparation Dilution:	0.986

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	126 *	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	104	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITTATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
trans-1,2-Dichloroethene	156-50-5	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.5	5.5	
Chloroform	67-66-3	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95 (NOC)

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D294	LAL Sample ID:	L3706-23
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	27-JAN-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	012795-8260-E1
Percent Moisture:	10.35	Preparation Dilution:	0.973

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	128 *	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	102	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

4-2-95
WJC

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	BOD294	LAL Sample ID:	L3706-23-RE
Date Collected:	19-JAN-95	Date Received:	25-JAN-95
Date Analyzed:	28-JAN-95	Analytical Dilution:	1
Matrix:	SolidWaste	Analytical Batch ID:	012895-8260-E1
Percent Moisture:	10.35	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	127 *	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	101	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.5	5.5	
Vinyl Chloride	75-01-4	<5.5	5.5	
Bromomethane	74-83-9	<5.5	5.5	
Chloroethane	75-00-3	<5.5	5.5	
Trichlorofluoromethane	75-69-4	<5.5	5.5	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.5	5.5	
Carbon Disulfide	75-15-0	<5.5	5.5	
Methylene Chloride	75-09-2	<5.5	5.5	
trans-1,2-Dichloroethene	156-50-5	<5.5	5.5	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.5	5.5	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.5	5.5	
Chloroform	67-66-3	<5.5	5.5	
1,1,1-Trichloroethane	71-55-6	<5.5	5.5	
Carbon tetrachloride	56-23-5	<5.5	5.5	
1,2-Dichloroethane	107-06-2	<5.5	5.5	
Benzene	71-43-2	<5.5	5.5	
Trichloroethene	79-01-6	<5.5	5.5	
1,2-Dichloropropane	78-87-5	<5.5	5.5	
Bromodichloromethane	75-27-4	<5.5	5.5	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.5	5.5	
Toluene	108-88-3	<5.5	5.5	
trans-1,3-Dichloropropene	10061-02-6	<5.5	5.5	
1,1,2-Trichloroethane	79-00-5	<5.5	5.5	
Tetrachloroethene	127-18-4	<5.5	5.5	
Dibromochloromethane	124-48-1	<5.5	5.5	
Chlorobenzene	108-90-7	<5.5	5.5	
Ethylbenzene	100-41-4	<5.5	5.5	
m,p-Xylene	1330-20-7	<5.5	5.5	
o-Xylene	95-47-6	<5.5	5.5	
Styrene	100-42-5	<5.5	5.5	
Bromoform	75-25-2	<5.5	5.5	
1,1,2,2-Tetrachloroethane	79-34-5	<5.5	5.5	
1,3-Dichlorobenzene	541-73-1	<5.5	5.5	
1,4-Dichlorobenzene	106-46-7	<5.5	5.5	
1,2-Dichlorobenzene	95-50-1	<5.5	5.5	

4-7-95
WTC

050

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

PRECISION DATA SUMMARY

SDG:	LK3706-LAS-030	VALIDATOR: B COWAN					DATE: 06-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE	REVIEWER: M WEBB					LATA NO.: VW403.28	
HEIS-SN	CONSTITUENT	LAB Q	UNITS	SPIKE CONC	5X SPIKE CONC	MS/MSD RPD	SAMPLES AFFECTED	VAL Q
B0D2B3	1,1- dichloroethene					46.0%	NONE ALL ND	NONE

Note: All compounds associated with 1,1-dichloroethene were non-detects and no qualifiers were assigned due to the unacceptable MS/MSD RPD for sample B0D2B3.

LOCKHEED ANALYTICAL SERVICES

MATRIX SPIKE DUPLICATE DATA SUMMARY
GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD2B3	LAL Sample ID:	19196MSD
Date Collected:	23-JAN-95	Date Received:	27-JAN-95
Date Analyzed:	03-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020295-8240-E2
Percent Moisture:	21.49	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	87	70-121
Toluene-d8	111	81-117
Bromofluorobenzene	78	74-121

Constituent	Spike Added ug/kg	MSD Concentration ug/kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recovery
1,1-Dichloroethene	63.3	117	184	46*	22	1-234
Benzene	63.3	70.8	112	4	21	41-148
Trichloroethene	63.3	45.2	71*	3	24	75-137
Toluene	63.3	65.0	103	2	21	51-156
Chlorobenzene	63.3	64.4	102	4	21	41-159

Associated Samples: BOD2B3

dw 4/20/95

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

VOA RELATIVE RESPONSE FACTOR

Analyte	Response for Analyte of Interest	Conc. of Internal Standard	Area of Internal Standard	Conc. of Analyte of Interest	RRF
Chloromethane (8260, 20 ppb, 1/17/95)	27320	50.00	77691	20.00	0.879
Chloromethane (8240, 20 ppb, 2/7/95)	23773	50.00	74876	20.00	0.794

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

RELATIVE STANDARD DEVIATION
8260
1-17-95

RRF1 Analyte: Chloromethane

RRF1
0.87912
1.55884
0.82649
0.87535
0.90588

MEAN	STDEV	RSD
1.009	0.3086	30.6

RELATIVE STANDARD DEVIATION
8240
2-7-95

RRF2 Analyte: Chloromethane

RRF2
0.79375
0.89939
1.0259
0.8146
0.90351

MEAN	STDEV	RSD
0.887	0.0917	10.3

9513357.1615

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

VOA PERCENT DIFFERENCE

Analyte	Initial Calibration Average RRF	Continuing Calibration Average RRF	%D
Chloromethane (8260, 50 ppb, 1/17/95)	1.00914	0.66752	33.85%
Chloromethane (8240, 50 ppb, 2/7/95)	0.88743	0.83639	5.75%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

VOA SURROGATE RECOVERY

Analyte	surrogate result	surrogate added	%R
Toluene-d8 (8260, B0D2B5)	52.01	50.00	104%
Toluene-d8 (8240, B0D2B5)	50.08	50.00	100%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

MATRIX SPIKE RECOVERY (MS/MSD)

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

Analyte	Sample ID	MS Result	MSD Result	Sample Result	Spike Added	MS%R	MSD%R
Benzene (8260)	B0D2B5	59.4	58.0	0.0	54.3	109%	107%
Benzene (8240)	B0D2B9	74.6	70.9	0.0	55.7	134%	127%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

RELATIVE PERCENT DIFFERENCE

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

Analyte	Sample ID	MS %R	MSD %R	RPD
Benzene (8260)	B0D2B5	109.4%	106.8%	2%
Benzene (8240)	B0D2B9	133.9%	127.3%	5%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

RESULTS CALCULATIONS FOR VOA SOLID SAMPLES (Low Level)

SDG: LK3706-LAS-030 Date: 6-Apr-95

LATA No.: VW403.28 Validator: B COWAN

Analyte	Area of the Quant Ion for the Analyte of Interest	Area of the Quant Ion for the Internal Standard	Amount of Internal Standard added (ng)	Relative Response Factor	Weight of sample added (g)	Dry Weight Conversion (decimal)	Conc (µg/Kg)
Benzene (8260, 2B5MS)	995741	105106	50.00	1.73156	5.00	0.921	59.4
Benzene (8240, 2B9MS)	2558129	278696	50.00	1.37015	5.01	0.896	74.6

Laboratory Case Narratives

Lockheed Analytical Services

Log-in No.: L3706/L3723/L3748
Quotation No.: Q400000
SAF: 94-402
Document File No.: 0125512/0127512A/0202512
WHC Document Control No.: 151
SDG No.: LK3723

CASE NARRATIVE
INORGANIC ANALYSES

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- Fourteen soil samples were logged in as projects L3706, L3723 and L3748 for total metals analysis. The samples were prepared and analyzed as Batch 125WH2 for selected analytes as requested on the chain of custody. Sample BOD2F0 (L3607-1) was used for matrix spike, duplicate, post-digestion spike and serial dilution analyses. All flags due to the performance of the above-mentioned QC sample are also associated with every sample digested with this batch.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The concentration levels of all the requested analytes in the method blank were below the reporting detection limits.

Internal Quality Control

All Internal Quality Control were within acceptance limits with the following exceptions:

- The matrix spike recovered outside the control limits for thallium. However, the acceptable recovery of the prep blank spike for thallium indicates that the analytical system was operating correctly and that the out-of-control recovery may be attributed to matrix interferences.

- Sodium in the solid lcs recovered outside of the manufacturer's advisory limits. This is due to the fact that its true concentration in solution is below the reporting detection limit. Signals observed at this level consist primarily of noise.

011
LDW
4-21-9

- For lead, the relative percent difference between the sample and the duplicate was out of control limit of +/- 20%. All other analytes were acceptable. All lead results are flagged with a "*".

- A duplicate precision is not reported for mercury, as the procedure does not adequately address how to report the triplicate results. At the customers request, the samples were analyzed in triplicate, all solid samples submitted for this method are reported as the mean of the three values with a +/- 2 sigma error.

Sample Results

- Due to matrix interference , the following sample was analyzed via Method of Standard Addition (MSA). The sample result is flagged with an "S".

Lead BOD2B8

- The following qualifiers are reported on the basis of the techniques employed to perform the analyses:
"F" GFAA
"P" ICP-AES
"AV"Cold Vapor AA

The preparation log (form XIII) indicates one mercury digestion for each sample. However, as per the customers request, the samples were digested and analyzed in triplicates. Due to software field size limitation the duplicate and the triplicate sample do not show on this form. Please refer to the bench sheets for additional information.

Nalini Prabhakar — March 7, 1995

Prepared By — **Date**

~~01E~~
cdm
4-21-9

Lockheed Analytical Services

Log-in No.: L3706/L3723/L3748
Quotation No.: Q400000
SAF: 94-402
Document File No.: 0125512/0127512A/0202512
WHC Document Control No.: 151
SDG No.: LK3723

RECORD COPY

CASE NARRATIVE
RADIOCHEMICAL ANALYSES

The routine calibration and quality control analyses performed for this batch include as applicable: instrument calibration, initial and continuing calibration verification, quench monitoring standards, instrument background analysis, method blanks, yield tracer, laboratory control samples, matrix spike samples, duplicate samples.

Holding Time Requirements

All holding time requirements were met.

Analytical Method

Total Uranium

The total uranium analysis was performed using LAL-91-SOP-0168. The sample duplicate analysis was out of limits; however, since the sample is below the MDA, the data is considered acceptable. All other QC criteria were met. Due to an anomoly of the KPA software, any sample or QC result with an activity of "0" causes a blank space to appear under the "final result" header.

Yvonne M. Jacoby
Prepared By

March 20, 1995
Date

~~DH~~
LAM 4-2

Lockheed Analytical Services

Log-in No.: L3706/L3723/L3748
Quotation No.: Q400000
SAF: 94-402
Document File No.: 0125512/0127512A/0202512
WHC Document Control No.: 151
SDG No.: LK3723

RECORD COPY

Analytical Method 8240 Volatiles

The associated client samples were analyzed in two analytical batches.

Analytical Batch 020295-8240-E2 (Soil Samples)

The associated samples were analyzed within holding time on February 02 and 03, 1995. All associated instrument tunes, initial and continuing calibrations were within QC criteria. Target compound Acetone was detected at less than five times (5x) the Practical Quantitation Limits (PQL) in the method blank (19196MB) but tentatively identified compounds (TICs) were not detected. All associated samples with detected Acetone as in the method blank were flagged with the qualifier **"B"**. Surrogate recoveries were within QC limits for all associated samples analyzed except for Toluene-d8 in sample BOD2B3 (19196MS). All compound recoveries in the matrix spike (19196MS), matrix spike duplicate (19196MSD) and laboratory control sample (19196LCS) were within QC limits except for Trichloroethene in both the MS and MSD due to sample matrix interference. All relative percent differences (RPDs) between the MS and MSD recoveries were within QC limits for each compound except for 1,1-Dichloroethene. All internal standard area counts and retention times were within QC limits for all the samples. Target compound Acetone was detected in sample BOD2B3 (L3723-11) but tentatively identified compounds (TICs) were not detected.

Analytical Batch 020695-8240-E2 (Soil Samples)

The associated samples were analyzed within holding time on February 06, 1995. All associated instrument tunes, initial and continuing calibrations were within QC criteria. Target compounds and tentatively identified compounds (TICs) were not detected in the method blank (19197MB). Surrogate recoveries were within QC limits for all associated samples analyzed. All compound recoveries in the matrix spike (MS) and matrix spike duplicate (MSD) are referenced in analytical batch 020295-8240-E1. All compound recoveries in the laboratory control sample (19197LCS) were within QC limits. All internal standard area counts and retention times were within QC limits for all the samples. Target compound Acetone was detected in sample BOD2B1 (L3723-5). Tentatively identified compounds (TICs) were not detected in the associated client samples.

Lydia M. Coleman
Prepared By

March 20, 1995
Date

~~DTG~~
4-21-95

Lockheed Analytical Services

Log-in No.: L3706/L3723/L3748
Quotation No.: Q400000
SAF: 94-402
Document File No.: 0125512/0127512A/0202512
WHC Document Control No.: 151
SDG No.: LK3723

CASE NARRATIVE
ORGANIC ANALYSES

Analytical Method 8260 Volatiles

The associated samples were analyzed in two analytical batches.

Analytical Batch 013095-8260-J1 (Soil Samples)

The associated samples were analyzed within holding time on January 30, 1995. All associated instrument tunes, initial and continuing calibrations were within QC criteria. Target compounds Acetone and 1,1,1-Trichloroethane were detected at less than five times (5x) the Practical Quantitation Limits (PQL) in the method blank (18460MB) and two tentatively identified compounds (TICs) were also detected. All associated samples with detected target compounds and TICs as in the method blank were flagged with the qualifier "B". Surrogate recoveries were within QC limits for all associated samples analyzed. All compound recoveries in the matrix spike (MS), matrix spike duplicate (MSD) are referenced in analytical batch 013195-8260-J1. All compound recoveries in the laboratory control sample (18460LCS) were within QC limits. All internal standard area counts and retention times were within QC limits for all the samples. Target compound Acetone and one tentatively identified compound (TIC) were detected in the associated client sample analyzed.

Analytical Batch 013195-8260-J1 (Soil Samples)

The associated samples were analyzed within holding time on January 31, 1995. All associated instrument tunes, initial and continuing calibrations were within QC criteria. Target compound Acetone was detected in the method blank (18536MB) at less than five times (5x) the Practical Quantitation Limits (PQL). Tentatively identified compounds (TICs) were not detected in the method blank. All associated samples with detected Acetone as in the method blank were flagged with the qualifier "B". Surrogate recoveries were within QC limits for all associated samples analyzed. All compound recoveries in the matrix spike (18536-MS), matrix spike duplicate (18536-MSD) and laboratory control sample (18536LCS) were within QC limits. All relative percent differences (RPDs) between the MS and MSD recoveries were within QC limits for each compound. All internal standard area counts and retention times were within QC limits for all the samples. Target compounds and tentatively identified compounds (TICs) were not detected in the associated client sample analyzed.

~~01~~
ldw
4-21

Chain-of-Custody Information

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

L3723

C-O-C # 008773

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator : RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: S Expansion Joint
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376-1532

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
B0D2B1	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-23-95/1020	500 mL aG
B0D2B2	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-23-95/1045	500 mL aG
B0D2B1	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-23-95/1020	120 mL aG
B0D2B2	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-23-95/1045	120 mL aG
B0D2B1	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	1-23-95/1020	250 mL aG
B0D2B2	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	1-23-95/1045	250 mL aG
B0D2B1	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-23-95/1020	250 mL aG
B0D2B2	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-23-95/1045	250 mL aG

0185

Relinquished By R.J. Steffler	Received By Shannon L. Spencer	Date/Time 1-24-95 0900	Special Lab Instructions/Conditions
Relinquished By Shannon L. Spencer	Received By	Date/Time	
Relinquished By	Received By	Date/Time	
Relinquished By	Received By	Date/Time	
Relinquished By	Received By	Date/Time	

Laboratory Section: Received By: Paula Davis 1-24-95/9:45AM Date/Time
Title: Sample Custodian 1-24-95/9:45 Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

A-6001-500 (11/94)

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 008774

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: S EXPANSION JOINT
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376-1552

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
B0D213	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-23-95/1115	500 mL aG
~~B~~	~~ICP Metals- TAL (6010)~~	~~/~~		~~/~~	~~As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)~~	~~SOLIDS~~	~~None~~	/	~~500 mL aG~~
B0D2B3	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-23-95/1115	120 mL aG
~~B~~	~~TOTAL URANIUM (LAL-91-0168)~~	~~/~~		~~/~~		~~SOLIDS~~	~~NONE~~	/	~~120 mL aG~~
B0D213	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	1-23-95/1115	250 mL aGs
~~B~~	~~VOA (SW-846 8240)~~	~~/~~		~~/~~	~~ethyl acetate, methl ethyl ketone, (2-butanone)~~	~~SOLIDS~~	~~Cool to 4 Deg. C.~~	/	~~250 mL aGs~~
B0D2B3	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-23-95/1115	250 mL aGs
~~B~~	~~VOA (SW-846 8260)~~	~~/~~		~~/~~		~~SOLIDS~~	~~Cool to 4°C~~	/	~~250 mL aGs~~

Relinquished By R.J. Steffler	Received By Shannon L. Spencer	Date/Time: 1-26-95 0900	Special Lab Instructions/Conditions:
Relinquished By Shannon L. Spencer	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	

Laboratory Section: Received By: Paul A. Davis 1-27-95/9:45am Date/Time
Title: Sample Custodian 1-27-95/9:45am Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C # 08797

SAF #: 94-402
Date: 12/13/94

Project Designation: 304 CONCRETION FACILITY
Sampling Location: S Extension Joint
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376-1532

Laboratory: Lockheed
Protocol: RCRA

Custody Form Initiator: ~~RZ STEFFLER~~ SCS 1-25-95 RJ Young

L3748

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
B00285	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-25-95 1120	500 mL ag
B00288	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-25-95 1150	500 mL ag
B00285	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-25-95 1120	120 mL ag
B00288	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-25-95 1150	120 mL ag
B00285	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	1-25-95 1120	250 mL ag
B00288	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	1-25-95 1150	250 mL ag
B00285	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-25-95 1120	250 mL ag
B00288	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-25-95 1150	250 ml ag

OFFSITE

Relinquished By: [signature]	Received By: R.J. Steffler	Date/Time: 2-1-95 0650	Special Lab Instructions/Conditions
Relinquished By: R.J. Steffler	Received By:	Date/Time:	
Relinquished By:	Received By:	Date/Time:	
Relinquished By:	Received By:	Date/Time:	
Relinquished By:	Received By:	Date/Time:	

Laboratory Section: Received By: Paul C Daud 2-2-95/9:45am Date/Time
Title: Sample Custodian 2-2-95/9:45 Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C # 08798

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: ~~RZ STEFFLER~~ KS Young SCS 1-25-95

Project Designation: 304 CONCRETION FACILITY
Sampling Location: S Extension Sorrit
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376-1532

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
B00289	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-25-95/1140	500 mL aG
~~B~~	~~ICP Metals- TAL (6010)~~	/	RZS 1-31-95	/	~~As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)~~	~~SOLIDS~~	~~None~~	/	~~500 mL aG~~
B00289	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-25-95/1140	120 mL p
~~B~~	~~TOTAL URANIUM (LAL-91-0168)~~	/	RZS 1-31-95	/		~~SOLIDS~~	~~NONE~~	/	~~120 mL~~
B00289	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	1-25-95/1140	250 mL aG
~~B~~	~~VOA (SW-846 8240)~~	/	RZS 1-31-95	/	~~ethyl acetate, methl ethyl ketone, (2-butanone)~~	~~SOLIDS~~	~~Cool to 4 Deg. C.~~	/	~~250 mL aG~~
B00289	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-25-95/1140	250 mL aG
~~B~~	~~VOA (SW-846 8260)~~	/	RZS 1-31-95	/		~~SOLIDS~~	~~Cool to 4°C~~	/	~~250 mL aG~~

ZOTO

Relinquished By	Received By	Date/Time	
Relinquished By R.Z. Steffler	Received By	Date/Time	
Relinquished By	Received By	Date/Time	
Relinquished By	Received By	Date/Time	
Relinquished By	Received By	Date/Time	

Special Lab Instructions/Conditions:

Laboratory Section: Received By: Paul C Davis 2-2-95/9:45a Date/Time
Title: Sample Custodian 2-2-95/9:45a Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 008152

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: SOIL 1
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376 15..2

Laboratory: Lockheed
Protocol: RCRA

L3706

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
BOD2F0	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-19-95 1130	500 mL aG
BOD2F0	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1130	120 mL aG
BOD2F1	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	/ 1130	500 mL aG
BOD2F1	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1130	120 mL aG
BOD2F2	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	/ 1130	500 mL aG
BOD2F2	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1130	120 mL aG
BOD2F3	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	/ 1215	500 mL aG
BOD2F3	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1215	120 mL aG
BOD2F4	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	/ 1215	500 mL aG
BOD2F4	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1215	120 mL aG

01/4/

Relinquished By	R.Z. Steffler	Received By	Shannon L. Spencer	Date/Time:	1-24-95 0800
Relinquished By	Shannon L. Spencer	Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	

Special Lab Instructions/Conditions:

Laboratory Section:	Received By:	1-25-95 / 1330 Date/Time	Title:	Sample Custodian	1-25-95 / 1330 Date/Time
Sample Disposition:	Disposed By:	Date/Time	Disposal Method:		Date/Time

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C # 008154

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: SOIL 6
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376 15.3.2

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
BOD2F5	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(77841), Hg(7471)	SOLIDS	None	1-19-95 1215	500 mL aG
BOD2F5	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1-19-95 1215	120 mL aG
BOD2F6	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1225	500 mL aG
BOD2F6	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1225	120 mL aG
BOD2F7	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1225	500 mL aG
BOD2F7	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	1225	120 mL aG
BOD2F8	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1225	500 mL aG
BOD2F8	TOTAL URANIUM (LAL-91-0168)	/	RZS 1-20-95	/		SOLIDS	NONE	1225	120 mL aG
~~BOD2F9~~	~~ICP Metals- TAL (6010)~~	/		/	~~As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)~~	~~SOLIDS~~	~~None~~		~~500 mL aG~~
~~BOD2F9~~	~~TOTAL URANIUM (LAL-91-0168)~~	/	RZS 1-20-95	/		~~SOLIDS~~	~~NONE~~		~~120 mL aG~~

Relinquished By	RZ Steffler	Received By	Shannon L Spencer	Date/Time: 12-14-95 0700
Relinquished By	Shannon L Spencer	Received By		Date/Time:
Relinquished By		Received By		Date/Time:
Relinquished By		Received By		Date/Time:
Relinquished By		Received By		Date/Time:

Special Lab Instructions/Conditions:

Laboratory Section:	M M Ste	1-25-95/1330	Sample Custodian	1-25-95/1330
	Received By:	Date/Time	Title:	Date/Time
Sample Disposition:				
	Disposed By:	Date/Time	Disposal Method:	Date/Time

0001182

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 008140

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: SOIL 1
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376 1532

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
BOD290	VOA (SW-846 8260) 8240 RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	1-19-95 / 1130	250 mL aGs
BOD291	VOA (SW-846 8260) 8240 RZS 1-19-95	/		/	ethyl acetate, methyl ethyl keton (2-butanone)	SOLIDS	Cool to 4°C	/ 1130	250 mL aGs
BOD292	VOA (SW-846 8260) 8240 RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	/ 1130	250 mL aGs
BOD293	VOA (SW-846 8260) 8240 RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	/ 1215	250 mL aGs
BOD294	VOA (SW-846 8260) 8240 RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	/ 1215	250 mL aGs

K70

Relinquished By R.Z. Steffler — Received By Sharon L. Spencer — Date/Time: 1-24-95 0800
Relinquished By Sharon L. Spencer — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____

Special Lab Instructions/Conditions

Laboratory Section: Received By: [illegible] 1-25-95/1330 Date/Time — Title: Sample Custodian 1-25-95/1330 Date/Time

Sample Disposition: Disposed By: _____ Date/Time _____ — Disposal Method: _____ Date/Time _____

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 008142

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: SOIL 6
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376 1542

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
BOD295	VOA (SW-846 ~~8260~~ 8240) RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	1-19-95 / 1215	250 mL aGs
BOD296	VOA (SW-846 ~~8260~~ 8240) RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	/ 1225	250 mL aGs
BOD297	VOA (SW-846 ~~8260~~ 8240) RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	/ 1225	250 mL aGs
BOD298	VOA (SW-846 ~~8260~~ 8240) RZS 1-19-95	/		/	ethyl acetate, methyl ethyl ketone (2-butanone)	SOLIDS	Cool to 4°C	/ 1225	250 mL aGs
~~BOD299~~	~~VOA (SW-846 8260)~~	/	RZS 1-20-95	/	~~ethyl acetate, methyl ethyl ketone (2-butanone)~~	~~SOLIDS~~	~~Cool to 4°C~~	/	~~250 mL aGs~~

017

Relinquished By	R.Z. Steffler	Received By	Sharon A. Spencer	Date/Time:	1-24-95 0800
Relinquished By	Sharon A. Spencer	Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	

Special Lab Instructions/Conditions:

Laboratory Section:	Received By:	1-25-95 / 1330 Date/Time	Title:	Sample Custodian	1-25-95 / 1330 Date/Time
Sample Disposition:	Disposed By:	Date/Time	Disposal Method:		Date/Time

1/18/95 1:47:32 PM

A-6001-500 (11/94)

9513357.1655

SAMPLE STATUS REPORT FOR N 4562. RAD SCREEN BOD2B1 TIME: 1/24/95 8:2
DISPATCHED: 1/23/95 13: 5 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 1/24/95 7:45

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARG CODE
****	********	**********	***	***	*****
4271	TOT-ACT	61.19 PCI/G, <1% POSSIBLE ALPHA			K345R

END OF REPORT

01 B0

012751

SAMPLE STATUS REPORT FOR N 4564. RAD SCREEN BOD2B3 TIME: 1/24/95 8:2
DISPATCHED: 1/23/95 13: 5 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 1/24/95 7:45

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARG CODE
****	********	**********	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

~~01 BN~~

~~01 751~~
LAM 4-21-95

SAMPLE STATUS REPORT FOR N 4587. RAD SCREEN 60D2B5 TIME: 1/27/95 8:

DISPATCHED: 1/26/95 9:52 SAMPLE HAS NOT BEEN SLURPED

RECEIVED: 1/27/95 0:40

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARG CODE
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

01 CF

003 222 S COUNTING ROOM 08:38 01/27/95

ODOIS 6-21-9

SAMPLE STATUS REPORT FOR N 4588. RAD SCREEN BOD2B8 TIME: 1/27/95 2:3
DISPATCHED: 1/26/95 9:52 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 1/27/95 0:41

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

~~01 CG~~

004 222 S COUNTING ROOM 08:38 01/27/95 ~~0202512~~

ldw 4-21-95

00012

SAMPLE STATUS REPORT FOR DN 4689, RAD SCREEN BOD2B9 TIME: 1/27/95 8: 3
DISPATCHED: 1/26/95 9:52 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 1/27/95 0:41

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

01C#

S00 222 S COUNTING ROOM 08:38 01/27/95 ~~02025~~

000189 idw 4-21-95

AMPLE STATUS REPORT FOR N 4494. RAD SCREEN B0D2F0 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 13:19

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

B0D2F0 and B0D290 were taken from the same sample location therefor this analysis is good for both sample ID numbers.

~~01AE~~

000130 ~~01255L~~

9513357.1658

AMPLE STATUS REPORT FOR N 4495. RAD SCREEN BOD2F1 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:55

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD2F1 and BOD291 were taken from the same sample location therefor this analysis is good for both Sample ID numbers.

~~01AF~~

0001 ~~01~~ 55 12

AMPLE STATUS REPORT FOR N 4496. RAD SCREEN BOD2F2 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:55

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD2F2 and BOD292 were taken from the same sample location therefor this analysis is go for both sample ID numbers.

~~01A4~~

9513357.1659

AMPLE STATUS REPORT POR N 4497. RAD SCREEN BOD2F3 TIME: 1/20/95 13:25
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

B00293 and B00293 were taken from the same sample location therefor this analysis is good for both sample ID numbers.

~~01AH~~

 ~~012551~~ Lau 7-.95

AMPLE STATUS REPORT FOR N 4498. RAD SCREEN BOD2F4 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD2F4 and BOD294 were taken from the sam
sample location therefor this analysis is goo
for both sample ID numbers.

01AI

000194

01351
Jan 1-21-95

9513357.1660

AMPLE STATUS REPORT FOR N 4499. RAD SCREEN BOD2F5 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD2F5 and BOD295 were taken from the same sample location therefor this analysis is good for both sample ID numbers.

~~01AP~~

000195 ~~013510~~
1 dw 1.9

AMPLE STATUS REPORT FOR N 4500. RAD SCREEN BOD2F6 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD3F6 and BOD29G were taken from the same sample location therefor this analysis is good. for both sample ID numbers.

~~01AQ~~

9513357.1661

AMPLE STATUS REPORT FOR N 4501. RAD SCREEN BOD2F7 TIME: 1/20/95 13:2
DISPATCHED: 1/19/95 14:46 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD2F7 and BOD297 were taken from the same sample location therefor this analysis is good for both sample ID numbers.

~~01AR~~

000197 ~~01355~~

AMPLE STATUS REPORT FOR N.4502. RAD SCREEN BOD2F8 TIME: 1/20/95 13:26
DISPATCHED: 1/19/95 14:47 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 1/20/95 7:58

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K345R

END OF REPORT

PRESS ANY KEY TO CONTINUE

BOD2F8 and BOD298 were taken from the same sample location therefor this analysis is good for both sample ID numbers.

~~01AS~~

000198 ~~012558~~

Supplemental Information

DON'T SAY IT --- *Write It!*

DATE: May 1, 1995

TO: LK3706-LAS-030

FROM: Michelle Hendrix H4-23

Telephone: 372-0550

cc: Jason Adler H6-23
Sandy Walls H4-23

SUBJECT: Ethyl Acetate results not reported in LK3706-LAS-030

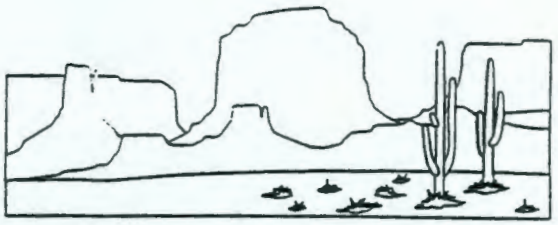
SAF# 94-402 and associated Chain of Custodies request the analysis of ethyl acetate by method 8240. Initially, Lockheed indicated that quantitating ethyl acetate by 8240 would be possible; even though, the ethyl acetate was not included on the standard list of compounds analyzed by 8240. With this information, SAF# 94-402 and its associated Chain of Custodies were prepared requesting ethyl acetate by method 8240. Sometime later, Lockheed informed Analytical Services that ethyl acetate would be looked for as a Tentatively Identified Compound (TIC) during the volatile analyses. Analytical Services and the data user agreed with this approach. Searching for ethyl acetate as a TIC is consistent with the requirements of the current Sampling Analysis Plan WHC-SD-EN-AP-177 which states on page 25 that:

> " Ethyl Acetate is not included as a target analyte in the most current revision (Revision 0, July 1992) of method 8260. However, ethyl acetate can be identified by Method 8260 as a tentatively identified compound."

In keeping with SAP requirements, the laboratory did provide TIC reporting for both methods 8240 and 8260. Ethyl Acetate was not found as a TIC by either method for the samples associated with data package LK3706-LAS-030.

FAX TRANSMITTAL

Los Alamos Technical Associates
750 Swift, Suite 12
Richland, WA 99352
Telephone: (509) 943-0244
Fax: (509) 943-9903



DATE: May 2, 1995

TO: Jeanette Duncan, WHC/BHI

FAX: 372-2106

FROM: Janet Jones, LATA

REFERENCE: The attached IRF is in response to RCR comments made by Stephanie Johansen on the first two concretion packages delivered. We listed temperatures as well as we could from the documentation provided by the laboratory.

There is no direct validation criteria for qualification due to temperature excursions. Temperature excursions do affect holding time by invalidating the preservation requirement, but the validator must use "technical judgement" to determine qualification (if any) based on the degree to which the temperature exceeds the acceptance criteria combined with the type of analysis and how that excursion would affect the results. Minor excursions for inorganic parameters would not necessarily require qualification of the data.

Until now we have not deemed it necessary to request this information. Please advise how WHC would like to proceed. If you would like to pursue it further with the laboratory, please let Stephanie know so we don't see the same comment repeated until this issue is resolved.

Two ideas I have that would help to solve this issue in the future are (1) the field sampling team should write the cooler ID on the COC when the samples are shipped, and (2) the labortatory should write the cooler temperature directly on the COC when the samples arrive. This still doesn't help if all of the containers for a given sample ID are not shipped in the same cooler, so supplemental information will have to be clearly documented at the time of receipt.

Please let me know if it is necessary to place this project on hold pending resolution of this issue.

TOTAL NUMBER OF PAGES INCLUDING COVER SHEET: 6

LATA INORGANIC (METALS/CYANIDE)
DATA VALIDATION CHECKLIST

INFORMATION REQUEST FORM (IRF)

To: Jeanette Duncan, WHC/BHI Date: 02-May-95

Primary FAX: 372-2106 Secondary FAX: 372-1616

PROJECT NAME:	304 CONCRETION FACILITY CLOSURE
SDG NUMBER:	ALL
LATA NO.:	VW403.25, .26, .27, .28, .30, .31
LABORATORY:	LAS and 222-S
CASE NUMBER:	N/A
ANALYSIS METHOD:	ALL
ANALYSIS DATE:	N/A
ITEM(S) MISSING:	TEMPERATURE AT TIME OF RECEIPT

Comments: Sample temperature at time of receipt has not been well documented in these packages. Please see the attached "Master List" of all of the samples received for validation on the 304 Concretion project for specific details.

Please have the laboratories provide a listing by sample ID of the documented temperature at time of sample receipt. If there were multiple containers for a given sample ID received at different temperatures it will be necessary to distinguish which analyses were affected by temperature excursions outside the 4 ± 2 °C acceptance criteria.

RETURN TO LATA

Attention: JM JONES JMJones 5/2/95

INFORMATION RECEIVED FROM WHC (INITIALS/DATE): JMJ 5/3/95

INFORMATION ACCEPTABLE?: YES ☒ NO ☐

v LIRF to request additional information.

Post-It® Fax Note	7671	Date	# of pages ▸ 3
To Jeanette Duncan		From JANET JONES	
Co./Dept. BHI		Co. LATA	
Phone # 372-3395		Phone # 943-0244	
Fax # 372-2106		Fax #	

)C.XLS, LIRF-1
5, 10:07 AM

9513357.1664

304 Concretion
MASTER LIST

LATA ID	SDG	SAMPLE ID	LOGIN #	COC #	TEMP	DATE COL-LECTED	MATRIX	SAMPLING LOCATION	QC INFO
VW403.25	LK3689	B0D275	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D276	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D277	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D278	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	CONFIRMATORY SAMPLE (E-9316)
VW403.25	LK3689	B0D279	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D280	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D281	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D282	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	EQUIPMENT BLANK (E-9320)
VW403.25	LK3689	B0D283	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D284	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D285	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	DUPLICATE OF B0D284 (E-9323)
VW403.25	LK3689	B0D286	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D287	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.25	LK3689	B0D288	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	FIELD BLANK (E-9326)
VW403.25	LK3689	B0D289	L3689	8120	NOTE 1	13-Dec-94	WIPE	304 FACILITY	
VW403.26	LK3723	B0D299	L3706	8767	NOTE 2	19-Jan-95	WATER	E-1	EQUIPMENT BLANK
VW403.26	LK3723	B0D2B0	L3723	8772	3° C	23-Jan-95	WATER	S EXPANSION JOINT	EQUIPMENT BLANK
VW403.26	LK3723	B0D2B4	L3748	8796	NOTE 3	25-Jan-95	WATER	E EXTENSION JOINT	EQUIPMENT BLANK
VW403.26	LK3723	B0D2C2	L3748	8777	NOTE 3	26-Jan-95	WATER	E	EQUIPMENT BLANK
VW403.26	LK3723	B0D2C3	L3748	8777	NOTE 3	26-Jan-95	WATER	E	DUPLICATE OF B0D2C2
VW403.26	LK3723	B0D2C4	L3748	8788	NOTE 3	30-Jan-95	WATER	E	EQUIPMENT BLANK
VW403.26	LK3723	B0D2D7	L3706	8163	NOTE 2	19-Jan-95	WATER	ASPHALT-1	EQUIPMENT BLANK
VW403.26	LK3723	B0D2D9	L3706	8163	NOTE 2	20-Jan-95	WATER	ASPHALT-6	EQUIPMENT BLANK
VW403.27	LK3748	B0D2B2	L3723	8773	3° C	23-Jan-95	SOLIDS	S EXPANSION JOINT	
VW403.27	LK3748	B0D2B7	L3844	8936	9°C	25-Jan-95	SOLIDS	CO	
VW403.27	LK3748	B0D2C0	L3764	8816	2°C	25-Jan-95	SOLIDS	C	
VW403.27	LK3748	B0D2C1	L3748	8795	NOTE 3	25-Jan-95	SOLIDS	C	
VW403.27	LK3748	B0D2C5	L3844	8787	9°C	30-Jan-95	SOLIDS	S	

000203

LATA ID	SDG	SAMPLE ID	LOGIN #	COC #	TEMP	DATE COL-LECTED	MATRIX	SAMPLING LOCATION	QC INFO
VW403.27	LK3748	B0D2C6	L3844	8787	9°C	30-Jan-95	SOLIDS	S	
VW403.27	LK3748	B0D2C7	L3844	8787	9°C	30-Jan-95	SOLIDS	S	
VW403.27	LK3748	B0D2C8	L3844	8786	9°C	30-Jan-95	SOLIDS	S	
VW403.27	LK3748	B0D2C9	L3844	8786	9°C	30-Jan-95	SOLIDS	S	DUPLICATE OF B0D2C8
VW403.27	LK3748	B0D2D3	L3706	8163	NOTE 2	19-Jan-95	OTHER	ASPHALT-1	
VW403.27	LK3748	B0D2D4	L3706	8163	NOTE 2	19-Jan-95	OTHER	ASPHALT-1	DUPLICATE OF B0D2D3
VW403.27	LK3748	B0D2D5	L3706	8163	NOTE 2	19-Jan-95	OTHER	ASPHALT-1	
VW403.27	LK3748	B0D2D6	L3764	8806	2°C	19-Jan-95	SOLIDS	CO ASPHALT CORES	
VW403.27	LK3748	B0D2D8	L3764	8806	2°C	20-Jan-95	SOLIDS	CO ASPHALT CORES	
VW403.27	LK3748	B0D2F9	L3764	8792	2°C	31-Jan-95	SOLIDS	C	
VW403.27	LK3748	B0D2G0	L3748	8157	NOTE 3	26-Jan-95	SOLIDS	CONCRETE CHIPS-1	
VW403.27	LK3748	B0D2G1	L3748	8157	NOTE 3	26-Jan-95	SOLIDS	CONCRETE CHIPS-1	DUPLICATE OF B0D2G0
VW403.27	LK3748	B0D2G6	L3764	8792	2°C	31-Jan-95	SOLIDS	C	
VW403.27	LK3748	B0D2H8	L3844	8812	9°C	2-Feb-95	SOLIDS	CO	
VW403.27	LK3748	B0D2J6	L3706	8771	NOTE 2	20-Jan-95	SOLIDS	C	
VW403.27	LK3748	B0D2J7	L3844	8812	9°C	2-Feb-95	SOLIDS	CO	
VW403.28	LK3706	B0D290	L3706	8140	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D291	L3706	8140	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D292	L3706	8140	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D293	L3706	8140	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D294	L3706	8140	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D295	L3706	8142	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D296	L3706	8142	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D297	L3706	8142	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D298	L3706	8142	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D2B1	L3723	8773	3° C	23-Jan-95	SOLIDS	S EXPANSION JOINT	
VW403.28	LK3706	B0D2B3	L3723	8774	3° C	23-Jan-95	SOLIDS	S EXPANSION JOINT	
VW403.28	LK3706	B0D2B5	L3748	8797	NOTE 3	25-Jan-95	SOLIDS	S EXTENSION JOINT	

304 Concretion
MASTER LIST

LATA ID	SDG	SAMPLE ID	LOGIN #	COC #	TEMP	DATE COL-LECTED	MATRIX	SAMPLING LOCATION	QC INFO
VW403.28	LK3706	B0D2B8	L3748	8797	NOTE 3	25-Jan-95	SOLIDS	S EXTENSION JOINT	
VW403.28	LK3706	B0D2B9	L3748	8798	NOTE 3	25-Jan-95	SOLIDS	S EXTENSION JOINT	
VW403.28	LK3706	B0D2F0	L3706	8152	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D2F1	L3706	8152	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D2F2	L3706	8152	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D2F3	L3706	8152	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D2F4	L3706	8152	NOTE 2	19-Jan-95	SOLIDS	SOIL 1	
VW403.28	LK3706	B0D2F5	L3706	8154	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D2F6	L3706	8154	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D2F7	L3706	8154	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.28	LK3706	B0D2F8	L3706	8154	NOTE 2	19-Jan-95	SOLIDS	SOIL 6	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2D0	222-S	8785	NOTE 4	30-Jan-95	SOLIDS	C	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2G2	222-S	8790	NOTE 4	31-Jan-95	SOLIDS	C	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2G7	222-S	8790	NOTE 4	31-Jan-95	SOLIDS	C	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2G9	222-S	8800	NOTE 4	1-Feb-95	SOLIDS	C	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2H9	222-S	8814	NOTE 4	2-Feb-95	SOLIDS	C	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2J8	222-S	8814	NOTE 4	2-Feb-95	SOLIDS	C	
VW403.30	WHC-SD-WM-DP-096, Rev. 0	B0D2K9	222-S	?	NOTE 4	23-Jan-95	SOLIDS	C	
VW403.31	LK3764	B0D2D1	L3764	8791	2°C	31-Jan-95	WATER	E	EQUIPMENT BLANK
VW403.31	LK3764	B0D2D2	L3764	8791	2°C	31-Jan-95	WATER	E	EQUIPMENT BLANK
VW403.31	LK3764	B0D2G3	L3764	8793	2°C	31-Jan-95	SOLIDS	CO	
VW403.31	LK3764	B0D2G4	L3764	8793	2°C	31-Jan-95	SOLIDS	CO	
VW403.31	LK3764	B0D2G5	L3764	8793	2°C	31-Jan-95	SOLIDS	CO	
VW403.31	LK3764	B0D2G8	L3764	8801	2°C	1-Feb-95	WATER	E	EQUIPMENT BLANK
VW403.31	LK3764	B0D2H0	L3764	8802	2°C	1-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2H1	L3764	8802	2°C	1-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2H2	L3764	8802	2°C	1-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2H3	L3764	8802	2°C	1-Feb-95	SOLIDS	C	DUPLICATE OF B0D2H0 2A

5/6/95

304 Concretion
MASTER LIST

LATA ID	SDG	SAMPLE ID	LOGIN #	COC #	TEMP	DATE COL-LECTED	MATRIX	SAMPLING LOCATION	QC INFO
VW403.31	LK3764	B0D2H4	L3764	8802	2°C	1-Feb-95	SOLIDS	C	DUPLICATE OF B0D2H1 VOA
VW403.31	LK3764	B0D2H5	L3764	8802	2°C	1-Feb-95	SOLIDS	C	DUPLICATE OF B0D2H2 VOA
VW403.31	LK3764	B0D2H6	L3764	8815	2°C	2-Feb-95	LIQUID	C	EQUIPMENT BLANK
VW403.31	LK3764	B0D2H7	L3764	8815	2°C	2-Feb-95	LIQUID	C	EQUIPMENT BLANK
VW403.31	LK3764	B0D2J0	L3764	8815	2°C	2-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2J1	L3764	8815	2°C	2-Feb-95	SOLIDS	CO	DUPLICATE OF B0D2J0
VW403.31	LK3764	B0D2J2	L3764	8815	2°C	2-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2J3	L3764	8815	2°C	2-Feb-95	SOLIDS	CO	DUPLICATE OF B0D2J2
VW403.31	LK3764	B0D2J4	L3764	8815	2°C	2-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2J5	L3764	8815	2°C	2-Feb-95	SOLIDS	CO	DUPLICATE OF B0D2J4
VW403.31	LK3764	B0D2J9	L3764	8813	2°C	2-Feb-95	SOLIDS	CO	
VW403.31	LK3764	B0D2K0	L3764	8813	2°C	2-Feb-95	SOLIDS	CO	

NOTE 1: There were two coolers in this login batch (L3689) received at 2° and 14° C.

NOTE 2: There were three coolers in this login batch (L3706) received at 1°, 1° and 6° C.

NOTE 3: There were two coolers in this login batch (L3748) received at 2° and 15° C.

NOTE 4: Cooler/sample temperatures were not documented by the laboratory in the data package.

For the Lockheed data packages:

a) There is no cooler identification number on the COC.
b) The temperature at the time of receipt is not written on the COC.
c) Supplemental login documentation provided in the package such as the "Login Review Checklist" and the "Sample Check-in List" document cooler IDs and number of samples, NOT sample IDs.
d) The "Login Chain of Custory Report" lists a range of temperatures such as 0 to 1 or 2, 15 for each sample identified.
e) Therefore, since there is no documentation linking sample IDs to cooler ID, it is not possible to be specific about the sample receipt temperature.

For the 222-S data package:

a) Temperature at time of receipt was not documented at all in the data package.

5/6/95

000206

VW 405.21

To: Janet Jones

Fax: ~~943-9904~~ 943-6740

From: Jim McCabe

Date: May 3, 1995

Pages: 6

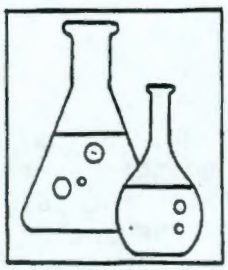
Janet,
Here is the response for the 304 Concretion cooler temp and ID problem. I will fax this to Stephanie Johansen as a response to here comments. LATA may want to make an official resoponse to the RCR comments as well.
If you have any questions give Jeanette or myself a call.

Jim

fax

From the desk of...

Jim McCabe
LATA
509-373-3138



DON'T SAY IT --- *Write It!*

DATE: May 2, 1995

TO: Stephanie Johansen

FROM: Michelle Hendrix H4-23

Telephone: 372-0550

cc: Karl Pool H4-23
Jim McCabe H4-23
Jeanette Duncan H4-23
Janet Jones LATA

SUBJECT: Response to Item Number 2 on RCR for LK3723-LAS-025

Item 2 notes that some of the samples were received at 15 C. According to the samplers, some of the samples did not require cooling and therefore were not iced. Item 2 also notes that the validators could not identify which samples were in what cooler and suggests that the laboratory should have this information. This disconnect was investigated. The validators were correct. For this referenced package and for all packages associated with the 304 Concretion project, there is apparently no way to connect sample numbers to cooler ids. The assumption that the Laboratory should have this information is certainly reasonable and expected, but unfortunately, is not the case for this project.

Two contributing factors to this mishap were identified during the investigation:

1) The laboratory failed to note Chain of Custody numbers on the Sample Check-In Form. The form did contain cooler ids, number of samples in cooler, and the cooler temperature; but without the corresponding COC number, the samples present in the cooler could not be identified. Attached is a Sample Check-In Form. Notice the COC number was not filled in. This is consistent with all the forms associated with this project.

2) The samplers began using a new Chain of Custody form. The new form does not include a space for the cooler id. In the past, the cooler id was written on the COC by the samplers before shipment. With the new COC form, this process of including the cooler id on the corresponding COC did not always take place. Attached is the Chain of Custody Form. Notice there is no designated space for the Cooler Id. This is consistent with all COC forms associated with this project.

This issue has been resolved tc eliminate future episodes by requiring the laboratory to fill in the Sample Check-in Form completely including the cooler id, the COC number, and the cooler temperature. Additional reassurance will be provided by the samplers who will be including cooler ids on the Chain of Custodies accompanying the samples at the time of shipment. The attached letters from the laboratory and sampling organization are assurance that both sides are aware of the problem and are committed to its resolution.

000208

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 1-25-95 13:30 Client Name Westinghouse - Hanford

Project/Client # SAF # 94-402 Batch or Case # N/A

Cooler ID (if noted on outside of cooler) 80 - Jem

1. Condition of shipping container? Good
2. Custody Seals on cooler intact? Yes [X] No [ ]
3. Custody Seals dated and signed? Yes [X] No [ ]
4. Chain of Custody record is taped on inside of cooler lid? Yes [X] No [ ]
5. Vermiculite/packing material is: Wet [ ] Dry [X]
6. Each sample is in a plastic bag? Yes [X] No [ ]
7. Number of sample containers in cooler: 8
8. Samples have:
   - ___ tape
   - ___ hazard labels
   - X custody seals
   - ___ appropriate sample labels
9. Samples are:
   - X in good condition
   - ___ leaking
   - ___ broken
   - ___ have air bubbles
   - ___ other
10. Coolant Present? Yes [X] No [ ] Sample Temperature 6°C
11. The following paperwork should be accounted for (N/A if not applicable):
    - Chain of Custody #(s) N/A
    - Request for Analysis #(s) N/A
    - Airbill # 140 213 4503 Carrier Emery
12. Have any anomalies been identified above? Yes [ ] No [ ] N/A
13. Memos have been initiated for all anomalies identified above? Yes [ ] N/A.

Printed Name/Signature Patricia A. Davis Date/Time 1-25-95, 13:

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C # 008152

SAF # 94-402
Date 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: SOIL 1
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509) 376-1532

Laboratory: Lockheed
Protocol: RCRA

L3706

Sample Id	Analysis	Analysis Parameters	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
BOD2F0	ICP Metals- TAL (6010)	/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1-19-95 1130	500 mL a
BOD2F0	TOTAL URANIUM (LAL-91-0168)	/		SOLIDS	NONE	1130	120 mL a
BOD2F1	ICP Metals- TAL (6010)	/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1130	500 mL a
BOD2F1	TOTAL URANIUM (LAL-91-0168)	/		SOLIDS	NONE	1130	120 mL a
BOD2F2	ICP Metals- TAL (6010)	/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1130	500 mL a
BOD2F2	TOTAL URANIUM (LAL-91-0168)	/		SOLIDS	NONE	1130	120 mL a
BOD2F3	ICP Metals- TAL (6010)	/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1215	500 mL a
BOD2F3	TOTAL URANIUM (LAL-91-0168)	/		SOLIDS	NONE	1215	120 mL a
BOD2F4	ICP Metals- TAL (6010)	/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	None	1215	500 mL a
BOD2F4	TOTAL URANIUM (LAL-91-0168)	/		SOLIDS	NONE	1215	120 mL a

Relinquished By RZ Steffler	Received By Shannon A. Spencer	Date/Time: 1-24-95 0800	Special Lab Instructions/Conditions:	
Relinquished By Shannon A. Spencer	Received By	Date/Time:		
Relinquished By	Received By	Date/Time:		
Relinquished By	Received By	Date/Time:		
Relinquished By	Received By	Date/Time:		

Laboratory Section: Received By: [illegible] 1-25-95/1330 Date/Time
Title: Sample Custodian 1-25-95/1330 Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

Lockheed

Lockheed Analytical Services
975 Kelly Johnson Drive
Las Vegas, Nevada 89119-3705

Phone: (702) 361-0220
Fax: (702) 361-6434

May 3, 1995

Document Control #
WHC-000213

Karl Pool H4-23
Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

SUBJECT: Contract No. MPV-SVV-207924

Dear Karl:

It has been brought to my attention that the Chain of Custody number has not routinely been entered on the Westinghouse Hanford Company sample receipt checklist by the sample custodians at Lockheed Analytical Services. It is necessary to have this information recorded in order to trace the sample IDs to a specific cooler. This is especially important when the cooler temperature specifications are out of control.

The sample receipt staff has been reminded to record this information on the checklist. I will monitor the performance to ensure that it is possible to trace the sample to a specific cooler for all future sample receipts. If you have any questions or need further information, please contact me at (509) 943-4423.

Sincerely,

Kathleen M. Hall

Kathleen M. Hall
Project Manager

cc: M. Hendrix
WHC file
P. Sturtz
M. Ford
J. Jordan

DON'T SAY IT -- WRITE IT!!!!!!!!!!!!

Date: May 2, 1995

To: Michelle Hendrix

From: Dan Edwards

Subject: ICE CHEST NUMBERS AND SAMPLE IDENTIFICATION

The cc:mail that I received indicated that ice chest numbers have not been included on the shipping documentation and chain of custodies. This information was not put on the chain of custody for samples delivered directly to the laboratory from the field.

This process has since been changed in the field include the ice chest number on the paperwork and shall be reiterated at the weekly staff meeting to be held on 5/3/95.

END OF PACKAGE

END OF PACKAGE

Los Alamos Technical Associates, Inc.

8633 Gage Blvd. / Kennewick, WA 99336 / Telephone (509) 783-4369 / FAX (509) 783-9661

INFORMATION ONLY COPY

May 17, 1995
LATA95-091

Mr. Karl Pool
Westinghouse Hanford Company
P. O. Box 1970
Richland, WA 99352

Subject: VW403.31, SDG LK3764-LAS-028

Dear Mr. Pool:

Attached is the data validation report for analytical results for RCRA Closure of the 304 Concretion Facility (SDG LK3764-LAS-028). The package was received by Los Alamos Technical Associates on April 5, 1995. This data package was placed on hold April 12, and April 25, 1995 to request missing information deemed necessary to the validation effort. The final information request was closed on May 9, 1995 placing the package back in active status.

If you have any questions, please let me know.

Sincerely,

Janet M. Jones
Deputy Project Manager

Attachment

cc: Jeanette Duncan, CH2M Hill
Don Smith, LATA
VW403.31
JMJ/lb

ln

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DATA VALIDATION REPORT
for
RCRA Closure of 304 Concretion Facility
SDG LK3764-LAS-028
LATA VW403.31

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

May 17, 1995

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Table of Contents

RCRA Closure of 304 Concretion Facility
Data Validation Narrative

INTRODUCTION

All samples in Sample Delivery Group (SDG) LK3764-LAS-028 (VW403.31) were validated at level "D" as defined in the Data Validation Procedures for Chemical Analysis (WHC-SD-EN-SPP-002) and/or Data Validation Procedures for Radiochemical Analyses (WHC-SD-EN-SPP-001).

The analyses were performed by Lockheed Analytical Services.

ANALYSES REQUESTED

See Table 1

DATA QUALITY OBJECTIVES

Precision: Goals for precision were met with the exception of those items discussed in the "**Qualification Summary Table**".

Accuracy: Goals for accuracy were met with the exception of those items discussed in the "**Qualification Summary Table**".

Sample Result Verification: All sample results were supported in the raw data.

Detection Limits: Detection limit goals were met for all sample results as specified in the *Phase I Sampling and Analysis for the 304 Concretion Facility Closure Activity*, WHC-SD-EN-AP-177, Rev. 1 with the exception of those items discussed in the "**Qualification Summary Table**".

Completeness: The data package was 100% complete for all requested analyses.

Data qualifiers are assigned to any results that have been determined to be deficient. These are discussed in the Qualification Summary Table.

Table 1
Chain-of-Custody
Analysis Request

LATA ID #: VW403.31 SDG: LK3764-LAS-028

Sample Information							Analyses Requested		
SAMPLE NO.	DATE COLLECTED	MATRIX	SAF	SAMPLING LOCATION	QC INFO	TEMP °C	1	2	3
B0D2D1	31-Jan-95	WATER	94-402	E	EQUIPMENT BLANK	2°C	X	X	
B0D2D2	31-Jan-95	WATER	94-402	E	EQUIPMENT BLANK	2°C	X	X	
B0D2G3	31-Jan-95	SOLIDS	94-402	CO		2°C		X	X
B0D2G4	31-Jan-95	SOLIDS	94-402	CO		2°C		X	X
B0D2G5	31-Jan-95	SOLIDS	94-402	CO		2°C		X	X
B0D2G8	1-Feb-95	WATER	94-402	E	EQUIPMENT BLANK	2°C	X	X	
B0D2H0	1-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2H1	1-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2H2	1-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2H3	1-Feb-95	SOLIDS	94-402	C	DUPLICATE OF B0D2H0 VOA	2°C			X
B0D2H4	1-Feb-95	SOLIDS	94-402	C	DUPLICATE OF B0D2H1 VOA	2°C			X
B0D2H5	1-Feb-95	SOLIDS	94-402	C	DUPLICATE OF B0D2H2 VOA	2°C			X
B0D2H6	2-Feb-95	LIQUID	94-402	C	EQUIPMENT BLANK	2°C	X	X	
B0D2H7	2-Feb-95	LIQUID	94-402	C	EQUIPMENT BLANK	2°C	X	X	
B0D2J0	2-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2J1	2-Feb-95	SOLIDS	94-402	CO	DUPLICATE OF B0D2J0	2°C		X	
B0D2J2	2-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2J3	2-Feb-95	SOLIDS	94-402	CO	DUPLICATE OF B0D2J2	2°C		X	
B0D2J4	2-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2J5	2-Feb-95	SOLIDS	94-402	CO	DUPLICATE OF B0D2J4	2°C		X	
B0D2J9	2-Feb-95	SOLIDS	94-402	CO		2°C		X	X
B0D2K0	2-Feb-95	SOLIDS	94-402	CO		2°C		X	X

Method References:

	Analysis	Method
1.	Metals:	
	ICP	6010
	Arsenic	7060
	Lead	7421
	Selenium	7740
	Thallium	7841
	Mercury	7471
2.	Total Uranium	LAL-91-0618
3.	Volatile Organics	8240/8260

REFERENCES

EPA July 1992, *Test Methods for Evaluating Solid Waste (SW-846),* Third Edition; U.S. Environmental Protection Agency, Washington, D.C.

WHC 1993, *Data Validation Procedures for Chemical Analyses*, WHC-SD-EN-SPP-002, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

WHC 1993, *Data Validation Procedures for Radiochemical Analyses*, WHC-SD-EN-SPP-001, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

WHC 1994, *Phase I Sampling and Analysis for the 304 Concretion Facility Closure Activity*, WHC-SD-EN-AP-177, Rev. 1., Westinghouse Hanford Company, Richland, Washington.

GLOSSARY OF VALIDATION APPLIED QUALIFIERS (CHEMISTRY)

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows.

U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ- Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a QC deficiency identified during data validation, the associated quantitation limit is an estimate.

J- Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate, but the data are usable for decision making purposes.

BJ- Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R- Indicates the compound or analyte was analyzed for, detected, and due to an identified QC deficiency the data are unusable.

UR- Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data are unusable due to an identified QC deficiency.

JN- Indicates a tentatively identified compound (TIC) that has been determined to be valid in terms of identification and quantitation.

UJN- Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.

NJ- Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific application (i.e., usable for decision making purposes).

N- Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision making purposes).

GLOSSARY OF VALIDATION APPLIED QUALIFIERS (RADIOCHEMISTRY)

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows.

U- Indicates the constituent was analyzed for, but was not detected at a concentration above the Minimum Detectable Activity (MDA). The concentration reported in the sample result corrected for sample aliquot size, dilution factors, and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.

UJ- Indicates the constituent was analyzed and was not detected at a concentration above the Minimum Detectable Activity (MDA). Due to a quality control deficiency identified during data validation, the result reported may not accurately reflect the sample concentration. The associated data should be considered usable for decision making purposes.

J- Indicates a constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during validation. The data should be considered usable for decision making purposes.

R- Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision making purposes.

UR- Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision making purposes.

GLOSSARY OF LABORATORY APPLIED QUALIFIERS

Qualifiers which may be applied by the laboratory in compliance with applicable requirements are as follows.

Organic Data Qualifiers

U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

J- Indicates an estimated value. This flag is used when estimating concentrations of tentatively identified compounds (TICs) or when the presence of a TCL compound is confirmed at a concentration of less than the CRQL but greater than the IDL.

N- Indicates presumptive evidence of a compound. This flag is used only by the laboratory for TIC results when the identification is based on a mass spectral library search.

P- This flag is used for pesticide/Aroclor target analytes when there is greater than 25% difference for detected values between the quantitation and confirmation GC columns. The lower of the two concentrations is reported on the report form and the result is flagged with a "P".

C- This flag applies to pesticide results where the identification has been confirmed by GC/MS. This flag should not be used by the laboratory if GC/MS confirmation was attempted but unsuccessful, in which case, the laboratory should use an "X" flag as defined below. The "X" flag is then defined in the SDG narrative.

B- This flag applies to results in which the analyte was detected in both the sample and the associated blank. The combination of the "B" flag with the "U" flag ("BU" or "UB") is expressly prohibited in the analytical SOW.

E- This flag identifies compounds whose concentrations exceed the calibrated range of the GC/MS instrument.

D- This flag identifies compounds identified in an analysis at a secondary dilution factor.

A- Indicates a TIC which is a suspected aldol-condensate product.

X- This is a non-specific flag used to properly define the results. If used, this flag must be properly defined within the body of the SDG.

GLOSSARY OF LABORATORY APPLIED QUALIFIERS (continued)

Inorganic Qualifiers

U- Indicates the analyte was analyzed for but not detected in the sample.

B- Indicates the analyte concentration is less than the CRDL but greater than the IDL.

E- Indicates the value reported is estimated due to the presence of interference.

M- Indicates duplicate injection precision criteria were not met during graphite furnace (GFAA) analysis.

N- Indicates spiked sample recovery was not within the control limits.

S- Indicates the reported value was determined by the Method of Standard Additions (MSA).

W- Indicates post-digestion spike for GFAA analysis is outside control limits and the sample absorbance is less than 50% of the spike absorbance.

*- Indicates duplicate analysis was not within control limits.

+- Indicates the correlation coefficient (r) for the MSA was less than 0.995.

Qualification Summary Table

Qualification Summary Table

Inorganics (Metals)

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Aluminum	MINOR	J	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	No matrix spike performed.
Antimony	MINOR	UJ	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	Matrix spike recovery is outside acceptance criteria.
Calcium	MINOR	J	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	No matrix spike performed.
Cobalt	MINOR	J/BJ	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	Matrix spike recovery is outside acceptance criteria.
Iron	MINOR	J	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	No matrix spike performed.
Magnesium	MINOR	J	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	No matrix spike performed.

Qualification Summary Table

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Potassium	MINOR	J/BJ	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	No matrix spike performed.
Sodium	MINOR	BJ	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	ACCURACY	No matrix spike performed.
Aluminum	MINOR	U	B0D2D1 B0D2D2 B0D2G8 B0D2H6	BLANKS	Preparation blank value is positive and outside acceptance criteria.
Calcium	MINOR	U	B0D2D1 B0D2D2 B0D2G8 B0D2H6 B0D2H7	BLANKS	Preparation blank value is positive and outside acceptance criteria.
Iron	MINOR	U	B0D2D1 B0D2D2 B0D2G8 B0D2H6	BLANKS	Preparation blank value is positive and outside acceptance criteria.
Magnesium	MINOR	U	B0D2H7	BLANKS	Preparation blank value is positive and outside acceptance criteria.
Manganese	MINOR	U	B0D2H7	BLANKS	Calibration blank value is positive and outside acceptance criteria.
Sodium	MINOR	U	B0D2D1 B0D2D2 B0D2G8 B0D2H6 B0D2H7	BLANKS	Preparation blank value is positive and outside acceptance criteria.
Zinc	MINOR	U	B0D2D1 B0D2D2 B0D2G8 B0D2H6 B0D2H7	BLANKS	Preparation blank value is positive and outside acceptance criteria.
Cadmium	MINOR	U	B0D2J9	BLANKS	Calibration blank value(s) are positive and outside acceptance criteria.

Inorganics (Metals) Field QC

ANALYTE	TYPE	QUALIFIER	FIELD QC SAMPLE	DQO	REASON
Barium	Equipment Blank	NONE	B0D2D2	BLANKS	Equipment blank contamination noted.
Iron	Equipment Blank	NONE	B0D2H7	BLANKS	Equipment blank contamination noted.
ALL	Field Duplicate	NONE	B0D2J0/B0D2J1	PRECISION	Field duplicate precision is acceptable.
ALL	Field Duplicate	NONE	B0D2J2/B0D2J3	PRECISION	Field duplicate precision is acceptable.
ALL	Field Duplicate	NONE	B0D2J4/B0D2J5	PRECISION	Field duplicate precision is acceptable.

Qualification Summary Table

Volatile Organic Method 8240

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Benzene	MINOR	J	B0D2G3	ACCURACY	Surrogate recovery was outside acceptance criteria.
Toluene	MINOR	J	B0D2G3	ACCURACY	Surrogate recovery was outside acceptance criteria.
2-Hexanone	MINOR	U	B0D2G3	BLANKS	Preparation blank value was positive and outside acceptance criteria.
2-Chloroethylvinyl ether	MINOR	UJ	B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2H3 B0D2H4 B0D2H5 B0D2J0 B0D2J2 B0D2J4 B0D2J9 B0D2K0	CALIBRATION	Initial and continuing calibration was not performed.
2-Chloroethylvinyl ether	MINOR	UJ	B0D2G3RE B0D2G4RE B0D2G5RE B0D2H1RE B0D2K0RE	CALIBRATION	Initial and continuing calibration was not performed.

Comments:

1. An upward adjustment to meet the CRQL for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Volatile Organic Method 8240 Field QC

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Methlyene Chloride	Field Duplicate	NONE	B0D2H0/B0D2H3	PRECISION	Field duplicate precision is acceptable.
Unk Hydrocarbon @ RT 21.96	Field Duplicate	NONE	B0D2H1/B0D2H4	PRECISION	Field duplicate precision is acceptable.
Unk Hydrocarbon @ RT 21.93	Field Duplicate	NONE	B0D2H2/B0D2H5	PRECISION	Field duplicate precision is acceptable.

Volatile Organic Method 8260

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Acetone	MINOR	U	B0D2G3 B0D2G4 B0D2G5 B0D2H2 B0D2H3 B0D2J0 B0D2J2 B0D2J4	BLANKS	Preparation blank value was positive and outside acceptance criteria.

Comments:

1. An upward adjustment to meet the CRQL for sample results qualified non-detect (U) due to blank contamination has been made by the validator on the Data Summary Tables and Form Is as required.

Qualification Summary Table

Volatile Organic Method 8260 Field QC

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
All analytes non-detect	Field Duplicate	NONE	B0D2H0/B0D2H3	PRECISION	Field precision is not evaluated for non-detects.
All analytes non-detect	Field Duplicate	NONE	B0D2H1/B0D2H4	PRECISION	Field precision is not evaluated for non-detects.
All analytes non-detect	Field Duplicate	NONE	B0D2H2/B0D2H5	PRECISION	Field precision is not evaluated for non-detects.

Radiochemistry

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Total Uranium	MINOR	J	B0D2G3 B0D2J1 B0D2G4 B0D2J2 B0D2G5 B0D2J3 B0D2H0 B0D2J4 B0D2H1 B0D2J5 B0D2H2 B0D2J9 B0D2J0 B0D2K0	ACCURACY	Matrix spike recovery is outside acceptance criteria.

Radiochemistry Field QC

ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	DQO	REASON
Total Uranium	Equipment Blank	NONE	B0D2D1	BLANKS	Equipment blank contamination noted.
Total Uranium	Equipment Blank	NONE	B0D2D2	BLANKS	Equipment blank contamination noted.
Total Uranium	Equipment Blank	NONE	B0D2G8	BLANKS	Equipment blank contamination noted.
Total Uranium	Equipment Blank	NONE	B0D2H6	BLANKS	Equipment blank contamination noted.
Total Uranium	Equipment Blank	NONE	B0D2H7	BLANKS	Equipment blank contamination noted.
Total Uranium	Field Duplicate	NONE	B0D2J0/B0D2J1	PRECISION	Field duplicate precision is unacceptable.
Total Uranium	Field Duplicate	NONE	B0D2J2/B0D2J3	PRECISION	Field duplicate precision is acceptable.
Total Uranium	Field Duplicate	NONE	B0D2J4/B0D2J5	PRECISION	Field duplicate precision is acceptable.

Comments:

1. The MDAs do not meet the RDLs for samples B0D2D2 or B0D2H6.
2. There is no record of a preservative being added to the water samples on the COC or in the data package.
3. The raw data for batch # 18901 was included with this SDG (LK3764-LAS-028). It was also included in SDG # LK3748-LAS-032. The data was validated and will be reported with SDG # LK3748-LAS-032.
4. Data qualification is not required based on field duplicate precision, however field duplicate results are noted here to alert the data user to uncertainties in the data set during decision making processes.
5. Data qualification is not required based on equipment blanks, however equipment blank results are noted here to alert the data user to uncertainties in the data set during decision making processes.

Data Summary Tables

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2D1		B0D2D2		B0D2G8		B0D2H6		B0D2H7	
		Date:	31-Jan-95		31-Jan-95		1-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	WATER		WATER		WATER		LIQUID		LIQUID	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	µg/L	37.2	U	36.0	U	75.6	U	65.1	U	26.0	U
Antimony	7440-36-0	µg/L	45.0	U	45.0	U	45.0	U	45.0	U	45.0	U
Arsenic	7440-38-2	µg/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Barium	7440-39-3	µg/L	12.0	U	13.4	B	12.0	U	12.0	U	12.0	U
Beryllium	7440-41-7	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	7440-43-9	µg/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Calcium	7440-70-2	µg/L	237	U	92.5	U	27.9	U	39.7	U	119	U
Chromium	7440-47-3	µg/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Cobalt	7440-48-4	µg/L	7.0	U	7.0	U	7.0	U	7.0	U	7.0	U
Copper	7440-50-8	µg/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Iron	7439-89-6	µg/L	28.4	U	19.7	U	50.2	U	7.8	U	304	
Lead	7439-92-1	µg/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	7439-95-4	µg/L	37.0	U	37.0	U	37.0	U	37.0	U	45.7	U
Manganese	7439-96-5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	7.2	U
Mercury	7439-97-6	µg/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	7440-02-0	µg/L	12.0	U	12.0	U	12.0	U	12.0	U	12.0	U
Potassium	7440-09-7	µg/L	680	U	680	U	680	U	680	U	680	U
Selenium	7782-49-2	µg/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Silver	7440-22-4	µg/L	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Sodium	7440-23-5	µg/L	236	U	197	U	172	U	183	U	329	U
Thallium	7440-28-0	µg/L	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Vanadium	7440-62-2	µg/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Zinc	7440-66-6	µg/L	5.3	U	6.8	U	10.6	U	5.1	U	19.0	U

Shaded areas indicate changes by the validator.

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2G3		B0D2G4		B0D2G5		B0D2H0		B0D2H1	
		Date:	31-Jan-95		31-Jan-95		31-Jan-95		1-Feb-95		1-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	mg/Kg	6290	J	5600	J	5520	J	5390	J	5560	J
Antimony	7440-36-0	mg/Kg	11.9	UJ	9.8	UJ	9.8	UJ	9.6	UJ	9.6	UJ
Arsenic	7440-38-2	mg/Kg	2.7		2.3		2.2		2.7		2.4	
Barium	7440-39-3	mg/Kg	79.8		68.2		77.5		60.3		63.4	
Beryllium	7440-41-7	mg/Kg	0.26	U	0.22	U	0.22	B	0.21	U	0.25	B
Cadmium	7440-43-9	mg/Kg	0.79	U	0.65	U	0.65	U	0.64	U	0.64	U
Calcium	7440-70-2	mg/Kg	6720	J	5320	J	5360	J	6190	J	6730	J
Chromium	7440-47-3	mg/Kg	8.1		8.2		7.3		8.1		8.2	
Cobalt	7440-48-4	mg/Kg	45.2	J	10	BJ	11.6	J	31.1	J	13.8	J
Copper	7440-50-8	mg/Kg	11.9		11.2		10.1		13.4		13.3	
Iron	7439-89-6	mg/Kg	15600	J	16800	J	16200	J	16400	J	16500	J
Lead	7439-92-1	mg/Kg	4.4		3.8		2.9		3.1		2.7	
Magnesium	7439-95-4	mg/Kg	3840	J	3920	J	3850	J	3880	J	4150	J
Manganese	7439-96-5	mg/Kg	275		297		292		260		268	
Mercury	7439-97-6	mg/Kg	0.11	U	0.11	U	0.11	U	0.11	U	0.10	U
Nickel	7440-02-0	mg/Kg	9.1	B	11.8		10.9		11.6		10.7	
Potassium	7440-09-7	mg/Kg	1290	BJ	982	BJ	922	BJ	857	BJ	1010	BJ
Selenium	7782-49-2	mg/Kg	0.78	U	0.65	U	0.66	U	0.64	U	0.64	U
Silver	7440-22-4	mg/Kg	1.1	U	0.87	U	0.87	U	0.85	U	0.86	U
Sodium	7440-23-5	mg/Kg	572	BJ	406	BJ	451	BJ	452	BJ	498	BJ
Thallium	7440-28-0	mg/Kg	1.0	U	0.87	U	0.88	U	0.85	U	0.86	U
Vanadium	7440-62-2	mg/Kg	30.8		35.2		34.0		32.8		30.5	
Zinc	7440-66-6	mg/Kg	38.7		39.2		48.6		33.7		32.0	

Shaded areas indicate changes by the validator.

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2H2		B0D2J0		B0D2J1		B0D2J2		B0D2J3	
		Date:	1-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	mg/Kg	5620	J	6410	J	6390	J	7580	J	7520	J
Antimony	7440-36-0	mg/Kg	9.7	UJ	12.2	UJ	11.4	UJ	12.2	UJ	11.8	UJ
Arsenic	7440-38-2	mg/Kg	3.1		2.2	B	2.7		3.6		3.6	
Barium	7440-39-3	mg/Kg	65.0		79.8		85.8		98.3		100	
Beryllium	7440-41-7	mg/Kg	0.25	B	0.27	U	0.26	B	0.28	B	0.28	B
Cadmium	7440-43-9	mg/Kg	0.65	U	0.82	U	0.76	U	0.81	U	0.79	U
Calcium	7440-70-2	mg/Kg	6770	J	5660	J	5680	J	6340	J	6230	J
Chromium	7440-47-3	mg/Kg	8.2		8.3		7.6		9.5		9.0	
Cobalt	7440-48-4	mg/Kg	14.9	J	60.0	J	48.7	J	41.3	J	39.8	J
Copper	7440-50-8	mg/Kg	13.1		12.0		12.2		14.3		13.8	
Iron	7439-89-6	mg/Kg	16700	J	16000	J	17400	J	17300	J	18100	J
Lead	7439-92-1	mg/Kg	3.5		4.2		4.1		5.9	~	4.8	
Magnesium	7439-95-4	mg/Kg	3960	J	3650	J	3760	J	4070	J	4160	J
Manganese	7439-96-5	mg/Kg	278		282		307		313		324	
Mercury	7439-97-6	mg/Kg	0.11	U	0.29		0.27		0.12	U	0.19	
Nickel	7440-02-0	mg/Kg	10.8		9.7	B	11.6		13.5		12.5	
Potassium	7440-09-7	mg/Kg	831	BJ	1350	BJ	1220	BJ	1650	J	1550	J
Selenium	7782-49-2	mg/Kg	0.64	U	0.82	U	0.76	U	0.82	U	0.78	U
Silver	7440-22-4	mg/Kg	0.86	U	1.1	U	1.0	U	1.1	U	1.1	U
Sodium	7440-23-5	mg/Kg	508	BJ	668	BJ	611	BJ	711	BJ	695	BJ
Thallium	7440-28-0	mg/Kg	0.86	U	1.1	U	1.0	U	1.1	U	1.0	U
Vanadium	7440-62-2	mg/Kg	36.0		34.2		37.2		34.5		35.9	
Zinc	7440-66-6	mg/Kg	32.8		37.6		40.2		40.8		42.7	

Shaded areas indicate changes by the validator.

METALS
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2J4		B0D2J5		B0D2J9		B0D2K0	
		Date:	2-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	mg/Kg	6850	J	6980	J	7010	J	6910	J
Antimony	7440-36-0	mg/Kg	11.3	UJ	11.0	UJ	11.0	UJ	10.3	UJ
Arsenic	7440-38-2	mg/Kg	2.4	B	1.8	B	3.2		5.4	
Barium	7440-39-3	mg/Kg	91.5		85.8		100		95.2	
Beryllium	7440-41-7	mg/Kg	0.26	B	0.24	U	0.31	B	0.29	B
Cadmium	7440-43-9	mg/Kg	0.75	U	0.73	U	0.74	U	0.68	U
Calcium	7440-70-2	mg/Kg	5750	J	5730	J	5990	J	5390	J
Chromium	7440-47-3	mg/Kg	8.4		8.6		11.7		9.8	
Cobalt	7440-48-4	mg/Kg	46.6	J	47.3	J	28.7	J	16.6	J
Copper	7440-50-8	mg/Kg	12.5		12.1		37.6		23.6	
Iron	7439-89-6	mg/Kg	17700	J	17800	J	18300	J	21100	J
Lead	7439-92-1	mg/Kg	3.3		3.8		7.4		863	
Magnesium	7439-95-4	mg/Kg	3900	J	3980	J	4070	J	4520	J
Manganese	7439-96-5	mg/Kg	315		308		310		334	
Mercury	7439-97-6	mg/Kg	0.13		0.12		0.11	U	0.11	U
Nickel	7440-02-0	mg/Kg	10.1		10.9		14.8		16.2	
Potassium	7440-09-7	mg/Kg	1350	J	1300	J	1110	BJ	1180	J
Selenium	7782-49-2	mg/Kg	0.76	U	0.73	U	0.73	U	0.68	U
Silver	7440-22-4	mg/Kg	1.0	U	0.98	U	0.98	U	0.91	U
Sodium	7440-23-5	mg/Kg	688	BJ	675	BJ	567	BJ	480	BJ
Thallium	7440-28-0	mg/Kg	1.0	U	0.98	U	0.97	U	0.91	U
Vanadium	7440-62-2	mg/Kg	37.6		38.3		38.0		36.1	
Zinc	7440-66-6	mg/Kg	40.2		40.7		191		90.4	

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8240
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2G3		B0D2G3RE		B0D2G4		B0D2G4RE		B0D2G5	
		Date:	31-Jan-95		31-Jan-95		31-Jan-95		31-Jan-95		31-Jan-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	3.0	J	6.5	U	5.4	U	5.3	U	5.3	U
Vinyl chloride	75-01-4	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Bromomethane	74-83-9	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Chloroethane	75-00-3	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Trichlorofluoromethane	75-69-4	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Acetone	67-64-1	µg/kg	29		13	J	11	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Carbon disulfide	75-15-0	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Methylene chloride	75-09-2	µg/kg	6.4	U	2.3	J	5.4	U	5.3	U	5.3	U
Vinyl Acetate	108-05-4	µg/kg	13	U	13	U	11	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
2-Butanone	78-93-3	µg/kg	13	U	13	U	11	U	11	U	11	U
Chloroform	67-66-3	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
2-Hexanone	591-78-6	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,1,1-Trichloroethane	71-55-6	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Carbon tetrachloride	56-23-5	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,2-Dichloroethane	107-06-2	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Benzene	71-43-2	µg/kg	3.0	J	6.5	U	5.4	U	5.3	U	5.3	U
Trichloroethene	79-01-6	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,2-Dichloropropane	78-87-5	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Bromodichloromethane	75-27-4	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
2-Chloroethylvinyl ether	110-75-8	µg/kg	26	UJ	26	UJ	22	UJ	21	UJ	21	UJ
4-Methyl-2-pentanone	108-10-1	µg/kg	3.0	J	13	U	11	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Toluene	108-88-3	µg/kg	1.8	J	6.5	U	5.4	U	5.3	U	5.3	U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,1,2-Trichloroethane	79-00-5	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Tetrachloroethene	127-18-4	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Dibromochloromethane	124-48-1	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Chlorobenzene	108-90-7	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Ethylbenzene	100-41-4	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
m,p-Xylene	1330-20-7	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
o-Xylene	95-47-6	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Styrene	100-42-5	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
Bromoform	75-25-2	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,3-Dichlorobenzene	541-73-1	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U
1,4-Dichlorobenzene	106-46-7	µg/kg	1.5	J	6.5	U	5.4	U	5.3	U	5.3	U
1,2-Dichlorobenzene	95-50-1	µg/kg	6.4	U	6.5	U	5.4	U	5.3	U	5.3	U

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8240
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2G5RE		B0D2H0		B0D2H1		B0D2H1RE		B0D2H2	
		Date:	31-Jan-95		1-Feb-95		1-Feb-95		1-Feb-95		1-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Vinyl chloride	75-01-4	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Bromomethane	74-83-9	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Chloroethane	75-00-3	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Trichlorofluoromethane	75-69-4	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Acetone	67-64-1	µg/kg	11	U	11	U	11	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Carbon disulfide	75-15-0	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.30	U
Methylene chloride	75-09-2	µg/kg	5.4	U	1.7	J	5.3	U	5.3	U	5.3	U
Vinyl Acetate	108-05-4	µg/kg	11	U	11	U	11	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
2-Butanone	78-93-3	µg/kg	11	U	11	U	11	U	11	U	11	U
Chloroform	67-66-3	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
2-Hexanone	591-78-6	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,1,1-Trichloroethane	71-55-6	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Carbon tetrachloride	56-23-5	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,2-Dichloroethane	107-06-2	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Benzene	71-43-2	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Trichloroethene	79-01-6	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,2-Dichloropropane	78-87-5	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Bromodichloromethane	75-27-4	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
2-Chloroethylvinyl ether	110-75-8	µg/kg	21	UJ	21	UJ	21	UJ	21	UJ	21	UJ
4-Methyl-2-pentanone	108-10-1	µg/kg	11	U	11	U	11	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Toluene	108-88-3	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,1,2-Trichloroethane	79-00-5	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Tetrachloroethene	127-18-4	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Dibromochloromethane	124-48-1	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Chlorobenzene	108-90-7	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Ethylbenzene	100-41-4	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
m,p-Xylene	1330-20-7	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
o-Xylene	95-47-6	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Styrene	100-42-5	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
Bromoform	75-25-2	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,3-Dichlorobenzene	541-73-1	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,4-Dichlorobenzene	106-46-7	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U
1,2-Dichlorobenzene	95-50-1	µg/kg	5.4	U	5.3	U	5.3	U	5.3	U	5.3	U

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8240
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2H3		B0D2H4		B0D2H5		B0D2J0		B0D2J2	
		Date:	1-Feb-95		1-Feb-95		1-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Vinyl chloride	75-01-4	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Bromomethane	74-83-9	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Chloroethane	75-00-3	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Trichlorofluoromethane	75-69-4	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Acetone	67-64-1	µg/kg	9.9	U	10	U	10	U	13	U	14	
1,1-Dichloroethene	75-35-4	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Carbon disulfide	75-15-0	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Methylene chloride	75-09-2	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Vinyl Acetate	108-05-4	µg/kg	9.9	U	10	U	10	U	13	U	14	U
1,1-Dichloroethane	75-34-3	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
2-Butanone	78-93-3	µg/kg	9.9	U	10	U	10	U	13	U	14	U
Chloroform	67-66-3	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
2-Hexanone	591-78-6	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,1,1-Trichloroethane	71-55-6	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Carbon tetrachloride	56-23-5	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,2-Dichloroethane	107-06-2	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Benzene	71-43-2	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Trichloroethene	79-01-6	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,2-Dichloropropane	78-87-5	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Bromodichloromethane	75-27-4	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
2-Chloroethylvinyl ether	110-75-8	µg/kg	20	UJ	20	UJ	20	UJ	25	UJ	27	UJ
4-Methyl-2-pentanone	108-10-1	µg/kg	9.9	U	10	U	10	U	2.7	J	3.1	J
cis-1,3-Dichloropropene	10061-01-5	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Toluene	108-88-3	µg/kg	4.9	U	5.0	U	5.0	U	60		49	
trans-1,3-Dichloropropene	10061-02-6	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,1,2-Trichloroethane	79-00-5	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Tetrachloroethene	127-18-4	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Dibromochloromethane	124-48-1	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Chlorobenzene	108-90-7	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Ethylbenzene	100-41-4	µg/kg	4.9	U	5.0	U	5.0	U	2.9	J	2.5	J
m,p-Xylene	1330-20-7	µg/kg	4.9	U	5.0	U	5.0	U	6.9		6.3	J
o-Xylene	95-47-6	µg/kg	4.9	U	5.0	U	5.0	U	2.2	J	2.0	J
Styrene	100-42-5	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
Bromoform	75-25-2	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,3-Dichlorobenzene	541-73-1	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,4-Dichlorobenzene	106-46-7	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U
1,2-Dichlorobenzene	95-50-1	µg/kg	4.9	U	5.0	U	5.0	U	6.4	U	6.8	U

VOLATILE ORGANIC METHOD 8240
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2J4		B0D2J9		B0D2K0		B0D2K0RE	
		Date:	2-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Vinyl chloride	75-01-4	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Bromomethane	74-83-9	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Chloroethane	75-00-3	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Trichlorofluoromethane	75-69-4	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Acetone	67-64-1	µg/kg	13		9.3	J	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Carbon disulfide	75-15-0	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Methylene chloride	75-09-2	µg/kg	6.3	U	1.6	J	1.6	J	1.3	J
Vinyl Acetate	108-05-4	µg/kg	13	U	12	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
2-Butanone	78-93-3	µg/kg	13	U	12	U	11	U	11	U
Chloroform	67-66-3	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
2-Hexanone	591-78-6	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,1,1-Trichloroethane	71-55-6	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Carbon tetrachloride	56-23-5	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,2-Dichloroethane	107-06-2	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Benzene	71-43-2	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Trichloroethene	79-01-6	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,2-Dichloropropane	78-87-5	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Bromodichloromethane	75-27-4	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
2-Chloroethylvinyl ether	110-75-8	µg/kg	25	UJ	24	UJ	23	UJ	23	UJ
4-Methyl-2-pentanone	108-10-1	µg/kg	4.7	J	12	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Toluene	108-88-3	µg/kg	45		5.8	J	5.7	U	5.7	U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,1,2-Trichloroethane	79-00-5	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Tetrachloroethene	127-18-4	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Dibromochloromethane	124-48-1	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Chlorobenzene	108-90-7	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Ethylbenzene	100-41-4	µg/kg	2.6	J	6.1	U	5.7	U	5.7	U
m,p-Xylene	1330-20-7	µg/kg	6.6		6.1	U	5.7	U	5.7	U
o-Xylene	95-47-6	µg/kg	2.2	J	6.1	U	5.7	U	5.7	U
Styrene	100-42-5	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
Bromoform	75-25-2	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,3-Dichlorobenzene	541-73-1	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,4-Dichlorobenzene	106-46-7	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U
1,2-Dichlorobenzene	95-50-1	µg/kg	6.3	U	6.1	U	5.7	U	5.7	U

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8260
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2G3		B0D2G4		B0D2G5		B0D2H0	
		Date:	31-Jan-95		31-Jan-95		31-Jan-95		1-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Vinyl chloride	75-01-4	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Bromomethane	74-83-9	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Chloroethane	75-00-3	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Trichlorofluoromethane	75-69-4	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Acetone	67-64-1	µg/kg	12	U	12	U	12	U	11	U
1,1-Dichloroethene	75-35-4	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Carbon disulfide	75-15-0	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Methylene chloride	75-09-2	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
trans-1,2-Dichloroethene	156-50-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Vinyl Acetate	108-05-4	µg/kg	12	U	10	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
2-Butanone	78-93-3	µg/kg	12	U	10	U	11	U	11	U
cis-1,2-Dichloroethene	156-59-2	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Chloroform	67-66-3	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,1,1-Trichloroethane	71-55-6	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Carbon tetrachloride	56-23-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,2-Dichloroethane	107-06-2	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Benzene	71-43-2	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Trichloroethene	79-01-6	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,2-Dichloropropane	78-87-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Bromodichloromethane	75-27-4	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
4-Methyl-2-pentanone	108-10-1	µg/kg	12	U	10	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Toluene	108-88-3	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,1,2-Trichloroethane	79-00-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Tetrachloroethene	127-18-4	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Dibromochloromethane	124-48-1	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Chlorobenzene	108-90-7	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Ethylbenzene	100-41-4	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
m,p-Xylene	1330-20-7	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
o-Xylene	95-47-6	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Styrene	100-42-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
Bromoform	75-25-2	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,3-Dichlorobenzene	541-73-1	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,4-Dichlorobenzene	106-46-7	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U
1,2-Dichlorobenzene	95-50-1	µg/kg	6.1	U	5.2	U	5.4	U	5.3	U

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8260
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2H1		B0D2H2		B0D2H3		B0D2H4	
		Date:	1-Feb-95		1-Feb-95		1-Feb-95		1-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Vinyl chloride	75-01-4	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Bromomethane	74-83-9	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Chloroethane	75-00-3	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Trichlorofluoromethane	75-69-4	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Acetone	67-64-1	µg/kg	11	U	11	U	11	U	11	U
1,1-Dichloroethene	75-35-4	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Carbon disulfide	75-15-0	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Methylene chloride	75-09-2	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
trans-1,2-Dichloroethene	156-50-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Vinyl Acetate	108-05-4	µg/kg	11	U	11	U	11	U	11	U
1,1-Dichloroethane	75-34-3	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
2-Butanone	78-93-3	µg/kg	11	U	11	U	11	U	11	U
cis-1,2-Dichloroethene	156-59-2	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Chloroform	67-66-3	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,1,1-Trichloroethane	71-55-6	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Carbon tetrachloride	56-23-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,2-Dichloroethane	107-06-2	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Benzene	71-43-2	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Trichloroethene	79-01-6	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,2-Dichloropropane	78-87-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Bromodichloromethane	75-27-4	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
4-Methyl-2-pentanone	108-10-1	µg/kg	11	U	11	U	11	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Toluene	108-88-3	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,1,2-Trichloroethane	79-00-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Tetrachloroethene	127-18-4	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Dibromochloromethane	124-48-1	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Chlorobenzene	108-90-7	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Ethylbenzene	100-41-4	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
m,p-Xylene	1330-20-7	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
o-Xylene	95-47-6	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Styrene	100-42-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
Bromoform	75-25-2	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,3-Dichlorobenzene	541-73-1	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,4-Dichlorobenzene	106-46-7	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U
1,2-Dichlorobenzene	95-50-1	µg/kg	5.3	U	5.3	U	5.4	U	5.3	U

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8260
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2H5		B0D2J0		B0D2J2		B0D2J4	
		Date:	1-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Vinyl chloride	75-01-4	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Bromomethane	74-83-9	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Chloroethane	75-00-3	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Trichlorofluoromethane	75-69-4	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Acetone	67-64-1	µg/kg	11	U	29	U	56	U	15	U
1,1-Dichloroethene	75-35-4	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Carbon disulfide	75-15-0	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Methylene chloride	75-09-2	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
trans-1,2-Dichloroethene	156-50-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Vinyl Acetate	108-05-4	µg/kg	11	U	13	U	13	U	13	U
1,1-Dichloroethane	75-34-3	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
2-Butanone	78-93-3	µg/kg	11	U	13	U	13	U	13	U
cis-1,2-Dichloroethene	156-59-2	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Chloroform	67-66-3	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,1,1-Trichloroethane	71-55-6	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Carbon tetrachloride	56-23-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,2-Dichloroethane	107-06-2	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Benzene	71-43-2	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Trichloroethene	79-01-6	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,2-Dichloropropane	78-87-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Bromodichloromethane	75-27-4	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
4-Methyl-2-pentanone	108-10-1	µg/kg	11	U	9.1	J	7.5	J	4.8	J
cis-1,3-Dichloropropene	10061-01-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Toluene	108-88-3	µg/kg	5.4	U	83		63		43	
trans-1,3-Dichloropropene	10061-02-6	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,1,2-Trichloroethane	79-00-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Tetrachloroethene	127-18-4	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Dibromochloromethane	124-48-1	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Chlorobenzene	108-90-7	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Ethylbenzene	100-41-4	µg/kg	5.4	U	4.4	J	3.5	J	6.3	U
m,p-Xylene	1330-20-7	µg/kg	5.4	U	19		16		9.2	
o-Xylene	95-47-6	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Styrene	100-42-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
Bromoform	75-25-2	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,3-Dichlorobenzene	541-73-1	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,4-Dichlorobenzene	106-46-7	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U
1,2-Dichlorobenzene	95-50-1	µg/kg	5.4	U	6.3	U	6.7	U	6.3	U

Shaded areas indicate changes by the validator.

VOLATILE ORGANIC METHOD 8260
DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2J9		B0D2K0	
		Date:	2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q
Chloromethane	74-87-3	µg/kg	6.0	U	5.6	U
Vinyl chloride	75-01-4	µg/kg	6.0	U	5.6	U
Bromomethane	74-83-9	µg/kg	6.0	U	5.6	U
Chloroethane	75-00-3	µg/kg	6.0	U	5.6	U
Trichlorofluoromethane	75-69-4	µg/kg	6.0	U	5.6	U
Acetone	67-64-1	µg/kg	12	U	11	U
1,1-Dichloroethene	75-35-4	µg/kg	6.0	U	5.6	U
Carbon disulfide	75-15-0	µg/kg	6.0	U	5.6	U
Methylene chloride	75-09-2	µg/kg	6.0	U	5.6	U
trans-1,2-Dichloroethene	156-50-5	µg/kg	6.0	U	5.6	U
Vinyl Acetate	108-05-4	µg/kg	12	U	11	U
1,1-Dichloroethane	75-34-3	µg/kg	6.0	U	5.6	U
2-Butanone	78-93-3	µg/kg	12	U	11	U
cis-1,2-Dichloroethene	156-59-2	µg/kg	6.0	U	5.6	U
Chloroform	67-66-3	µg/kg	6.0	U	5.6	U
1,1,1-Trichloroethane	71-55-6	µg/kg	6.0	U	5.6	U
Carbon tetrachloride	56-23-5	µg/kg	6.0	U	5.6	U
1,2-Dichloroethane	107-06-2	µg/kg	6.0	U	5.6	U
Benzene	71-43-2	µg/kg	6.0	U	5.6	U
Trichloroethene	79-01-6	µg/kg	6.0	U	5.6	U
1,2-Dichloropropane	78-87-5	µg/kg	6.0	U	5.6	U
Bromodichloromethane	75-27-4	µg/kg	6.0	U	5.6	U
4-Methyl-2-pentanone	108-10-1	µg/kg	12	U	11	U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	6.0	U	5.6	U
Toluene	108-88-3	µg/kg	6.0	U	5.6	U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	6.0	U	5.6	U
1,1,2-Trichloroethane	79-00-5	µg/kg	6.0	U	5.6	U
Tetrachloroethene	127-18-4	µg/kg	6.0	U	5.6	U
Dibromochloromethane	124-48-1	µg/kg	6.0	U	5.6	U
Chlorobenzene	108-90-7	µg/kg	6.0	U	5.6	U
Ethylbenzene	100-41-4	µg/kg	6.0	U	5.6	U
m,p-Xylene	1330-20-7	µg/kg	6.0	U	5.6	U
o-Xylene	95-47-6	µg/kg	6.0	U	5.6	U
Styrene	100-42-5	µg/kg	6.0	U	5.6	U
Bromoform	75-25-2	µg/kg	6.0	U	5.6	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	6.0	U	5.6	U
1,3-Dichlorobenzene	541-73-1	µg/kg	6.0	U	5.6	U
1,4-Dichlorobenzene	106-46-7	µg/kg	6.0	U	5.6	U
1,2-Dichlorobenzene	95-50-1	µg/kg	6.0	U	5.6	U

RADIOCHEMISTRY DATA SUMMARY TABLE

LATA ID#: VW403.31		HEIS #:	B0D2D1		B0D2D2		B0D2G8		B0D2H6		B0D2H7	
		Date:	31-Jan-95		31-Jan-95		1-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	WATER		WATER		WATER		LIQUID		LIQUID	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Uranium, Total	7440-61-1	µg/L	0.207		0.517		0.1178		0.794		0.315	

LATA ID#: VW403.31		HEIS #:	B0D2G3		B0D2G4		B0D2G5		B0D2H0		B0D2H1	
		Date:	31-Jan-95		31-Jan-95		31-Jan-95		1-Feb-95		1-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Uranium, Total	7440-61-1	µg/g	5.43	J	3.72	J	3.42	J	2.93	J	5.97	J

LATA ID#: VW403.31		HEIS #:	B0D2H2		B0D2J0		B0D2J1		B0D2J2		B0D2J3	
		Date:	1-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Uranium, Total	7440-61-1	µg/g	4.36	J	20.1	J	13.74	J	10.29	J	12.05	J

LATA ID#: VW403.31		HEIS #:	B0D2J4		B0D2J5		B0D2J9		B0D2K0	
		Date:	2-Feb-95		2-Feb-95		2-Feb-95		2-Feb-95	
		Matrix:	SOLIDS		SOLIDS		SOLIDS		SOLIDS	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Uranium, Total	7440-61-1	µg/g	9.65	J	11.92	J	18.1	J	33.3	J

Shaded areas indicate changes by the validator.

Sample Results (Form I's)

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2D1

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Matrix (soil/water): WATER Lab Sample ID: L3764-3___

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	37.2	B		P	U
7440-36-0	Antimony	45.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	12.0	U		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	237	B		P	U
7440-47-3	Chromium	3.0	U		P	
7440-48-4	Cobalt	7.0	U		P	
7440-50-8	Copper	3.0	U		P	
7439-89-6	Iron	28.4	B		P	U
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	37.0	U		P	
7439-96-5	Manganese	1.0	U		P	
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	680	U		P	
7782-49-2	Selenium	3.0	U		F	
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	236	B		P	U
7440-28-0	Thallium	4.0	U		F	
7440-62-2	Vanadium	3.0	U		P	
7440-66-6	Zinc	5.3	B		P	U

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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4-26-95

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2D2

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Matrix (soil/water): WATER Lab Sample ID: L3764-4___

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum_	36.0	~~B~~		P_	U
7440-36-0	Antimony_	45.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	13.4	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	3.0	U		P_	
7440-70-2	Calcium__	92.5	~~B~~		P_	U
7440-47-3	Chromium_	3.0	U		P_	
7440-48-4	Cobalt___	7.0	U		P_	
7440-50-8	Copper___	3.0	U		P_	
7439-89-6	Iron____	19.7	~~B~~		P_	U
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	37.0	U		P_	
7439-96-5	Manganese	1.0	U		P_	
7439-97-6	Mercury__	0.20	U		AV	
7440-02-0	Nickel___	12.0	U		P_	
7440-09-7	Potassium	680	U		P_	
7782-49-2	Selenium_	3.0	U		F_	
7440-22-4	Silver___	4.0	U		P_	
7440-23-5	Sodium___	197	~~B~~		P_	U
7440-28-0	Thallium_	4.0	U		F_	
7440-62-2	Vanadium_	3.0	U		P_	
7440-66-6	Zinc____	6.8	~~B~~		P_	U

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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4-26-95

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CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2G8

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Matrix (soil/water): WATER Lab Sample ID: L3764-1___

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum_	75.6	~~B~~		P_	U
7440-36-0	Antimony_	45.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	12.0	U		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	3.0	U		P_	
7440-70-2	Calcium__	27.9	~~B~~		P_	U
7440-47-3	Chromium_	3.0	U		P_	
7440-48-4	Cobalt___	7.0	U		P_	
7440-50-8	Copper___	3.0	U		P_	
7439-89-6	Iron_____	50.2	~~B~~		P_	U
7439-92-1	Lead_____	2.0	U		F_	
7439-95-4	Magnesium	37.0	U		P_	
7439-96-5	Manganese	1.0	U		P_	
7439-97-6	Mercury__	0.20	U		AV	
7440-02-0	Nickel___	12.0	U		P_	
7440-09-7	Potassium	680	U		P_	
7782-49-2	Selenium_	3.0	U		F_	
7440-22-4	Silver___	4.0	U		P_	
7440-23-5	Sodium___	172	~~B~~		P_	U
7440-28-0	Thallium_	4.0	U		F_	
7440-62-2	Vanadium_	3.0	U		P_	
7440-66-6	Zinc_____	10.6	~~B~~		P_	U

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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4-26-95

082

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1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2H6

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Matrix (soil/water): WATER Lab Sample ID: L3764-63__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	65.1	B		P	U
7440-36-0	Antimony	45.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	12.0	U		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	39.7	B		P	U
7440-47-3	Chromium	3.0	U		P	
7440-48-4	Cobalt	7.0	U		P	
7440-50-8	Copper	3.0	U		P	
7439-89-6	Iron	7.8	B		P	U
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	37.0	U		P	
7439-96-5	Manganese	1.0	U		P	
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	680	U		P	
7782-49-2	Selenium	3.0	U		F	
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	183	B		P	U
7440-28-0	Thallium	4.0	U		F	
7440-62-2	Vanadium	3.0	U		P	
7440-66-6	Zinc	5.1	B		P	U

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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4-26-95

083

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2H7

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Matrix (soil/water): WATER Lab Sample ID: L3764-65__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	26.0	U		P	
7440-36-0	Antimony	45.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	12.0	U		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	119	B		P	u
7440-47-3	Chromium	3.0	U		P	
7440-48-4	Cobalt	7.0	U		P	
7440-50-8	Copper	3.0	U		P	
7439-89-6	Iron	304			P	
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	45.7	B		P	u
7439-96-5	Manganese	7.2	B		P	u
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	680	U		P	
7782-49-2	Selenium	3.0	U		F	
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	329	B		P	u
7440-28-0	Thallium	4.0	U		F	
7440-62-2	Vanadium	3.0	U		P	
7440-66-6	Zinc	19.0	B		P	u

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2G3

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-25__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _76.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6290			P	J
7440-36-0	Antimony	11.9	U	N	P	UJ
7440-38-2	Arsenic	2.7			F	
7440-39-3	Barium	79.8			P	
7440-41-7	Beryllium	0.26	U		P	
7440-43-9	Cadmium	0.79	U		P	
7440-70-2	Calcium	6720			P	J
7440-47-3	Chromium	8.1			P	
7440-48-4	Cobalt	45.2		N*	P	J
7440-50-8	Copper	11.9			P	
7439-89-6	Iron	15600		*	P	J
7439-92-1	Lead	4.4			F	
7439-95-4	Magnesium	3840			P	J
7439-96-5	Manganese	275			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	9.1	B		P	
7440-09-7	Potassium	1290	B		P	BJ
7782-49-2	Selenium	0.78	U		F	
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	572	B		P	BJ
7440-28-0	Thallium	1.0	U		F	
7440-62-2	Vanadium	30.8			P	
7440-66-6	Zinc	38.7			P	

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2G4

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-26__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _91.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5600			P	J
7440-36-0	Antimony	9.8	~~U~~	N	P	UJ
7440-38-2	Arsenic	2.3			F	
7440-39-3	Barium	68.2			P	
7440-41-7	Beryllium	0.22	U		P	
7440-43-9	Cadmium	0.65	U		P	
7440-70-2	Calcium	5320			P	J
7440-47-3	Chromium	8.2			P	
7440-48-4	Cobalt	10	~~B~~	N*	P	BJ
7440-50-8	Copper	11.2			P	
7439-89-6	Iron	16800		*	P	J
7439-92-1	Lead	3.8			F	
7439-95-4	Magnesium	3920			P	J
7439-96-5	Manganese	297			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	11.8			P	
7440-09-7	Potassium	982	~~B~~		P	BJ
7782-49-2	Selenium	0.65	U		F	
7440-22-4	Silver	0.87	U		P	
7440-23-5	Sodium	406	~~B~~		P	BJ
7440-28-0	Thallium	0.87	U		F	
7440-62-2	Vanadium	35.2			P	
7440-66-6	Zinc	39.2			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2G5

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-27__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _91.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5520			P	J
7440-36-0	Antimony	9.8	U	N	P	UJ
7440-38-2	Arsenic	2.2			F	
7440-39-3	Barium	77.5			P	
7440-41-7	Beryllium	0.22	B		P	
7440-43-9	Cadmium	0.65	U		P	
7440-70-2	Calcium	5360			P	J
7440-47-3	Chromium	7.3			P	
7440-48-4	Cobalt	11.6		N*	P	J
7440-50-8	Copper	10.1			P	
7439-89-6	Iron	16200		*	P	J
7439-92-1	Lead	2.9			F	
7439-95-4	Magnesium	3850			P	J
7439-96-5	Manganese	292			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	10.9			P	
7440-09-7	Potassium	922	B		P	BJ
7782-49-2	Selenium	0.66	U		F	
7440-22-4	Silver	0.87	U		P	
7440-23-5	Sodium	451	B		P	BJ
7440-28-0	Thallium	0.88	U		F	
7440-62-2	Vanadium	34.0			P	
7440-66-6	Zinc	48.6			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2H0

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-7___

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _93.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5390			P	J
7440-36-0	Antimony	9.6	U	N	P	UJ
7440-38-2	Arsenic	2.7			F	
7440-39-3	Barium	60.3			P	
7440-41-7	Beryllium	0.21	U		P	
7440-43-9	Cadmium	0.64	U		P	
7440-70-2	Calcium	6190			P	J
7440-47-3	Chromium	8.1			P	
7440-48-4	Cobalt	31.1		N*	P	J
7440-50-8	Copper	13.4			P	
7439-89-6	Iron	16400		*	P	J
7439-92-1	Lead	3.1			F	
7439-95-4	Magnesium	3880			P	J
7439-96-5	Manganese	260			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	11.6			P	
7440-09-7	Potassium	857	B		P	BJ
7782-49-2	Selenium	0.64	U		F	
7440-22-4	Silver	0.85	U		P	
7440-23-5	Sodium	452	B		P	BJ
7440-28-0	Thallium	0.85	U		F	
7440-62-2	Vanadium	32.8			P	
7440-66-6	Zinc	33.7			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2H1

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-8___

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _93.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5660			P	J
7440-36-0	Antimony	9.6	U	N	P	UJ
7440-38-2	Arsenic	2.4			F	
7440-39-3	Barium	63.4			P	
7440-41-7	Beryllium	0.25	B		P	
7440-43-9	Cadmium	0.64	U		P	
7440-70-2	Calcium	6730			P	J
7440-47-3	Chromium	8.2			P	
7440-48-4	Cobalt	13.8		N*	P	J
7440-50-8	Copper	13.3			P	
7439-89-6	Iron	16500		*	P	J
7439-92-1	Lead	2.7			F	
7439-95-4	Magnesium	4150			P	J
7439-96-5	Manganese	268			P	
7439-97-6	Mercury	0.10	U		AV	
7440-02-0	Nickel	10.7			P	
7440-09-7	Potassium	1010	B		P	BJ
7782-49-2	Selenium	0.64	U		F	
7440-22-4	Silver	0.86	U		P	
7440-23-5	Sodium	498	B		P	BJ
7440-28-0	Thallium	0.86	U		F	
7440-62-2	Vanadium	30.5			P	
7440-66-6	Zinc	32.0			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2H2

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-9___

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _93.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5620			P	J
7440-36-0	Antimony	9.7	U	N	P	UJ
7440-38-2	Arsenic	3.1			F	
7440-39-3	Barium	65.0			P	
7440-41-7	Beryllium	0.25	B		P	
7440-43-9	Cadmium	0.65	U		P	
7440-70-2	Calcium	6770			P	J
7440-47-3	Chromium	8.2			P	
7440-48-4	Cobalt	14.9		N*	P	J
7440-50-8	Copper	13.1			P	
7439-89-6	Iron	16700		*	P	J
7439-92-1	Lead	3.5			F	
7439-95-4	Magnesium	3960			P	J
7439-96-5	Manganese	278			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	10.8			P	
7440-09-7	Potassium	831	B		P	BJ
7782-49-2	Selenium	0.64	U		F	
7440-22-4	Silver	0.86	U		P	
7440-23-5	Sodium	508	B		P	BJ
7440-28-0	Thallium	0.86	U		F	
7440-62-2	Vanadium	36.0			P	
7440-66-6	Zinc	32.8			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2J0

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-51__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _73.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6410			P	J
7440-36-0	Antimony	12.2	~~U~~	N	P	UJ
7440-38-2	Arsenic	2.2	B		F	
7440-39-3	Barium	79.8			P	
7440-41-7	Beryllium	0.27	U		P	
7440-43-9	Cadmium	0.82	U		P	
7440-70-2	Calcium	5660			P	J
7440-47-3	Chromium	8.3			P	
7440-48-4	Cobalt	60.0		N*	P	J
7440-50-8	Copper	12.0			P	
7439-89-6	Iron	16000		*	P	J
7439-92-1	Lead	4.2		S	F	
7439-95-4	Magnesium	3650			P	J
7439-96-5	Manganese	282			P	
7439-97-6	Mercury	0.29			AV	
7440-02-0	Nickel	9.7	B		P	
7440-09-7	Potassium	1350	~~B~~		P	BJ
7782-49-2	Selenium	0.82	U		F	
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	668	~~B~~		P	BJ
7440-28-0	Thallium	1.1	U		F	
7440-62-2	Vanadium	34.2			P	
7440-66-6	Zinc	37.6			P	

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2J1

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-67__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _78.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6390	-		P	J
7440-36-0	Antimony	11.4	~~U~~	N	P	UJ
7440-38-2	Arsenic	2.7	-		F	
7440-39-3	Barium	85.8	-		P	
7440-41-7	Beryllium	0.26	B		P	
7440-43-9	Cadmium	0.76	U		P	
7440-70-2	Calcium	5680	-		P	J
7440-47-3	Chromium	7.6	-		P	
7440-48-4	Cobalt	48.7	-	N*	P	J
7440-50-8	Copper	12.2	-		P	
7439-89-6	Iron	17400	-	*	P	J
7439-92-1	Lead	4.1	-		F	
7439-95-4	Magnesium	3760	-		P	J
7439-96-5	Manganese	307	-		P	
7439-97-6	Mercury	0.27	-	± 0.17	AV	
7440-02-0	Nickel	11.6	-		P	
7440-09-7	Potassium	1220	~~B~~		P	BJ
7782-49-2	Selenium	0.76	U		F	
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	611	~~B~~		P	BJ
7440-28-0	Thallium	1.0	U		F	
7440-62-2	Vanadium	37.2	-		P	
7440-66-6	Zinc	40.2	-		P	
			-			
			-			

Color Before: BROWN____ Clarity Before: _____ NP 3/17/95 Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2J2

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-52__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _73.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7580			P	J
7440-36-0	Antimony	12.2	U	N	P	UJ
7440-38-2	Arsenic	3.6			F	
7440-39-3	Barium	98.3			P	
7440-41-7	Beryllium	0.28	B		P	
7440-43-9	Cadmium	0.81	U		P	
7440-70-2	Calcium	6340			P	J
7440-47-3	Chromium	9.5			P	
7440-48-4	Cobalt	41.3		N*	P	J
7440-50-8	Copper	14.3			P	
7439-89-6	Iron	17300		*	P	J
7439-92-1	Lead	5.9		S	F	
7439-95-4	Magnesium	4070			P	J
7439-96-5	Manganese	313			P	
7439-97-6	Mercury	0.12	U		AV	
7440-02-0	Nickel	13.5			P	
7440-09-7	Potassium	1650			P	J
7782-49-2	Selenium	0.82	U		F	
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	711	B		P	BJ
7440-28-0	Thallium	1.1	U		F	
7440-62-2	Vanadium	34.5			P	
7440-66-6	Zinc	40.8			P	

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2J3

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-68__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _76.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7520			P	J
7440-36-0	Antimony	11.8	U	N	P	UJ
7440-38-2	Arsenic	3.6			F	
7440-39-3	Barium	100			P	
7440-41-7	Beryllium	0.28	B		P	
7440-43-9	Cadmium	0.79	U		P	
7440-70-2	Calcium	6230			P	J
7440-47-3	Chromium	9.0			P	
7440-48-4	Cobalt	39.8		N*	P	J
7440-50-8	Copper	13.8			P	
7439-89-6	Iron	18100		*	P	J
7439-92-1	Lead	4.8			F	
7439-95-4	Magnesium	4160			P	J
7439-96-5	Manganese	324			P	
7439-97-6	Mercury	0.19		± 0.67	AV	
7440-02-0	Nickel	12.5			P	
7440-09-7	Potassium	1550			P	J
7782-49-2	Selenium	0.78	U		F	
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	695	B		P	BJ
7440-28-0	Thallium	1.0	U		F	
7440-62-2	Vanadium	35.9			P	
7440-66-6	Zinc	42.7			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/17/95 Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2J4

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-53__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _79.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6850			P	J
7440-36-0	Antimony	11.3	~~U~~	N	P	UJ
7440-38-2	Arsenic	2.4	B		F	
7440-39-3	Barium	91.5			P	
7440-41-7	Beryllium	0.26	B		P	
7440-43-9	Cadmium	0.75	U		P	
7440-70-2	Calcium	5750			P	J
7440-47-3	Chromium	8.4			P	
7440-48-4	Cobalt	46.6		N*	P	J
7440-50-8	Copper	12.5			P	
7439-89-6	Iron	17700		*	P	J
7439-92-1	Lead	3.3			F	
7439-95-4	Magnesium	3900			P	J
7439-96-5	Manganese	315			P	
7439-97-6	Mercury	0.13		± 0.48	AV	
7440-02-0	Nickel	10.1			P	
7440-09-7	Potassium	1350			P	J
7782-49-2	Selenium	0.76	U		F	
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	688	~~B~~		P	BJ
7440-28-0	Thallium	1.0	U		F	
7440-62-2	Vanadium	37.6			P	
7440-66-6	Zinc	40.2			P	

NP 3/17/95.

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2J5

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-69__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _81.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6980			P	J
7440-36-0	Antimony	11.0	U	N	P	UJ
7440-38-2	Arsenic	1.8	B		F	
7440-39-3	Barium	85.8			P	
7440-41-7	Beryllium	0.24	U		P	
7440-43-9	Cadmium	0.73	U		P	
7440-70-2	Calcium	5730			P	J
7440-47-3	Chromium	8.6			P	
7440-48-4	Cobalt	47.3		N*	P	J
7440-50-8	Copper	12.1			P	
7439-89-6	Iron	17800		*	P	J
7439-92-1	Lead	3.8		S	F	
7439-95-4	Magnesium	3980			P	J
7439-96-5	Manganese	308			P	
7439-97-6	Mercury	0.12		± 0.1	AV	
7440-02-0	Nickel	10.9			P	
7440-09-7	Potassium	1300			P	J
7782-49-2	Selenium	0.73	U		F	
7440-22-4	Silver	0.98	U		P	
7440-23-5	Sodium	675	B		P	BJ
7440-28-0	Thallium	0.98	U		F	
7440-62-2	Vanadium	38.3			P	
7440-66-6	Zinc	40.7			P	

Color Before: BROWN____ Clarity Before: _____ NP 3/17/95 Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
WATERY_____

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CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOD2J9

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-43__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _82.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7010			P	J
7440-36-0	Antimony	11.0	~~U~~	N	P	UJ
7440-38-2	Arsenic	3.2			F	
7440-39-3	Barium	100			P	
7440-41-7	Beryllium	0.31	B		P	
7440-43-9	Cadmium	0.74	~~B~~		P	U
7440-70-2	Calcium	5990			P	J
7440-47-3	Chromium	11.7			P	
7440-48-4	Cobalt	28.7		N*	P	J
7440-50-8	Copper	37.6			P	
7439-89-6	Iron	18300		*	P	J
7439-92-1	Lead	7.4			F	
7439-95-4	Magnesium	4070			P	J
7439-96-5	Manganese	310			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	14.8			P	
7440-09-7	Potassium	1110	~~B~~		P	BJ
7782-49-2	Selenium	0.73	U		F	
7440-22-4	Silver	0.98	U		P	
7440-23-5	Sodium	567	~~B~~		P	BJ
7440-28-0	Thallium	0.97	U		F	
7440-62-2	Vanadium	38.0			P	
7440-66-6	Zinc	191			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

4.20.95

29C

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.: BOD2K0

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Lab Sample ID: L3764-44__

Level (low/med): LOW__ Date Received: 02/04/95

% Solids: _88.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6910			P	J
7440-36-0	Antimony	10.3	U	N	P	UJ
7440-38-2	Arsenic	5.4			F	
7440-39-3	Barium	95.2			P	
7440-41-7	Beryllium	0.29	B		P	
7440-43-9	Cadmium	0.68	U		P	
7440-70-2	Calcium	5390			P	J
7440-47-3	Chromium	9.8			P	
7440-48-4	Cobalt	16.6		N*	P	J
7440-50-8	Copper	23.6			P	
7439-89-6	Iron	21100		*	P	J
7439-92-1	Lead	863			F	
7439-95-4	Magnesium	4520			P	J
7439-96-5	Manganese	334			P	
7439-97-6	Mercury	0.11	U		AV	
7440-02-0	Nickel	16.2			P	
7440-09-7	Potassium	1180			P	J
7782-49-2	Selenium	0.68	U		F	
7440-22-4	Silver	0.91	U		P	
7440-23-5	Sodium	480	B		P	BJ
7440-28-0	Thallium	0.91	U		F	
7440-62-2	Vanadium	36.1			P	
7440-66-6	Zinc	90.4			P	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2G3	LAL Sample ID:	L3764-31
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	13-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021395-8240-C2
Percent Moisture:	23.72	Preparation Dilution:	0.975

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	118	70-121
Toluene-d8	134 *	81-117
Bromofluorobenzene	130 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg		DATA QUALIFIER(S)
Chloromethane	74-87-3	3.0	6.4		J
Vinyl Chloride	75-01-4	<6.4	6.4		
Bromomethane	74-83-9	<6.4	6.4		
Chloroethane	75-00-3	<6.4	6.4		
Trichlorofluoromethane	75-69-4	<6.4	6.4		
Acetone	67-64-1	29.	13.		
1,1-Dichloroethene	75-35-4	<6.4	6.4		
Carbon Disulfide	75-15-0	<6.4	6.4		
Methylene Chloride	75-09-2	<6.4	6.4		
Vinyl Acetate	108-05-4	<13.	13.		
1,1-Dichloroethane	75-34-3	<6.4	6.4		
2-Butanone	78-93-3	<13.	13.		
Chloroform	67-66-3	<6.4	6.4		
2-Hexanone	591-78-6	~~5.7~~ 6.4	6.4	U	~~J~~
1,1,1-Trichloroethane	71-55-6	<6.4	6.4		
Carbon tetrachloride	56-23-5	<6.4	6.4		
1,2-Dichloroethane	107-06-2	<6.4	6.4		
Benzene	71-43-2	3.0	6.4	J	J
Trichloroethene	79-01-6	<6.4	6.4		
1,2-Dichloropropane	78-87-5	<6.4	6.4		
Bromodichloromethane	75-27-4	<6.4	6.4		
2-Chloroethylvinylether	110-75-8	<26.	26.	UJ	X
4-Methyl-2-Pentanone	108-10-1	3.0	13.		J
cis-1,3-Dichloropropene	10061-01-5	<6.4	6.4		
Toluene	108-88-3	1.8	6.4	J	J
trans-1,3-Dichloropropene	10061-02-6	<6.4	6.4		
1,1,2-Trichloroethane	79-00-5	<6.4	6.4		
Tetrachloroethene	127-18-4	<6.4	6.4		
Dibromochloromethane	124-48-1	<6.4	6.4		
Chlorobenzene	108-90-7	<6.4	6.4		
Ethylbenzene	100-41-4	<6.4	6.4		
m,p-Xylene	1330-20-7	<6.4	6.4		
o-Xylene	95-47-6	<6.4	6.4		
Styrene	100-42-5	<6.4	6.4		
Bromoform	75-25-2	<6.4	6.4		
1,1,2,2-Tetrachloroethane	79-34-5	<6.4	6.4		
1,3-Dichlorobenzene	541-73-1	<6.4	6.4		
1,4-Dichlorobenzene	106-46-7	1.5	6.4		J
1,2-Dichlorobenzene	95-50-1	<6.4	6.4		

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2G3	**LAL Sample ID: L3764-31**
Date Received: 04-FEB-95	**Date Analyzed: 13-FEB-95**
Matrix: SOIL	**Dilution Factor: 0.975**
Analytical Batch #: 021395-8240-C2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN	24	6.01	J
UNKNOWN HYDROCARBON	7.7	9.89	J

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD2G3	LAL Sample ID:	L3764-31RE
Date Collected:	01-FEB-95	Date Received:	16-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	23.72	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	111	70-121
Toluene-d8	132 *	81-117
Bromofluorobenzene	124 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg		DATA QUALIFIER(s)
Chloromethane	74-87-3	<6.5	6.5		
Vinyl Chloride	75-01-4	<6.5	6.5		
Bromomethane	74-83-9	<6.5	6.5		
Chloroethane	75-00-3	<6.5	6.5		
Trichlorofluoromethane	75-69-4	<6.5	6.5		
Acetone	67-64-1	13.	13.		J
1,1-Dichloroethene	75-35-4	<6.5	6.5		
Carbon Disulfide	75-15-0	<6.5	6.5		
Methylene Chloride	75-09-2	2.3	6.5		J
Vinyl Acetate	108-05-4	<13.	13.		
1,1-Dichloroethane	75-34-3	<6.5	6.5		
2-Butanone	78-93-3	<13.	13.		
Chloroform	67-66-3	<6.5	6.5		
2-Hexanone	591-78-6	<6.5	6.5		
1,1,1-Trichloroethane	71-55-6	<6.5	6.5		
Carbon tetrachloride	56-23-5	<6.5	6.5		
1,2-Dichloroethane	107-06-2	<6.5	6.5		
Benzene	71-43-2	<6.5	6.5		
Trichloroethene	79-01-6	<6.5	6.5		
1,2-Dichloropropane	78-87-5	<6.5	6.5		
Bromodichloromethane	75-27-4	<6.5	6.5		
2-Chloroethylvinylether	110-75-8	<26.	26.	UJ	X
4-Methyl-2-Pentanone	108-10-1	<13.	13.		
cis-1,3-Dichloropropene	10061-01-5	<6.5	6.5		
Toluene	108-88-3	<6.5	6.5		
trans-1,3-Dichloropropene	10061-02-6	<6.5	6.5		
1,1,2-Trichloroethane	79-00-5	<6.5	6.5		
Tetrachloroethene	127-18-4	<6.5	6.5		
Dibromochloromethane	124-48-1	<6.5	6.5		
Chlorobenzene	108-90-7	<6.5	6.5		
Ethylbenzene	100-41-4	<6.5	6.5		
m,p-Xylene	1330-20-7	<6.5	6.5		
o-Xylene	95-47-6	<6.5	6.5		
Styrene	100-42-5	<6.5	6.5		
Bromoform	75-25-2	<6.5	6.5		
1,1,2,2-Tetrachloroethane	79-34-5	<6.5	6.5		
1,3-Dichlorobenzene	541-73-1	<6.5	6.5		
1,4-Dichlorobenzene	106-46-7	<6.5	6.5		
1,2-Dichlorobenzene	95-50-1	<6.5	6.5		

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2G4	LAL Sample ID:	L3764-32
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021395-8240-C2
Percent Moisture:	8.14	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	126 *	70-121
Toluene-d8	147 *	81-117
Bromofluorobenzene	136 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.4	5.4	
2-Hexanone	591-78-6	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
2-Chloroethylvinylether	110-75-8	<22.	22.	UJ x
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2G4	**LAL Sample ID: L3764-32**
Date Received: 04-FEB-95	**Date Analyzed: 13-FEB-95**
Matrix: SOIL	**Dilution Factor: 0.996**
Analytical Batch #: 021395-8240-C2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN HYDROCARBON	9.7	15.25	J
UNKNOWN HYDROCARBON	6.5	17.49	J
UNKNOWN HYDROCARBON	15	19.75	J
UNKNOWN	12	17.84	J

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD2G4	LAL Sample ID:	L3764-32RE
Date Collected:	01-FEB-95	Date Received:	16-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	8.14	Preparation Dilution:	0.971

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	110	70-121
Toluene-d8	127 *	81-117
Bromofluorobenzene	120	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.3	5.3	
2-Hexanone	591-78-6	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
2-Chloroethylvinylether	110-75-8	<21.	21.	UJ x
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2G5	LAL Sample ID:	L3764-33
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021395-8240-C2
Percent Moisture:	8.36	Preparation Dilution:	0.975

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	116	70-121
Toluene-d8	135 *	81-117
Bromofluorobenzene	125 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.3	5.3	
2-Hexanone	591-78-6	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
2-Chloroethylvinylether	110-75-8	<21.	21.	UJ X
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2G5	LAL Sample ID: L3764-33
Date Received: 04-FEB-95	Date Analyzed: 13-FEB-95
Matrix: SOIL	Dilution Factor: 0.975
Analytical Batch #: 021395-8240-C2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN HYDROCARBON	8.7	15.26	J
UNKNOWN HYDROCARBON	6.4	17.50	J
UNKNOWN HYDROCARBON	9.5	19.75	J

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	BOD2G5	LAL Sample ID:	L3764-33RE
Date Collected:	01-FEB-95	Date Received:	16-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	8.36	Preparation Dilution:	0.984

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	97	70-121
Toluene-d8	118 *	81-117
Bromofluorobenzene	108	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.4	5.4	
2-Hexanone	591-78-6	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
2-Chloroethylvinylether	110-75-8	<21.	21.	UJ X
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2H0	LAL Sample ID:	L3764-13
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	6.69	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	94	70-121
Toluene-d8	115	81-117
Bromofluorobenzene	104	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	1.7	5.3	J
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.3	5.3	
2-Hexanone	591-78-6	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
2-Chloroethylvinylether	110-75-8	<21.	21.	UJ X
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H0	**LAL Sample ID: L3764-13**
Date Received: 04-FEB-95	**Date Analyzed: 15-FEB-95**
Matrix: SOIL	**Dilution Factor: 0.998**
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2H1	LAL Sample ID:	L3764-14
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	6.55	Preparation Dilution:	0.984

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	127 *	70-121
Toluene-d8	139 *	81-117
Bromofluorobenzene	131 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.3	5.3	
2-Hexanone	591-78-6	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
2-Chloroethylvinylether	110-75-8	<21.	21.	VJ x
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H1	LAL Sample ID: L3764-14
Date Received: 04-FEB-95	Date Analyzed: 14-FEB-95
Matrix: SOIL	Dilution Factor: 0.984
Analytical Batch #: 021495-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

BM
5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2H1	LAL Sample ID:	L3764-14RE
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	6.55	Preparation Dilution:	0.984

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	111	70-121
Toluene-d8	135 *	81-117
Bromofluorobenzene	125 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.3	5.3	
2-Hexanone	591-78-6	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
2-Chloroethylvinylether	110-75-8	<21.	21.	UJ X
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2H2	LAL Sample ID:	L3764-15
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	6.77	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	94	70-121
Toluene-d8	110	81-117
Bromofluorobenzene	103	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.3	5.3	
2-Hexanone	591-78-6	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
2-Chloroethylvinylether	110-75-8	<21.	21.	UJ x
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H2	LAL Sample ID: L3764-15
Date Received: 04-FEB-95	Date Analyzed: 15-FEB-95
Matrix: SOIL	Dilution Factor: 0.996
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN HYDROCARBON	8.5	21.93	J

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LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	•B0D2H3	LAL Sample ID:	L3764-19
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	7.57	Preparation Dilution:	0.986

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	87	70-121
Toluene-d8	106	81-117
Bromofluorobenzene	94	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<4.9	4.9	
Vinyl Chloride	75-01-4	<4.9	4.9	
Bromomethane	74-83-9	<4.9	4.9	
Chloroethane	75-00-3	<4.9	4.9	
Trichlorofluoromethane	75-69-4	<4.9	4.9	
Acetone	67-64-1	<9.9	9.9	
1,1-Dichloroethene	75-35-4	<4.9	4.9	
Carbon Disulfide	75-15-0	<4.9	4.9	
Methylene Chloride	75-09-2	<4.9	4.9	
Vinyl Acetate	108-05-4	<9.9	9.9	
1,1-Dichloroethane	75-34-3	<4.9	4.9	
2-Butanone	78-93-3	<9.9	9.9	
Chloroform	67-66-3	<4.9	4.9	
2-Hexanone	591-78-6	<4.9	4.9	
1,1,1-Trichloroethane	71-55-6	<4.9	4.9	
Carbon tetrachloride	56-23-5	<4.9	4.9	
1,2-Dichloroethane	107-06-2	<4.9	4.9	
Benzene	71-43-2	<4.9	4.9	
Trichloroethene	79-01-6	<4.9	4.9	
1,2-Dichloropropane	78-87-5	<4.9	4.9	
Bromodichloromethane	75-27-4	<4.9	4.9	
2-Chloroethylvinylether	110-75-8	<20.	20.	UJ x
4-Methyl-2-Pentanone	108-10-1	<9.9	9.9	
cis-1,3-Dichloropropene	10061-01-5	<4.9	4.9	
Toluene	108-88-3	<4.9	4.9	
trans-1,3-Dichloropropene	10061-02-6	<4.9	4.9	
1,1,2-Trichloroethane	79-00-5	<4.9	4.9	
Tetrachloroethene	127-18-4	<4.9	4.9	
Dibromochloromethane	124-48-1	<4.9	4.9	
Chlorobenzene	108-90-7	<4.9	4.9	
Ethylbenzene	100-41-4	<4.9	4.9	
m,p-Xylene	1330-20-7	<4.9	4.9	
o-Xylene	95-47-6	<4.9	4.9	
Styrene	100-42-5	<4.9	4.9	
Bromoform	75-25-2	<4.9	4.9	
1,1,2,2-Tetrachloroethane	79-34-5	<4.9	4.9	
1,3-Dichlorobenzene	541-73-1	<4.9	4.9	
1,4-Dichlorobenzene	106-46-7	<4.9	4.9	
1,2-Dichlorobenzene	95-50-1	<4.9	4.9	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H3	**LAL Sample ID: L3764-19**
Date Received: 04-FEB-95	**Date Analyzed: 14-FEB-95**
Matrix: SOIL	**Dilution Factor: 0.986**
Analytical Batch #: 021495-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2H4	LAL Sample ID:	L3764-20
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	6.72	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	89	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	<10.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
Chloroform	67-66-3	<5.0	5.0	
2-Hexanone	591-78-6	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	UJ X
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H4	**LAL Sample ID: L3764-20**
Date Received: 04-FEB-95	**Date Analyzed: 14-FEB-95**
Matrix: SOIL	**Dilution Factor: 1.00**
Analytical Batch #: 021495-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN HYDROCARBON	7.0	21.96	J

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2H5	LAL Sample ID:	L3764-21
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	14-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021495-8240-C1
Percent Moisture:	7.39	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	97	70-121
Toluene-d8	114	81-117
Bromofluorobenzene	103	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	<10.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
Chloroform	67-66-3	<5.0	5.0	
2-Hexanone	591-78-6	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	UJ x
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H5	LAL Sample ID: L3764-21
Date Received: 04-FEB-95	Date Analyzed: 14-FEB-95
Matrix: SOIL	Dilution Factor: 0.998
Analytical Batch #: 021495-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN HYDROCARBON	7.0	21.96	J

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2J0	LAL Sample ID:	L3764-57
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	21.64	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	96	70-121
Toluene-d8	111	81-117
Bromofluorobenzene	107	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg		DATA QUALIFIER(s)
Chloromethane	74-87-3	<6.4	6.4		
Vinyl Chloride	75-01-4	<6.4	6.4		
Bromomethane	74-83-9	<6.4	6.4		
Chloroethane	75-00-3	<6.4	6.4		
Trichlorofluoromethane	75-69-4	<6.4	6.4		
Acetone	67-64-1	<13.	13.		
1,1-Dichloroethene	75-35-4	<6.4	6.4		
Carbon Disulfide	75-15-0	<6.4	6.4		
Methylene Chloride	75-09-2	<6.4	6.4		
Vinyl Acetate	108-05-4	<13.	13.		
1,1-Dichloroethane	75-34-3	<6.4	6.4		
2-Butanone	78-93-3	<13.	13.		
Chloroform	67-66-3	<6.4	6.4		
2-Hexanone	591-78-6	<6.4	6.4		
1,1,1-Trichloroethane	71-55-6	<6.4	6.4		
Carbon tetrachloride	56-23-5	<6.4	6.4		
1,2-Dichloroethane	107-06-2	<6.4	6.4		
Benzene	71-43-2	<6.4	6.4		
Trichloroethene	79-01-6	<6.4	6.4		
1,2-Dichloropropane	78-87-5	<6.4	6.4		
Bromodichloromethane	75-27-4	<6.4	6.4		
2-Chloroethylvinylether	110-75-8	<25.	25.	UJ	X
4-Methyl-2-Pentanone	108-10-1	2.7	13.		J
cis-1,3-Dichloropropene	10061-01-5	<6.4	6.4		
Toluene	108-88-3	60.	6.4		
trans-1,3-Dichloropropene	10061-02-6	<6.4	6.4		
1,1,2-Trichloroethane	79-00-5	<6.4	6.4		
Tetrachloroethene	127-18-4	<6.4	6.4		
Dibromochloromethane	124-48-1	<6.4	6.4		
Chlorobenzene	108-90-7	<6.4	6.4		
Ethylbenzene	100-41-4	2.9	6.4		J
m,p-Xylene	1330-20-7	6.9	6.4		
o-Xylene	95-47-6	2.2	6.4		J
Styrene	100-42-5	<6.4	6.4		
Bromoform	75-25-2	<6.4	6.4		
1,1,2,2-Tetrachloroethane	79-34-5	<6.4	6.4		
1,3-Dichlorobenzene	541-73-1	<6.4	6.4		
1,4-Dichlorobenzene	106-46-7	<6.4	6.4		
1,2-Dichlorobenzene	95-50-1	<6.4	6.4		

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2J0	LAL Sample ID: L3764-57
Date Received: 04-FEB-95	Date Analyzed: 15-FEB-95
Matrix: SOIL	Dilution Factor: 0.996
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2J2	LAL Sample ID:	L3764-58
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	26.71	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	114	81-117
Bromofluorobenzene	110	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg		DATA QUALIFIER(s)
Chloromethane	74-87-3	<6.8	6.8		
Vinyl Chloride	75-01-4	<6.8	6.8		
Bromomethane	74-83-9	<6.8	6.8		
Chloroethane	75-00-3	<6.8	6.8		
Trichlorofluoromethane	75-69-4	<6.8	6.8		
Acetone	67-64-1	14.	14.		
1,1-Dichloroethene	75-35-4	<6.8	6.8		
Carbon Disulfide	75-15-0	<6.8	6.8		
Methylene Chloride	75-09-2	<6.8	6.8		
Vinyl Acetate	108-05-4	<14.	14.		
1,1-Dichloroethane	75-34-3	<6.8	6.8		
2-Butanone	78-93-3	<14.	14.		
Chloroform	67-66-3	<6.8	6.8		
2-Hexanone	591-78-6	<6.8	6.8		
1,1,1-Trichloroethane	71-55-6	<6.8	6.8		
Carbon tetrachloride	56-23-5	<6.8	6.8		
1,2-Dichloroethane	107-06-2	<6.8	6.8		
Benzene	71-43-2	<6.8	6.8		
Trichloroethene	79-01-6	<6.8	6.8		
1,2-Dichloropropane	78-87-5	<6.8	6.8		
Bromodichloromethane	75-27-4	<6.8	6.8		
2-Chloroethylvinylether	110-75-8	<27.	27.	UJ	X
4-Methyl-2-Pentanone	108-10-1	3.1	14.		J
cis-1,3-Dichloropropene	10061-01-5	<6.8	6.8		
Toluene	108-88-3	49.	6.8		
trans-1,3-Dichloropropene	10061-02-6	<6.8	6.8		
1,1,2-Trichloroethane	79-00-5	<6.8	6.8		
Tetrachloroethene	127-18-4	<6.8	6.8		
Dibromochloromethane	124-48-1	<6.8	6.8		
Chlorobenzene	108-90-7	<6.8	6.8		
Ethylbenzene	100-41-4	2.5	6.8		J
m,p-Xylene	1330-20-7	6.3	6.8		J
o-Xylene	95-47-6	2.0	6.8		J
Styrene	100-42-5	<6.8	6.8		
Bromoform	75-25-2	<6.8	6.8		
1,1,2,2-Tetrachloroethane	79-34-5	<6.8	6.8		
1,3-Dichlorobenzene	541-73-1	<6.8	6.8		
1,4-Dichlorobenzene	106-46-7	<6.8	6.8		
1,2-Dichlorobenzene	95-50-1	<6.8	6.8		

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2J2	LAL Sample ID: L3764-58
Date Received: 04-FEB-95	Date Analyzed: 15-FEB-95
Matrix: SOIL	Dilution Factor: 0.996
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

BM
5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2J4	LAL Sample ID:	L3764-59
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	20.4	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	94	70-121
Toluene-d8	115	81-117
Bromofluorobenzene	106	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.3	6.3	
Vinyl Chloride	75-01-4	<6.3	6.3	
Bromomethane	74-83-9	<6.3	6.3	
Chloroethane	75-00-3	<6.3	6.3	
Trichlorofluoromethane	75-69-4	<6.3	6.3	
Acetone	67-64-1	13.	13.	
1,1-Dichloroethene	75-35-4	<6.3	6.3	
Carbon Disulfide	75-15-0	<6.3	6.3	
Methylene Chloride	75-09-2	<6.3	6.3	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.3	6.3	
2-Butanone	78-93-3	<13.	13.	
Chloroform	67-66-3	<6.3	6.3	
2-Hexanone	591-78-6	<6.3	6.3	
1,1,1-Trichloroethane	71-55-6	<6.3	6.3	
Carbon tetrachloride	56-23-5	<6.3	6.3	
1,2-Dichloroethane	107-06-2	<6.3	6.3	
Benzene	71-43-2	<6.3	6.3	
Trichloroethene	79-01-6	<6.3	6.3	
1,2-Dichloropropane	78-87-5	<6.3	6.3	
Bromodichloromethane	75-27-4	<6.3	6.3	
2-Chloroethylvinylether	110-75-8	<25.	25.	UJ X
4-Methyl-2-Pentanone	108-10-1	4.7	13.	J
cis-1,3-Dichloropropene	10061-01-5	<6.3	6.3	
Toluene	108-88-3	45.	6.3	
trans-1,3-Dichloropropene	10061-02-6	<6.3	6.3	
1,1,2-Trichloroethane	79-00-5	<6.3	6.3	
Tetrachloroethene	127-18-4	<6.3	6.3	
Dibromochloromethane	124-48-1	<6.3	6.3	
Chlorobenzene	108-90-7	<6.3	6.3	
Ethylbenzene	100-41-4	2.6	6.3	J
m,p-Xylene	1330-20-7	6.6	6.3	
o-Xylene	95-47-6	2.2	6.3	J
Styrene	100-42-5	<6.3	6.3	
Bromoform	75-25-2	<6.3	6.3	
1,1,2,2-Tetrachloroethane	79-34-5	<6.3	6.3	
1,3-Dichlorobenzene	541-73-1	<6.3	6.3	
1,4-Dichlorobenzene	106-46-7	<6.3	6.3	
1,2-Dichlorobenzene	95-50-1	<6.3	6.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2J4	LAL Sample ID: L3764-59
Date Received: 04-FEB-95	Date Analyzed: 15-FEB-95
Matrix: SOIL	Dilution Factor: 0.996
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
UNKNOWN	11	8.72	J

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2J9	LAL Sample ID:	L3764-47
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	17.74	Preparation Dilution:	0.996

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	95	70-121
Toluene-d8	109	81-117
Bromofluorobenzene	100	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<6.1	6.1	
Vinyl Chloride	75-01-4	<6.1	6.1	
Bromomethane	74-83-9	<6.1	6.1	
Chloroethane	75-00-3	<6.1	6.1	
Trichlorofluoromethane	75-69-4	<6.1	6.1	
Acetone	67-64-1	9.3	12.	J
1,1-Dichloroethene	75-35-4	<6.1	6.1	
Carbon Disulfide	75-15-0	<6.1	6.1	
Methylene Chloride	75-09-2	1.6	6.1	J
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.1	6.1	
2-Butanone	78-93-3	<12.	12.	
Chloroform	67-66-3	<6.1	6.1	
2-Hexanone	591-78-6	<6.1	6.1	
1,1,1-Trichloroethane	71-55-6	<6.1	6.1	
Carbon tetrachloride	56-23-5	<6.1	6.1	
1,2-Dichloroethane	107-06-2	<6.1	6.1	
Benzene	71-43-2	<6.1	6.1	
Trichloroethene	79-01-6	<6.1	6.1	
1,2-Dichloropropane	78-87-5	<6.1	6.1	
Bromodichloromethane	75-27-4	<6.1	6.1	
2-Chloroethylvinylether	110-75-8	<24.	24.	UJ X
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1	
Toluene	108-88-3	5.8	6.1	J
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1	
1,1,2-Trichloroethane	79-00-5	<6.1	6.1	
Tetrachloroethene	127-18-4	<6.1	6.1	
Dibromochloromethane	124-48-1	<6.1	6.1	
Chlorobenzene	108-90-7	<6.1	6.1	
Ethylbenzene	100-41-4	<6.1	6.1	
m,p-Xylene	1330-20-7	<6.1	6.1	
o-Xylene	95-47-6	<6.1	6.1	
Styrene	100-42-5	<6.1	6.1	
Bromoform	75-25-2	<6.1	6.1	
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1	
1,3-Dichlorobenzene	541-73-1	<6.1	6.1	
1,4-Dichlorobenzene	106-46-7	<6.1	6.1	
1,2-Dichlorobenzene	95-50-1	<6.1	6.1	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2J9	LAL Sample ID: L3764-47
Date Received: 04-FEB-95	Date Analyzed: 15-FEB-95
Matrix: SOIL	Dilution Factor: 0.996
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2K0	LAL Sample ID:	L3764-48
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	11.95	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	102	70-121
Toluene-d8	118 *	81-117
Bromofluorobenzene	110	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.7	5.7	
Vinyl Chloride	75-01-4	<5.7	5.7	
Bromomethane	74-83-9	<5.7	5.7	
Chloroethane	75-00-3	<5.7	5.7	
Trichlorofluoromethane	75-69-4	<5.7	5.7	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.7	5.7	
Carbon Disulfide	75-15-0	<5.7	5.7	
Methylene Chloride	75-09-2	1.6	5.7	J
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.7	5.7	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.7	5.7	
2-Hexanone	591-78-6	<5.7	5.7	
1,1,1-Trichloroethane	71-55-6	<5.7	5.7	
Carbon tetrachloride	56-23-5	<5.7	5.7	
1,2-Dichloroethane	107-06-2	<5.7	5.7	
Benzene	71-43-2	<5.7	5.7	
Trichloroethene	79-01-6	<5.7	5.7	
1,2-Dichloropropane	78-87-5	<5.7	5.7	
Bromodichloromethane	75-27-4	<5.7	5.7	
2-Chloroethylvinylether	110-75-8	<23.	23.	UJ X
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.7	5.7	
Toluene	108-88-3	<5.7	5.7	
trans-1,3-Dichloropropene	10061-02-6	<5.7	5.7	
1,1,2-Trichloroethane	79-00-5	<5.7	5.7	
Tetrachloroethene	127-18-4	<5.7	5.7	
Dibromochloromethane	124-48-1	<5.7	5.7	
Chlorobenzene	108-90-7	<5.7	5.7	
Ethylbenzene	100-41-4	<5.7	5.7	
m,p-Xylene	1330-20-7	<5.7	5.7	
o-Xylene	95-47-6	<5.7	5.7	
Styrene	100-42-5	<5.7	5.7	
Bromoform	75-25-2	<5.7	5.7	
1,1,2,2-Tetrachloroethane	79-34-5	<5.7	5.7	
1,3-Dichlorobenzene	541-73-1	<5.7	5.7	
1,4-Dichlorobenzene	106-46-7	<5.7	5.7	
1,2-Dichlorobenzene	95-50-1	<5.7	5.7	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8240
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2K0	LAL Sample ID: L3764-48
Date Received: 04-FEB-95	Date Analyzed: 15-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch #: 021595-8240-C1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes	Data Qualifier(s)
NONE DETECTED			

BM
5-4-95

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2K0	LAL Sample ID:	L3764-48RE
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	11.95	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	111	70-121
Toluene-d8	139 *	81-117
Bromofluorobenzene	125 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.7	5.7	
Vinyl Chloride	75-01-4	<5.7	5.7	
Bromomethane	74-83-9	<5.7	5.7	
Chloroethane	75-00-3	<5.7	5.7	
Trichlorofluoromethane	75-69-4	<5.7	5.7	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.7	5.7	
Carbon Disulfide	75-15-0	<5.7	5.7	
Methylene Chloride	75-09-2	1.3	5.7	J
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.7	5.7	
2-Butanone	78-93-3	<11.	11.	
Chloroform	67-66-3	<5.7	5.7	
2-Hexanone	591-78-6	<5.7	5.7	
1,1,1-Trichloroethane	71-55-6	<5.7	5.7	
Carbon tetrachloride	56-23-5	<5.7	5.7	
1,2-Dichloroethane	107-06-2	<5.7	5.7	
Benzene	71-43-2	<5.7	5.7	
Trichloroethene	79-01-6	<5.7	5.7	
1,2-Dichloropropane	78-87-5	<5.7	5.7	
Bromodichloromethane	75-27-4	<5.7	5.7	
2-Chloroethylvinylether	110-75-8	<23.	23.	UJ X
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.7	5.7	
Toluene	108-88-3	<5.7	5.7	
trans-1,3-Dichloropropene	10061-02-6	<5.7	5.7	
1,1,2-Trichloroethane	79-00-5	<5.7	5.7	
Tetrachloroethene	127-18-4	<5.7	5.7	
Dibromochloromethane	124-48-1	<5.7	5.7	
Chlorobenzene	108-90-7	<5.7	5.7	
Ethylbenzene	100-41-4	<5.7	5.7	
m,p-Xylene	1330-20-7	<5.7	5.7	
o-Xylene	95-47-6	<5.7	5.7	
Styrene	100-42-5	<5.7	5.7	
Bromoform	75-25-2	<5.7	5.7	
1,1,2,2-Tetrachloroethane	79-34-5	<5.7	5.7	
1,3-Dichlorobenzene	541-73-1	<5.7	5.7	
1,4-Dichlorobenzene	106-46-7	<5.7	5.7	
1,2-Dichlorobenzene	95-50-1	<5.7	5.7	

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LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2H0	LAL Sample ID:	L3764-16
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	06-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	6.69	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	99	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	102	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
trans-1,2-Dichloroethene	156-50-5	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.3	5.3	
Chloroform	67-66-3	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H0	LAL Sample ID: L3764-16
Date Received: 04-FEB-95	Date Analyzed: 06-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2H1	LAL Sample ID:	L3764-17
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	06-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	6.55	Preparation Dilution:	0.986

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	96	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	97	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
trans-1,2-Dichloroethene	156-50-5	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.3	5.3	
Chloroform	67-66-3	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H1	LAL Sample ID: L3764-17
Date Received: 04-FEB-95	Date Analyzed: 06-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2H2	LAL Sample ID:	L3764-18
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	06-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	6.77	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	99	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	96	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	11.	11.	U ~~BJ~~
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
trans-1,2-Dichloroethene	156-50-5	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.3	5.3	
Chloroform	67-66-3	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

DM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H2	**LAL Sample ID: L3764-18**
Date Received: 04-FEB-95	**Date Analyzed: 06-FEB-95**
Matrix: SOIL	**Dilution Factor: 1**
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5.4.95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2H3	LAL Sample ID:	L3764-22
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	06-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	7.57	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	98	81-117
Bromofluorobenzene	91	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	~~9.1~~ 11	11.	U ~~B~~
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS.

Client Sample ID: B0D2H3	LAL Sample ID: L3764-22
Date Received: 04-FEB-95	Date Analyzed: 06-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2H4	LAL Sample ID:	L3764-23
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020795-8260-J1
Percent Moisture:	6.72	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	100	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.3	5.3	
Vinyl Chloride	75-01-4	<5.3	5.3	
Bromomethane	74-83-9	<5.3	5.3	
Chloroethane	75-00-3	<5.3	5.3	
Trichlorofluoromethane	75-69-4	<5.3	5.3	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.3	5.3	
Carbon Disulfide	75-15-0	<5.3	5.3	
Methylene Chloride	75-09-2	<5.3	5.3	
trans-1,2-Dichloroethene	156-50-5	<5.3	5.3	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.3	5.3	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.3	5.3	
Chloroform	67-66-3	<5.3	5.3	
1,1,1-Trichloroethane	71-55-6	<5.3	5.3	
Carbon tetrachloride	56-23-5	<5.3	5.3	
1,2-Dichloroethane	107-06-2	<5.3	5.3	
Benzene	71-43-2	<5.3	5.3	
Trichloroethene	79-01-6	<5.3	5.3	
1,2-Dichloropropane	78-87-5	<5.3	5.3	
Bromodichloromethane	75-27-4	<5.3	5.3	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.3	5.3	
Toluene	108-88-3	<5.3	5.3	
trans-1,3-Dichloropropene	10061-02-6	<5.3	5.3	
1,1,2-Trichloroethane	79-00-5	<5.3	5.3	
Tetrachloroethene	127-18-4	<5.3	5.3	
Dibromochloromethane	124-48-1	<5.3	5.3	
Chlorobenzene	108-90-7	<5.3	5.3	
Ethylbenzene	100-41-4	<5.3	5.3	
m,p-Xylene	1330-20-7	<5.3	5.3	
o-Xylene	95-47-6	<5.3	5.3	
Styrene	100-42-5	<5.3	5.3	
Bromoform	75-25-2	<5.3	5.3	
1,1,2,2-Tetrachloroethane	79-34-5	<5.3	5.3	
1,3-Dichlorobenzene	541-73-1	<5.3	5.3	
1,4-Dichlorobenzene	106-46-7	<5.3	5.3	
1,2-Dichlorobenzene	95-50-1	<5.3	5.3	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2H4	LAL Sample ID: L3764-23
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020795-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM
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LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2H5	LAL Sample ID:	L3764-24
Date Collected:	01-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	7.39	Preparation Dilution:	0.998

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	97	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	94	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

BM 5.4.95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS .

Client Sample ID: B0D2H5	**LAL Sample ID: L3764-24**
Date Received: 04-FEB-95	**Date Analyzed: 07-FEB-95**
Matrix: SOIL	**Dilution Factor: 1**
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM
5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2G3	LAL Sample ID:	L3764-34
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	23.72	Preparation Dilution:	0.926

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	97	70-121
Toluene-d8	99	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.1	6.1	
Vinyl Chloride	75-01-4	<6.1	6.1	
Bromomethane	74-83-9	<6.1	6.1	
Chloroethane	75-00-3	<6.1	6.1	
Trichlorofluoromethane	75-69-4	<6.1	6.1	
Acetone	67-64-1	~~8.0~~ 12	12.	U ~~B~~
1,1-Dichloroethene	75-35-4	<6.1	6.1	
Carbon Disulfide	75-15-0	<6.1	6.1	
Methylene Chloride	75-09-2	<6.1	6.1	
trans-1,2-Dichloroethene	156-50-5	<6.1	6.1	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.1	6.1	
2-Butanone	78-93-3	<12.	12.	
cis-1,2-Dichloroethene	156-59-2	<6.1	6.1	
Chloroform	67-66-3	<6.1	6.1	
1,1,1-Trichloroethane	71-55-6	<6.1	6.1	
Carbon tetrachloride	56-23-5	<6.1	6.1	
1,2-Dichloroethane	107-06-2	<6.1	6.1	
Benzene	71-43-2	<6.1	6.1	
Trichloroethene	79-01-6	<6.1	6.1	
1,2-Dichloropropane	78-87-5	<6.1	6.1	
Bromodichloromethane	75-27-4	<6.1	6.1	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1	
Toluene	108-88-3	<6.1	6.1	
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1	
1,1,2-Trichloroethane	79-00-5	<6.1	6.1	
Tetrachloroethene	127-18-4	<6.1	6.1	
Dibromochloromethane	124-48-1	<6.1	6.1	
Chlorobenzene	108-90-7	<6.1	6.1	
Ethylbenzene	100-41-4	<6.1	6.1	
m,p-Xylene	1330-20-7	<6.1	6.1	
o-Xylene	95-47-6	<6.1	6.1	
Styrene	100-42-5	<6.1	6.1	
Bromoform	75-25-2	<6.1	6.1	
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1	
1,3-Dichlorobenzene	541-73-1	<6.1	6.1	
1,4-Dichlorobenzene	106-46-7	<6.1	6.1	
1,2-Dichlorobenzene	95-50-1	<6.1	6.1	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2G3	LAL Sample ID: L3764-34
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2G4	LAL Sample ID:	L3764-35
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	8.14	Preparation Dilution:	0.963

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	101	70-121
Toluene-d8	102	81-117
Bromofluorobenzene	94	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S
Chloromethane	74-87-3	<5.2	5.2	
Vinyl Chloride	75-01-4	<5.2	5.2	
Bromomethane	74-83-9	<5.2	5.2	
Chloroethane	75-00-3	<5.2	5.2	
Trichlorofluoromethane	75-69-4	<5.2	5.2	
Acetone	67-64-1	12.	10.	U B
1,1-Dichloroethene	75-35-4	<5.2	5.2	
Carbon Disulfide	75-15-0	<5.2	5.2	
Methylene Chloride	75-09-2	<5.2	5.2	
trans-1,2-Dichloroethene	156-50-5	<5.2	5.2	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.2	5.2	
2-Butanone	78-93-3	<10.	10.	
cis-1,2-Dichloroethene	156-59-2	<5.2	5.2	
Chloroform	67-66-3	<5.2	5.2	
1,1,1-Trichloroethane	71-55-6	<5.2	5.2	
Carbon tetrachloride	56-23-5	<5.2	5.2	
1,2-Dichloroethane	107-06-2	<5.2	5.2	
Benzene	71-43-2	<5.2	5.2	
Trichloroethene	79-01-6	<5.2	5.2	
1,2-Dichloropropane	78-87-5	<5.2	5.2	
Bromodichloromethane	75-27-4	<5.2	5.2	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.2	5.2	
Toluene	108-88-3	<5.2	5.2	
trans-1,3-Dichloropropene	10061-02-6	<5.2	5.2	
1,1,2-Trichloroethane	79-00-5	<5.2	5.2	
Tetrachloroethene	127-18-4	<5.2	5.2	
Dibromochloromethane	124-48-1	<5.2	5.2	
Chlorobenzene	108-90-7	<5.2	5.2	
Ethylbenzene	100-41-4	<5.2	5.2	
m,p-Xylene	1330-20-7	<5.2	5.2	
o-Xylene	95-47-6	<5.2	5.2	
Styrene	100-42-5	<5.2	5.2	
Bromoform	75-25-2	<5.2	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	<5.2	5.2	
1,3-Dichlorobenzene	541-73-1	<5.2	5.2	
1,4-Dichlorobenzene	106-46-7	<5.2	5.2	
1,2-Dichlorobenzene	95-50-1	<5.2	5.2	

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VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2G4	LAL Sample ID: L3764-35
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2G5	LAL Sample ID:	L3764-36
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	8.36	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.4	5.4	
Vinyl Chloride	75-01-4	<5.4	5.4	
Bromomethane	74-83-9	<5.4	5.4	
Chloroethane	75-00-3	<5.4	5.4	
Trichlorofluoromethane	75-69-4	<5.4	5.4	
Acetone	67-64-1	12.	11.	U B
1,1-Dichloroethene	75-35-4	<5.4	5.4	
Carbon Disulfide	75-15-0	<5.4	5.4	
Methylene Chloride	75-09-2	<5.4	5.4	
trans-1,2-Dichloroethene	156-50-5	<5.4	5.4	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.4	5.4	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.4	5.4	
Chloroform	67-66-3	<5.4	5.4	
1,1,1-Trichloroethane	71-55-6	<5.4	5.4	
Carbon tetrachloride	56-23-5	<5.4	5.4	
1,2-Dichloroethane	107-06-2	<5.4	5.4	
Benzene	71-43-2	<5.4	5.4	
Trichloroethene	79-01-6	<5.4	5.4	
1,2-Dichloropropane	78-87-5	<5.4	5.4	
Bromodichloromethane	75-27-4	<5.4	5.4	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.4	5.4	
Toluene	108-88-3	<5.4	5.4	
trans-1,3-Dichloropropene	10061-02-6	<5.4	5.4	
1,1,2-Trichloroethane	79-00-5	<5.4	5.4	
Tetrachloroethene	127-18-4	<5.4	5.4	
Dibromochloromethane	124-48-1	<5.4	5.4	
Chlorobenzene	108-90-7	<5.4	5.4	
Ethylbenzene	100-41-4	<5.4	5.4	
m,p-Xylene	1330-20-7	<5.4	5.4	
o-Xylene	95-47-6	<5.4	5.4	
Styrene	100-42-5	<5.4	5.4	
Bromoform	75-25-2	<5.4	5.4	
1,1,2,2-Tetrachloroethane	79-34-5	<5.4	5.4	
1,3-Dichlorobenzene	541-73-1	<5.4	5.4	
1,4-Dichlorobenzene	106-46-7	<5.4	5.4	
1,2-Dichlorobenzene	95-50-1	<5.4	5.4	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS.

Client Sample ID: B0D2G5	LAL Sample ID: L3764-36
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5.4.95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2J9	LAL Sample ID:	L3764-49
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	17.74	Preparation Dilution:	0.992

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	95	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s
Chloromethane	74-87-3	<6.0	6.0	
Vinyl Chloride	75-01-4	<6.0	6.0	
Bromomethane	74-83-9	<6.0	6.0	
Chloroethane	75-00-3	<6.0	6.0	
Trichlorofluoromethane	75-69-4	<6.0	6.0	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<6.0	6.0	
Carbon Disulfide	75-15-0	<6.0	6.0	
Methylene Chloride	75-09-2	<6.0	6.0	
trans-1,2-Dichloroethene	156-50-5	<6.0	6.0	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.0	6.0	
2-Butanone	78-93-3	<12.	12.	
cis-1,2-Dichloroethene	156-59-2	<6.0	6.0	
Chloroform	67-66-3	<6.0	6.0	
1,1,1-Trichloroethane	71-55-6	<6.0	6.0	
Carbon tetrachloride	56-23-5	<6.0	6.0	
1,2-Dichloroethane	107-06-2	<6.0	6.0	
Benzene	71-43-2	<6.0	6.0	
Trichloroethene	79-01-6	<6.0	6.0	
1,2-Dichloropropane	78-87-5	<6.0	6.0	
Bromodichloromethane	75-27-4	<6.0	6.0	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.0	6.0	
Toluene	108-88-3	<6.0	6.0	
trans-1,3-Dichloropropene	10061-02-6	<6.0	6.0	
1,1,2-Trichloroethane	79-00-5	<6.0	6.0	
Tetrachloroethene	127-18-4	<6.0	6.0	
Dibromochloromethane	124-48-1	<6.0	6.0	
Chlorobenzene	108-90-7	<6.0	6.0	
Ethylbenzene	100-41-4	<6.0	6.0	
m,p-Xylene	1330-20-7	<6.0	6.0	
o-Xylene	95-47-6	<6.0	6.0	
Styrene	100-42-5	<6.0	6.0	
Bromoform	75-25-2	<6.0	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	<6.0	6.0	
1,3-Dichlorobenzene	541-73-1	<6.0	6.0	
1,4-Dichlorobenzene	106-46-7	<6.0	6.0	
1,2-Dichlorobenzene	95-50-1	<6.0	6.0	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2J9	**LAL Sample ID: L3764-49**
Date Received: 04-FEB-95	**Date Analyzed: 07-FEB-95**
Matrix: SOIL	**Dilution Factor: 1**
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2K0	LAL Sample ID:	L3764-50
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	11.95	Preparation Dilution:	0.986

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	100	70-121
Toluene-d8	99	81-117
Bromofluorobenzene	92	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.6	5.6	
Vinyl Chloride	75-01-4	<5.6	5.6	
Bromomethane	74-83-9	<5.6	5.6	
Chloroethane	75-00-3	<5.6	5.6	
Trichlorofluoromethane	75-69-4	<5.6	5.6	
Acetone	67-64-1	<11.	11.	
1,1-Dichloroethene	75-35-4	<5.6	5.6	
Carbon Disulfide	75-15-0	<5.6	5.6	
Methylene Chloride	75-09-2	<5.6	5.6	
trans-1,2-Dichloroethene	156-50-5	<5.6	5.6	
Vinyl Acetate	108-05-4	<11.	11.	
1,1-Dichloroethane	75-34-3	<5.6	5.6	
2-Butanone	78-93-3	<11.	11.	
cis-1,2-Dichloroethene	156-59-2	<5.6	5.6	
Chloroform	67-66-3	<5.6	5.6	
1,1,1-Trichloroethane	71-55-6	<5.6	5.6	
Carbon tetrachloride	56-23-5	<5.6	5.6	
1,2-Dichloroethane	107-06-2	<5.6	5.6	
Benzene	71-43-2	<5.6	5.6	
Trichloroethene	79-01-6	<5.6	5.6	
1,2-Dichloropropane	78-87-5	<5.6	5.6	
Bromodichloromethane	75-27-4	<5.6	5.6	
4-Methyl-2-Pentanone	108-10-1	<11.	11.	
cis-1,3-Dichloropropene	10061-01-5	<5.6	5.6	
Toluene	108-88-3	<5.6	5.6	
trans-1,3-Dichloropropene	10061-02-6	<5.6	5.6	
1,1,2-Trichloroethane	79-00-5	<5.6	5.6	
Tetrachloroethene	127-18-4	<5.6	5.6	
Dibromochloromethane	124-48-1	<5.6	5.6	
Chlorobenzene	108-90-7	<5.6	5.6	
Ethylbenzene	100-41-4	<5.6	5.6	
m,p-Xylene	1330-20-7	<5.6	5.6	
o-Xylene	95-47-6	<5.6	5.6	
Styrene	100-42-5	<5.6	5.6	
Bromoform	75-25-2	<5.6	5.6	
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	5.6	
1,3-Dichlorobenzene	541-73-1	<5.6	5.6	
1,4-Dichlorobenzene	106-46-7	<5.6	5.6	
1,2-Dichlorobenzene	95-50-1	<5.6	5.6	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS

Client Sample ID: B0D2K0	LAL Sample ID: L3764-50
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020695-8260-J2	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2J0	LAL Sample ID:	L3764-60
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020795-8260-J1
Percent Moisture:	21.64	Preparation Dilution:	0.994

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	100	81-117
Bromofluorobenzene	99	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.3	6.3	
Vinyl Chloride	75-01-4	<6.3	6.3	
Bromomethane	74-83-9	<6.3	6.3	
Chloroethane	75-00-3	<6.3	6.3	
Trichlorofluoromethane	75-69-4	<6.3	6.3	
Acetone	67-64-1	29.	13.	J
1,1-Dichloroethene	75-35-4	<6.3	6.3	
Carbon Disulfide	75-15-0	<6.3	6.3	
Methylene Chloride	75-09-2	<6.3	6.3	
trans-1,2-Dichloroethene	156-50-5	<6.3	6.3	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.3	6.3	
2-Butanone	78-93-3	<13.	13.	
cis-1,2-Dichloroethene	156-59-2	<6.3	6.3	
Chloroform	67-66-3	<6.3	6.3	
1,1,1-Trichloroethane	71-55-6	<6.3	6.3	
Carbon tetrachloride	56-23-5	<6.3	6.3	
1,2-Dichloroethane	107-06-2	<6.3	6.3	
Benzene	71-43-2	<6.3	6.3	
Trichloroethene	79-01-6	<6.3	6.3	
1,2-Dichloropropane	78-87-5	<6.3	6.3	
Bromodichloromethane	75-27-4	<6.3	6.3	
4-Methyl-2-Pentanone	108-10-1	9.1	13.	J
cis-1,3-Dichloropropene	10061-01-5	<6.3	6.3	
Toluene	108-88-3	83.	6.3	
trans-1,3-Dichloropropene	10061-02-6	<6.3	6.3	
1,1,2-Trichloroethane	79-00-5	<6.3	6.3	
Tetrachloroethene	127-18-4	<6.3	6.3	
Dibromochloromethane	124-48-1	<6.3	6.3	
Chlorobenzene	108-90-7	<6.3	6.3	
Ethylbenzene	100-41-4	4.4	6.3	J
m,p-Xylene	1330-20-7	19.	6.3	
o-Xylene	95-47-6	<6.3	6.3	
Styrene	100-42-5	<6.3	6.3	
Bromoform	75-25-2	<6.3	6.3	
1,1,2,2-Tetrachloroethane	79-34-5	<6.3	6.3	
1,3-Dichlorobenzene	541-73-1	<6.3	6.3	
1,4-Dichlorobenzene	106-46-7	<6.3	6.3	
1,2-Dichlorobenzene	95-50-1	<6.3	6.3	

BM 5-4-95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS.

Client Sample ID: B0D2J0	**LAL Sample ID: L3764-60**
Date Received: 04-FEB-95	**Date Analyzed: 07-FEB-95**
Matrix: SOIL	**Dilution Factor: 1**
Analytical Batch: 020795-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
UNKNOWN	20	7.44	J

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2J2	LAL Sample ID:	L3764-61
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020795-8260-J1
Percent Moisture:	26.71	Preparation Dilution:	0.988

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	92	70-121
Toluene-d8	101	81-117
Bromofluorobenzene	94	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S
Chloromethane	74-87-3	<6.7	6.7	
Vinyl Chloride	75-01-4	<6.7	6.7	
Bromomethane	74-83-9	<6.7	6.7	
Chloroethane	75-00-3	<6.7	6.7	
Trichlorofluoromethane	75-69-4	<6.7	6.7	
Acetone	67-64-1	56.	13.	U
1,1-Dichloroethene	75-35-4	<6.7	6.7	
Carbon Disulfide	75-15-0	<6.7	6.7	
Methylene Chloride	75-09-2	<6.7	6.7	
trans-1,2-Dichloroethene	156-50-5	<6.7	6.7	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.7	6.7	
2-Butanone	78-93-3	<13.	13.	
cis-1,2-Dichloroethene	156-59-2	<6.7	6.7	
Chloroform	67-66-3	<6.7	6.7	
1,1,1-Trichloroethane	71-55-6	<6.7	6.7	
Carbon tetrachloride	56-23-5	<6.7	6.7	
1,2-Dichloroethane	107-06-2	<6.7	6.7	
Benzene	71-43-2	<6.7	6.7	
Trichloroethene	79-01-6	<6.7	6.7	
1,2-Dichloropropane	78-87-5	<6.7	6.7	
Bromodichloromethane	75-27-4	<6.7	6.7	
4-Methyl-2-Pentanone	108-10-1	7.5	13.	J
cis-1,3-Dichloropropene	10061-01-5	<6.7	6.7	
Toluene	108-88-3	63.	6.7	
trans-1,3-Dichloropropene	10061-02-6	<6.7	6.7	
1,1,2-Trichloroethane	79-00-5	<6.7	6.7	
Tetrachloroethene	127-18-4	<6.7	6.7	
Dibromochloromethane	124-48-1	<6.7	6.7	
Chlorobenzene	108-90-7	<6.7	6.7	
Ethylbenzene	100-41-4	3.5	6.7	J
m,p-Xylene	1330-20-7	16.	6.7	
o-Xylene	95-47-6	<6.7	6.7	
Styrene	100-42-5	<6.7	6.7	
Bromoform	75-25-2	<6.7	6.7	
1,1,2,2-Tetrachloroethane	79-34-5	<6.7	6.7	
1,3-Dichlorobenzene	541-73-1	<6.7	6.7	
1,4-Dichlorobenzene	106-46-7	<6.7	6.7	
1,2-Dichlorobenzene	95-50-1	<6.7	6.7	

BM 5.4.95

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS.

Client Sample ID: B0D2J2	LAL Sample ID: L3764-61
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020795-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	B0D2J4	LAL Sample ID:	L3764-62
Date Collected:	02-FEB-95	Date Received:	04-FEB-95
Date Analyzed:	07-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020795-8260-J1
Percent Moisture:	20.4	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	99	70-121
Toluene-d8	103	81-117
Bromofluorobenzene	98	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<6.3	6.3	
Vinyl Chloride	75-01-4	<6.3	6.3	
Bromomethane	74-83-9	<6.3	6.3	
Chloroethane	75-00-3	<6.3	6.3	
Trichlorofluoromethane	75-69-4	<6.3	6.3	
Acetone	67-64-1	15.	13.	U
1,1-Dichloroethene	75-35-4	<6.3	6.3	
Carbon Disulfide	75-15-0	<6.3	6.3	
Methylene Chloride	75-09-2	<6.3	6.3	
trans-1,2-Dichloroethene	156-50-5	<6.3	6.3	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.3	6.3	
2-Butanone	78-93-3	<13.	13.	
cis-1,2-Dichloroethene	156-59-2	<6.3	6.3	
Chloroform	67-66-3	<6.3	6.3	
1,1,1-Trichloroethane	71-55-6	<6.3	6.3	
Carbon tetrachloride	56-23-5	<6.3	6.3	
1,2-Dichloroethane	107-06-2	<6.3	6.3	
Benzene	71-43-2	<6.3	6.3	
Trichloroethene	79-01-6	<6.3	6.3	
1,2-Dichloropropane	78-87-5	<6.3	6.3	
Bromodichloromethane	75-27-4	<6.3	6.3	
4-Methyl-2-Pentanone	108-10-1	4.8	13.	J
cis-1,3-Dichloropropene	10061-01-5	<6.3	6.3	
Toluene	108-88-3	43.	6.3	
trans-1,3-Dichloropropene	10061-02-6	<6.3	6.3	
1,1,2-Trichloroethane	79-00-5	<6.3	6.3	
Tetrachloroethene	127-18-4	<6.3	6.3	
Dibromochloromethane	124-48-1	<6.3	6.3	
Chlorobenzene	108-90-7	<6.3	6.3	
Ethylbenzene	100-41-4	<6.3	6.3	
m,p-Xylene	1330-20-7	9.2	6.3	
o-Xylene	95-47-6	<6.3	6.3	
Styrene	100-42-5	<6.3	6.3	
Bromoform	75-25-2	<6.3	6.3	
1,1,2,2-Tetrachloroethane	79-34-5	<6.3	6.3	
1,3-Dichlorobenzene	541-73-1	<6.3	6.3	
1,4-Dichlorobenzene	106-46-7	<6.3	6.3	
1,2-Dichlorobenzene	95-50-1	<6.3	6.3	

BM 5.4.96

VOLATILE ORGANIC ANALYSIS RESULTS
FOR ANALYSES USING METHOD 8260
TENTATIVELY IDENTIFIED COMPOUNDS.

Client Sample ID: B0D2J4	LAL Sample ID: L3764-62
Date Received: 04-FEB-95	Date Analyzed: 07-FEB-95
Matrix: SOIL	Dilution Factor: 1
Analytical Batch: 020795-8260-J1	

Tentatively Identified Compound	Estimated Concentration (µg/Kg)	Retention Time (minutes)	Data Qualifier(s)
NONE DETECTED			

BM 5-4-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2D1 LAL Sample ID: L3764-5

Date Collected: 31-JAN-95 Date Received: 04-FEB-95

Matrix: Water Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	01-MAR-95	U TOTAL KPA LAL-0168_18896	0.207	0.012	0.049		ug/L

AJ 4-12-95

000109

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2D2 LAL Sample ID: L3764-6

Date Collected: 31-JAN-95 Date Received: 04-FEB-95

Matrix: Water Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	01-MAR-95	U TOTAL KPA LAL-0168_18896	0.517	0.034	0.15		ug/L

AJ 4-12-95

000110

7

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2G3 LAL Sample ID: L3764-28

Date Collected: 31-JAN-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units	
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	5.43	0.31	0.14		ug/g	J

AJ 4-12-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2G4 LAL Sample ID: L3764-29

Date Collected: 31-JAN-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	3.72	0.21	0.14		ug/g J

AF 4-12-95

000112 10

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2G5 LAL Sample ID: L3764-30

Date Collected: 31-JAN-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	3.42	0.20	0.15		ug/g J

AJ 4-12-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2G8 LAL Sample ID: L3764-2

Date Collected: 01-FEB-95 Date Received: 04-FEB-95

Matrix: Water Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	01-MAR-95	U TOTAL KPA LAL-0168_18896	0.1178	0.0092	0.049		ug/L

4-12-9

000114

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2H0 LAL Sample ID: L3764-10

Date Collected: 01-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	2.93	0.17	0.15		ug/g J

AJ 4-12-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2H1 LAL Sample ID: L3764-11

Date Collected: 01-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	5.97	0.34	0.14		ug/g J

AJ 4-12-95

000116

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2H2 LAL Sample ID: L3764-12

Date Collected: 01-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	4.36	0.25	0.15		ug/g J

AJ 4-12-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2H6
LAL Sample ID: L3764-64

Date Collected: 02-FEB-95
Date Received: 04-FEB-95

Matrix: Water
Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	01-MAR-95	U TOTAL KPA LAL-0168_18896	0.794	0.050	0.25		ug/L

AF 4-12-95

000118

21

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2H7 LAL Sample ID: L3764-66

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Water Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	01-MAR-95	U TOTAL KPA LAL-0168_18896	0.315	0.019	0.049		ug/L

AJ 4-12-95

22

000119

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J0 LAL Sample ID: L3764-54

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	20.1	1.1	0.16		ug/g J

AJ 4-12-95

000120

18

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J1
LAL Sample ID: L3764-70

Date Collected: 02-FEB-95
Date Received: 04-FEB-95

Matrix: Soil
Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	13.74	0.79	0.16		ug/g J

AJ 4-12-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J2 LAL Sample ID: L3764-55

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	10.29	0.59	0.15	J	ug/g

AJ 4-12-95

000122

19

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J3 LAL Sample ID: L3764-71

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	12.05	0.69	0.16		ug/g J

AJ 4-12-95

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J4 LAL Sample ID: L3764-56

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	9.65	0.56	0.16		ug/g J

AJ 4-12-95

000124 20

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J5 LAL Sample ID: L3764-72

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	11.92	0.68	0.15		ug/g J

AJ 4-12-95

25

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2J9 LAL Sample ID: L3764-45

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	18.1	1.2	0.16		ug/g J

AT
4-12-95

000126

16

RAD DATA REPORT (ra01)

Westinghouse Hanford Co. * Richland, WA

Westinghouse Hanford Project (Richland,WA) (Project WESTINGHOUSE-HANFORD)

Client Sample ID: B0D2K0 LAL Sample ID: L3764-46

Date Collected: 02-FEB-95 Date Received: 04-FEB-95

Matrix: Soil Login Number: L3764

SDG: LK3764

Constituent	Analyzed	Batch	Activity	Error	MDA	DataQual	Units
Uranium	02-MAR-95	U TOTAL KPA LAL-0168_18897	33.3	2.2	0.15		ug/g J

AJ 4-12-95

000127

AJ

Checklists

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

VALIDATION LEVEL:	A	B	C	D	E
VALIDATION PROCEDURE:	☐ WHC-CM-5-3, Rev. 0			☒ WHC-SD-EN-SPP-002, Rev. 2	

PROJECT:	304 CONCRETION FACILITY CLOSURE		SDG:	LK3764-LAS-028	
VALIDATOR:	MC WEBB 5/11/95	LATA NO:	VW403.31	DATE:	18-Apr-95
REVIEWER:	AM FREIER	LAB:	LAS	CASE:	N/A
SAF NO:	94-402	QAPP NO:	N/A	SAP NO:	WHC-SD-EN-AP-177

ANALYSES REQUESTED

☒ SW-846 ICP TAL 6010	☒ SW-846 GFAA Arsenic 7060	☒ SW-846 GFAA Lead 7421	☒ SW-846 GFAA Selenium 7740	☒ SW-846 GFAA Thallium 7841	☒ SW-846 Mercury 7471

SAMPLE #s	MATRIX	COMMENTS:
B0D2D1 B0D2D2 B0D2G8 B0D2H6 B0D2H7	WATER	B0D2H6 and B0D2H7 are listed as LIQUID on the COC.
B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2J0 B0D2J1 B0D2J2 B0D2J3 B0D2J4 B0D2J5 B0D2J9 B0D2K0	SOLIDS	

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE	YES	NO	N/A
Is technical verification documentation present?	☒	☐	☐
Is a case narrative present?	☒	☐	☐

2. HOLDING TIMES	YES	NO	N/A
Are sample holding times acceptable?	☒	☐	☐

See HOLDING TIME SUMMARY form

3. INSTRUMENT PERFORMANCE AND CALIBRATIONS	YES	NO	N/A
Were initial calibrations performed on all instruments?	☒	☐	☐
Are initial calibrations acceptable?	☒	☐	☐
Are ICP interference checks acceptable?	☒	☐	☐
Were ICV and CCV checks performed on all instruments?	☒	☐	☐
Are ICV and CCV checks acceptable?	☒	☐	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

4. BLANKS

	YES	NO	N/A
Were ICB and CCB checks performed for all applicable analyses?	X		
Are ICB and CCB results acceptable?		X	
Were preparation blanks analyzed?	X		
Are preparation blank results acceptable?		X	

If NO(s) are checked, see BLANK AND SAMPLE DATA SUMMARY form

5. ACCURACY

	YES	NO	N/A
Were spike samples analyzed at the proper frequency?		X	
Are all spike sample recoveries acceptable?		X	
Are all elements spiked at an appropriate level?	X		
Was a post digestion spike analyzed?			X
Are all post digestion spike recoveries acceptable?			X
Were laboratory control samples (LCS) analyzed at the proper frequency?	X		
Are all LCS recoveries acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see ACCURACY DATA SUMMARY form

6. PRECISION

	YES	NO	N/A
Were laboratory duplicates analyzed at the proper frequency?	X		
Are all duplicate RPD values acceptable?	X		
Were MS/MSDs analyzed?			X
Are all MS/MSD RPD values acceptable?			X
Were ICP serial dilution samples analyzed at the proper frequency?	X		
Are all ICP serial dilution %D values acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see PRECISION DATA SUMMARY form

DATA INORGANIC (METALS)
CALCULATION SPREADSHEET

7. FIELD QC SAMPLES	YES	NO	N/A
Were field QC samples (field/trip/equipment blanks, duplicates, splits, performance audit) identified?	X		
Are field/trip blank results acceptable? (see Blank Data Summary form)		X	
Are field duplicate RPD values acceptable? (see Field QC calculations)	X		
Are field split RPD values acceptable? (see Field QC calculations)			X
Are performance audit sample results acceptable?			X

Comments: B0D2D1, B0D2D2, B0D2G8, B0D2H6 and B0D2H7 are equipment blanks.

B0D2J0/B0D2J1, B0D2J2/B0D2J3, and B0D2J4/B0D2J5 are Field QC duplicate pairs.

8. FURNACE AA QUALITY CONTROL	YES	NO	N/A
Were duplicate injections performed if required?			X
Are all duplicate injection %RSD values acceptable?			X
Were analytical spikes performed if required?			X
Are all analytical spike recoveries acceptable?			X
Was MSA performed if required?	X		
Are all MSA results acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

Comments: SW-846 does not require duplicate injections and analytical spikes. These were performed by the laboratory, however, and were acceptable. Due to matrix interference, B0D2J0, B0D2J2, and B0D2J5 were analyzed for Lead using the Method of Standard Addition .

9. REPORTED RESULTS AND DETECTION LIMITS	YES	NO	N/A
Are results reported for all requested analyses?	X		
Are all results supported in the raw data?	X		
Are results calculated properly?	X		
Do results meet the CRDLs?	X		
Validation calculation checks were performed and are acceptable.	X		

Comments:

VALIDATION SUMMARY

For deficiencies (major and minor) and comments, please refer to the Qualification Summary Table.

000131

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028	VALIDATOR: MC WEBB						DATE: 18-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE	REVIEWER: WJ COWAN						LATA NO.: VW403.31		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2D1	WATER	ICP	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D1	WATER	Arsenic	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D1	WATER	Lead	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D1	WATER	Selenium	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D1	WATER	Thallium	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D1	WATER	Mercury	31-Jan-95	24-Feb-95	25-Feb-95	N/A	*N/A*	25	*38*	None
B0D2D2	WATER	ICP	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D2	WATER	Arsenic	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D2	WATER	Lead	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D2	WATER	Selenium	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D2	WATER	Thallium	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2D2	WATER	Mercury	31-Jan-95	24-Feb-95	25-Feb-95	N/A	*N/A*	25	*38*	None
B0D2G3	SOLIDS	ICP	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2G3	SOLIDS	Arsenic	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G3	SOLIDS	Lead	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G3	SOLIDS	Selenium	31-Jan-95	16-Feb-95	22-Feb-95	N/A	*N/A*	22	*180*	None
B0D2G3	SOLIDS	Thallium	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G3	SOLIDS	Mercury	31-Jan-95	22-Feb-95	22-Feb-95	N/A	*N/A*	22	*28*	None
B0D2G4	SOLIDS	ICP	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2G4	SOLIDS	Arsenic	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G4	SOLIDS	Lead	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G4	SOLIDS	Selenium	31-Jan-95	16-Feb-95	22-Feb-95	N/A	*N/A*	22	*180*	None
B0D2G4	SOLIDS	Thallium	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G4	SOLIDS	Mercury	31-Jan-95	22-Feb-95	22-Feb-95	N/A	*N/A*	22	*28*	None
B0D2G5	SOLIDS	ICP	31-Jan-95	16-Feb-95	17-Feb-95	N/A	*N/A*	17	*180*	None
B0D2G5	SOLIDS	Arsenic	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: MC WEBB					DATE: 18-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: WJ COWAN					LATA NO.: VW403.31		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2G5	SOLIDS	Lead	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G5	SOLIDS	Selenium	31-Jan-95	16-Feb-95	22-Feb-95	N/A	*N/A*	22	*180*	None
B0D2G5	SOLIDS	Thallium	31-Jan-95	16-Feb-95	21-Feb-95	N/A	*N/A*	21	*180*	None
B0D2G5	SOLIDS	Mercury	31-Jan-95	22-Feb-95	22-Feb-95	N/A	*N/A*	22	*28*	None
B0D2G8	WATER	ICP	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2G8	WATER	Arsenic	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2G8	WATER	Lead	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2G8	WATER	Selenium	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2G8	WATER	Thallium	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2G8	WATER	Mercury	1-Feb-95	24-Feb-95	25-Feb-95	N/A	*N/A*	24	*38*	None
B0D2H0	SOLIDS	ICP	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2H0	SOLIDS	Arsenic	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H0	SOLIDS	Lead	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H0	SOLIDS	Selenium	1-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	21	*180*	None
B0D2H0	SOLIDS	Thallium	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H0	SOLIDS	Mercury	1-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	21	*28*	None
B0D2H1	SOLIDS	ICP	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2H1	SOLIDS	Arsenic	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H1	SOLIDS	Lead	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H1	SOLIDS	Selenium	1-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	21	*180*	None
B0D2H1	SOLIDS	Thallium	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H1	SOLIDS	Mercury	1-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	21	*28*	None
B0D2H2	SOLIDS	ICP	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2H2	SOLIDS	Arsenic	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H2	SOLIDS	Lead	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H2	SOLIDS	Selenium	1-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	21	*180*	None

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: MC WEBB					DATE: 18-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: WJ COWAN					LATA NO.: VW403.31		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2H2	SOLIDS	Thallium	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H2	SOLIDS	Mercury	1-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	21	*28*	None
B0D2H4	SOLIDS	ICP	1-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	16	*180*	None
B0D2H4	SOLIDS	Arsenic	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H4	SOLIDS	Lead	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H4	SOLIDS	Selenium	1-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	21	*180*	None
B0D2H4	SOLIDS	Thallium	1-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	20	*180*	None
B0D2H4	SOLIDS	Mercury	1-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	21	*28*	None
B0D2H6	LIQUID	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H6	LIQUID	Arsenic	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H6	LIQUID	Lead	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H6	LIQUID	Selenium	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H6	LIQUID	Thallium	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H6	LIQUID	Mercury	2-Feb-95	24-Feb-95	25-Feb-95	N/A	*N/A*	23	*38*	None
B0D2H7	LIQUID	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H7	LIQUID	Arsenic	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H7	LIQUID	Lead	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H7	LIQUID	Selenium	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H7	LIQUID	Thallium	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2H7	LIQUID	Mercury	2-Feb-95	24-Feb-95	25-Feb-95	N/A	*N/A*	23	*38*	None
B0D2J0	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J0	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J0	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J0	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J0	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J0	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: MC WEBB					DATE: 18-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: WJ COWAN					LATA NO.: VW403.31		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2J1	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J1	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J1	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J1	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J1	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J1	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None
B0D2J2	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J2	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J2	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J2	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J2	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J2	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None
B0D2J3	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J3	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J3	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J3	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J3	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J3	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None
B0D2J4	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J4	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J4	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J4	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J4	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J4	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None
B0D2J5	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J5	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: MC WEBB					DATE: 18-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: WJ COWAN					LATA NO.: VW403.31		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2J5	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J5	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J5	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J5	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None
B0D2J9	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2J9	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J9	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J9	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2J9	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2J9	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None
B0D2K0	SOLIDS	ICP	2-Feb-95	16-Feb-95	17-Feb-95	N/A	*N/A*	15	*180*	None
B0D2K0	SOLIDS	Arsenic	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2K0	SOLIDS	Lead	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2K0	SOLIDS	Selenium	2-Feb-95	16-Feb-95	22-Feb-95	N/A	*N/A*	20	*180*	None
B0D2K0	SOLIDS	Thallium	2-Feb-95	16-Feb-95	21-Feb-95	N/A	*N/A*	19	*180*	None
B0D2K0	SOLIDS	Mercury	2-Feb-95	22-Feb-95	22-Feb-95	N/A	*N/A*	20	*28*	None

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

BLANK DATA SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: MC WEBB						DATE:	18-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: AM FREIER						LATA NO.:	VW403.31
BLANK ID	ANALYTE	RESULT	LAB Q	RT	UNITS	2X RESULT	5X RESULT	10X RESULT	SAMPLES AFFECTED	VAL Q
PB Water	Aluminum	100.5	B		µG/L	N/A	502.65	N/A	B0D2D1, B0D2D2, B0D2G8 B0D2H6	U
PB Water	Calcium	171.6	B		µg/L	N/A	858	N/A	B0D2D1, B0D2D2, B0D2G8 B0D2H6, B0D2H7	U
PB Water	Iron	37.35	B		µg/L	N/A	186.75	N/A	B0D2D1, B0D2D2, B0D2G8 B0D2H6	U
PB Water	Magnesium	46.2	B		µg/L	N/A	230.8	N/A	B0D2H7	U
CCB Water	Manganese	4.6	B		µg/L	N/A	23	N/A	B0D2H7	U
PB Water	Sodium	105.6	B		µg/L	N/A	527.9	N/A	B0D2D1, B0D2D2, B0D2G8 B0D2H6, B0D2H7	U
PB Water	Zinc	18.1	B		µg/L	N/A	90.3	N/A	B0D2D1, B0D2D2, B0D2G8 B0D2H6, B0D2H7	U
CCB Solids	Cadmium	3.2	B		µg/L	N/A	3.2 mg/Kg	N/A	B0D2J9	U
B0D2D2 Equip Blank	Barium	13.4			mg/Kg	N/A	N/A	N/A	NONE	NONE
BOD2H7 Equip blank	Iron	304.0			mg/Kg	N/A	N/A	N/A	NONE	NONE

CLP

3
BLANKS

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	26.0	U	79.5	B	26.0	U	26.0	U	100.530	B	P
Antimony	45.0	U	45.0	U	45.0	U	45.0	U	45.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Barium	12.0	U	12.0	U	12.0	U	12.0	U	12.000	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Cadmium	3.0	U	3.0	U	3.0	U	3.2	B	3.000	U	P
Calcium	20.0	U	76.4	B	20.0	U	20.0	U	71.630	B	P
Chromium	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Cobalt	7.0	U	7.0	U	7.0	U	7.0	U	7.000	U	P
Copper	3.0	U	4.1	B	3.0	U	3.4	B	3.000	U	P
Iron	9.6	B	34.3	B	6.0	U	6.0	U	37.350	B	P
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Magnesium	37.0	U	63.7	B	37.0	U	37.0	U	46.160	B	P
Manganese	1.0	U	4.6	B	2.5	B	2.7	B	1.180	B	P
Mercury	0.2	U	0.2	U	0.2	U			0.200	U	AV
Nickel	12.0	U	12.0	U	12.0	U	12.0	U	12.000	U	P
Potassium	680.0	U	680.0	U	680.0	U	680.0	U	680.000	U	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	F
Silver	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	P
Sodium	23.0	U	24.9	B	23.0	U	23.0	U	105.580	B	P
Thallium	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	F
Vanadium	3.0	U	4.1	B	3.0	U	3.2	B	3.000	U	P
Zinc	2.0	U	4.5	B	2.0	U	2.9	B	18.060	B	P

4-25-95

CLP

3
BLANKS

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	26.0	U	79.5	B	26.0	U	26.0	U	-5.808	B	P
Antimony	45.0	U	45.0	U	45.0	U	45.0	U	9.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Barium	12.0	U	12.0	U	12.0	U	12.0	U	2.400	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cadmium	3.0	U	3.0	U	3.0	U	3.2	B	0.600	U	P
Calcium	20.0	U	76.4	B	20.0	U	20.0	U	4.000	U	P
Chromium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Cobalt	7.0	U	7.0	U	7.0	U	7.0	U	1.400	U	P
Copper	3.0	U	4.1	B	3.0	U	3.4	B	0.600	U	P
Iron	9.6	B	34.3	B	6.0	U	6.0	U	1.200	U	P
Lead	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Magnesium	37.0	U	63.7	B	37.0	U	37.0	U	7.400	U	P
Manganese	1.0	U	4.6	B	2.5	B	2.7	B	0.200	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	AV
Nickel	12.0	U	12.0	U	12.0	U	12.0	U	2.400	U	P
Potassium	680.0	U	680.0	U	680.0	U	680.0	U	136.000	U	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	F
Silver	4.0	U	4.0	U	4.0	U	4.0	U	0.800	U	P
Sodium	23.0	U	24.9	B	23.0	U	23.0	U	-13.346	B	P
Thallium	4.0	U	4.0	U	4.0	U	4.0	U	0.800	U	F
Vanadium	3.0	U	4.1	B	3.0	U	3.2	B	0.600	U	P
Zinc	2.0	U	4.5	B	2.0	U	2.9	B	0.400	U	P

4-26-95

30C

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

ACCURACY DATA SUMMARY

SDG:	LK3764-LAS-028	VALIDATOR:	MC WEBB	DATE:	18-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE	REVIEWER:	AM FREIER	LATA NO.:	VW403.31

HEIS-SN	ANALYTE	RESULTS	Lab Q	Actual Spiking Level	Minimum Required Spiking Level	Difference	PERCENT RECOVERY (%R) Matrix Spike	Matrix Spike Duplicate	Post Digestion Spike	Laboratory Control Standard	SAMPLES AFFECTED	VAL Q
B0D2H0	Aluminum						NONE				B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	J
B0D2H0	Antimony	9.6	U	8.54	2.4	6.14	73.2%		NA		B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	UJ
B0D2H0	Calcium						NONE				B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	J
B0D2H0	Cobalt	31.15		106.7	7.7875	98.9125	131.8%		NA		B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	J/BJ
B0D2H0	Iron						NONE				B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	J
B0D2H0	Magnesium						NONE				B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	J
B0D2H0	Potassium						NONE				B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	J/BJ
B0D2H0	Sodium						NONE				B0D2G3, B0D2G4, B0D2G5 B0D2H0, B0D2H1, B0D2H2 B0D2J0, B0D2J1, B0D2J2 B0D2J3, B0D2J4, B0D2J5 B0D2J9, B0D2K0	BJ

NOTE: (1) The minimum required spiking level is 25% of the sample concentration or the detection limit, whichever is higher.
(2) A negative number in the difference column indicates the spiking level for that element was inappropriate for the analyte level in the sample spiked.

CLP

5A

SPIKE SAMPLE RECOVERY

CLIENT ID NO.: B0D2H0S

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL__ Level (low/med): LOW___

% Solids for Sample: _93.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	312.2376		9.6002	U	426.68	73.2	N	P
Arsenic	75-125	11.1878		2.6859		8.54	99.6		F
Barium	75-125	506.8703		60.3193		426.68	104.7		P
Beryllium	75-125	9.7538		0.2133	U	10.67	91.4		P
Cadmium	75-125	10.3298		0.6400	U	10.67	96.8		P
Calcium									NR
Chromium	75-125	51.3484		8.0962		42.67	101.4		P
Cobalt	75-125	171.7885		31.1453		106.67	131.8	N	P
Copper	75-125	66.0623		13.3848		53.33	98.8		P
Iron									NR
Lead	75-125	7.6222		3.0909		4.27	106.1		F
Magnesium									NR
Manganese	75-125	372.3904		260.0188		106.67	105.3		P
Mercury	75-125	0.4005		0.1072	U	0.49	81.7		AV
Nickel	75-125	116.8240		11.6461		106.67	98.6		P
Potassium									NR
Selenium	75-125	1.9856		0.6395	U	2.14	92.8		F
Silver	75-125	10.7757		0.8534	U	10.67	101.0		P
Sodium									NR
Thallium	75-125	10.2697		0.8527	U	10.68	96.2		F
Vanadium	75-125	140.0288		32.8285		106.67	100.5		P
Zinc	75-125	135.8901		33.7117		106.67	95.8		P

Comments:

MW 4-20-95

000141

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

PRECISION DATA SUMMARY

SDG:	LK3764-LAS-028				VALIDATOR:	MC WEBB							DATE:	18-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE				REVIEWER:	AM FREIER							LATA NO.:	VW403.31	
HEIS-SN	ANALYTE	RESULTS mg/Kg	LAB Q	IDL µg/L	10*IDL µg/L	50*IDL µg/L	SERIAL DIL %D	CRDL µg/L	2 CRDL mg/Kg	5 CRDL mg/Kg	DUPE RPD	DUPE CRDL	MS/MSD RPD	SAMPLES AFFECTED	VAL Q
B0D2H0	Beryllium	0.2133	U	N/A	N/A	N/A	N/A	5	2	5	N/A	<2*CRDL	N/A	None	None
B0D2H0	Cobalt	31.15		N/A	N/A	N/A	N/A	50	20	50	N/A	<2*CRDL	N/A	None	None
B0D2H0	Iron	16438.1		N/A	N/A	N/A	N/A	100	40	100	23.9%	N/A	N/A	None	None
B0D2H0	Chromium	37.95		3	N/A	150	35.9%	N/A	N/A	N/A	N/A	N/A	N/A	None	None
B0D2H0	Copper	62.74		3	N/A	150	12.8%	N/A	N/A	N/A	N/A	N/A	N/A	None	None
B0D2H0	Nickel	54.59		12	N/A	600	23.0%	N/A	N/A	N/A	N/A	N/A	N/A	None	None
B0D2H0	Potassium	4017	B	680	N/A	34000	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	None	None
B0D2G8	Iron	50.24 µg/L		N/A	N/A	N/A	N/A	100	200 µg/L	500 µg/L	N/A	<CRDL	N/A	None	None
B0D2G8	Zinc	10.65 µg/L		N/A	N/A	N/A	N/A	20	40 µg/L	100 µg/L	N/A	<CRDL	N/A	None	None

9513357.1743

CLP

6 DUPLICATES

CLIENT ID NO.: BOD2H0D

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

% Solids for Sample: _93.3 % Solids for Duplicate: __93.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		5393.2933		5826.0622		7.7		P
Antimony		9.6002	U	9.6463	U			P
Arsenic	2.1	2.6859		2.4866		7.7		F
Barium	42.7	60.3193		70.6195		15.7		P
Beryllium		0.2133	U	0.2551	B	(200.0)		P
Cadmium		0.6400	U	0.6431	U			P
Calcium		6185.4566		7306.8017		16.6		P
Chromium	2.1	8.0962		8.8060		8.4		P
Cobalt	10.7	31.1453		47.9807		(42.6)	*	P
Copper	5.3	13.3848		12.9775		3.1		P
Iron		16438.1366		20893.1640		(23.9)	*	P
Lead		3.0909		3.0868		0.1		F
Magnesium	1066.7	3877.2861		4259.5027		9.4		P
Manganese		260.0188		284.2337		8.9		P
Mercury								NR
Nickel	8.5	11.6461		10.8467		7.1		P
Potassium		857.1675	B	939.4662	B	9.2		P
Selenium		0.6395	U	0.6431	U			F
Silver		0.8534	U	0.8574	U			P
Sodium		451.5155	B	508.6774	B	11.9		P
Thallium		0.8527	U	0.8574	U			F
Vanadium	10.7	32.8285		33.6442		2.5		P
Zinc		33.7117		37.7042		11.2		P

Fe RPD < 35% and is acceptable

4-20-95
4-21-95
30E

000143

CLP

6
DUPLICATES

CLIENT ID NO.

BOD2G8D

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3723

Matrix (soil/water): WATER Level (low/med): _LOW__

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		75.5700	B	63.9300	B	16.7		P
Antimony		45.0000	U	45.0000	U			P
Arsenic		2.0000	U	2.0000	U			F
Barium		12.0000	U	12.0000	U			P
Beryllium		1.0000	U	1.0000	U			P
Cadmium		3.0000	U	3.0000	U			P
Calcium		27.8800	B	26.2800	B	5.9		P
Chromium		3.0000	U	3.0000	U			P
Cobalt		7.0000	U	7.0000	U			P
Copper		3.0000	U	3.0000	U			P
Iron		50.2400	B	29.7000	B	51.4		P
Lead		2.0000	U	2.0000	U			F
Magnesium		37.0000	U	37.0000	U			P
Manganese		1.0000	U	1.0000	U			P
Mercury								NR
Nickel		12.0000	U	12.0000	U			P
Potassium		680.0000	U	680.0000	U			P
Selenium		3.0000	U	3.0000	U			F
Silver		4.0000	U	4.0000	U			P
Sodium		172.0700	B	194.6900	B	12.3		P
Thallium		4.0000	U	4.0000	U			F
Vanadium		3.0000	U	3.0000	U			P
Zinc		10.6500	B	13.1300	B	20.9		P

CLP

ICP SERIAL DILUTION

CLIENT ID NO.: BOD2H0 L

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD___

Lab Code: LOCK__ Case No.: 94-402 SAS No.: _____ SDG No.: LK3764

Matrix (soil/water): SOIL_ Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	25280.48		26039.82		3.0		P
Antimony	45.00	U	225.00	U			P
Arsenic							
Barium	282.74		287.65	B	1.7		P
Beryllium	1.00	U	5.00	U			P
Cadmium	3.00	U	15.00	U			P
Calcium	28993.66		30636.80		5.7		P
Chromium	37.95		24.34	B	35.9		P
Cobalt	145.99		151.37	B	3.7		P
Copper	62.74		54.68	B	12.8		P
Iron	77051.99		81769.72		6.1		P
Lead							
Magnesium	18174.36		18927.63	B	4.1		P
Manganese	1218.81		1287.71		5.7		P
Mercury							
Nickel	54.59		67.14	B	23.0		P
Potassium	4017.88	B	3400.00	U	100.0		P
Selenium							
Silver	4.00	U	20.00	U			P
Sodium	2116.43	B	2019.03	B	4.6		P
Thallium							
Vanadium	153.88		154.65	B	0.5		P
Zinc	158.02		166.96		5.7		P

5-17-95

FIELD QC INORGANIC
FIELD DUPLICATE EVALUATION

LATA ID#: VW403.31		HEIS #:	B0D2J0		B0D2J1		RPD	DIF	5*CRDL
		Date:	2-Feb-95		2-Feb-95				mg/Kg
		Matrix:	SOLIDS		SOLIDS				
Constituent	CAS #	Units	Results	Q	Results	Q			
Aluminum	7429-90-5	mg/Kg	6410		6390		0.3%		200
Antimony	7440-36-0	mg/Kg	12.2	U	11.4	U			
Arsenic	7440-38-2	mg/Kg	2.2	B	2.7			0.5	10
Barium	7440-39-3	mg/Kg	79.8		85.8			6	200
Beryllium	7440-41-7	mg/Kg	0.27	U	0.26	B		0.01	5
Cadmium	7440-43-9	mg/Kg	0.82	U	0.76	U			
Calcium	7440-70-2	mg/Kg	5660		5680		0.4%		5000
Chromium	7440-47-3	mg/Kg	8.3		7.6			0.7	10
Cobalt	7440-48-4	mg/Kg	60.0		48.7		20.8%		50
Copper	7440-50-8	mg/Kg	12.0		12.2			0.2	25
Iron	7439-89-6	mg/Kg	16000		17400		8.4%		100
Lead	7439-92-1	mg/Kg	4.2		4.1		2.4%		3
Magnesium	7439-95-4	mg/Kg	3650		3760			110	5000
Manganese	7439-96-5	mg/Kg	282		307		8.5%		15
Mercury	7439-97-6	mg/Kg	0.29		0.27		7.1%		0.2
Nickel	7440-02-0	mg/Kg	9.7	B	11.6			1.9	40
Potassium	7440-09-7	mg/Kg	1350	B	1220	B		130	5000
Selenium	7782-49-2	mg/Kg	0.82	U	0.76	U			
Silver	7440-22-4	mg/Kg	1.1	U	1.0	U			
Sodium	7440-23-5	mg/Kg	668	B	611	B		57	5000
Thallium	7440-28-0	mg/Kg	1.1	U	1.0	U			
Vanadium	7440-62-2	mg/Kg	34.2		37.2			3	50
Zinc	7440-66-6	mg/Kg	37.6		40.2		6.7%		20

EVALUATION:

1. Field duplicates are not evaluated for precision if both results are non-detect.
2. If sample rsults are >5*CRDL, the RPD is used for evaluation.
3. If sample results are <5*CRDL, the DIF is used for evaluation.
4. All positive results have exhibited acceptable precision.

FIELD QC INORGANIC
FIELD DUPLICATE EVALUATION

LATA ID#: VW403.31		HEIS #:	B0D2J2		B0D2J3		RPD	DIF	5*CRDL
		Date:	2-Feb-95		2-Feb-95				mg/Kg
		Matrix:	SOLIDS		SOLIDS				
Constituent	CAS #	Units	Results	Q	Results	Q			
Aluminum	7429-90-5	mg/Kg	7580		7520		0.8%		200
Antimony	7440-36-0	mg/Kg	12.2	U	11.8	U			
Arsenic	7440-38-2	mg/Kg	3.6		3.6			0	10
Barium	7440-39-3	mg/Kg	98.3		100			1.7	200
Beryllium	7440-41-7	mg/Kg	0.28	B	0.28	B		0	5
Cadmium	7440-43-9	mg/Kg	0.81	U	0.79	U			
Calcium	7440-70-2	mg/Kg	6340		6230		1.8%		5000
Chromium	7440-47-3	mg/Kg	9.5		9.0			0.5	10
Cobalt	7440-48-4	mg/Kg	41.3		39.8			1.5	50
Copper	7440-50-8	mg/Kg	14.3		13.8			0.5	25
Iron	7439-89-6	mg/Kg	17300		18100		4.5%		100
Lead	7439-92-1	mg/Kg	5.9		4.8		20.6%		3
Magnesium	7439-95-4	mg/Kg	4070		4160			90	5000
Manganese	7439-96-5	mg/Kg	313		324		3.5%		15
Mercury	7439-97-6	mg/Kg	0.12	U	0.19			0.07	0.2
Nickel	7440-02-0	mg/Kg	13.5		12.5			1	40
Potassium	7440-09-7	mg/Kg	1650		1550			100	5000
Selenium	7782-49-2	mg/Kg	0.82	U	0.78	U			
Silver	7440-22-4	mg/Kg	1.1	U	1.1	U			
Sodium	7440-23-5	mg/Kg	711	B	695	B		16	5000
Thallium	7440-28-0	mg/Kg	1.1	U	1.0	U			10
Vanadium	7440-62-2	mg/Kg	34.5		35.9			1.4	50
Zinc	7440-66-6	mg/Kg	40.8		42.7		4.6%		20

EVALUATION:

1. Field duplicates are not evaluated for precision if both results are non-detect.
2. If sample rsults are >5*CRDL, the RPD is used for evaluation.
3. If sample results are <5*CRDL, the DIF is used for evaluation.
4. All positive results have exhibited acceptable precision.

FIELD QC INORGANIC
FIELD DUPLICATE EVALUATION

LATA ID#: VW403.31		HEIS #:	B0D2J4		B0D2J5		RPD	DIF	5*CRDL
		Date:	2-Feb-95		2-Feb-95				mg/Kg
		Matrix:	SOLIDS		SOLIDS				
Constituent	CAS #	Units	Results	Q	Results	Q			
Aluminum	7429-90-5	mg/Kg	6850		6980		1.9%		200
Antimony	7440-36-0	mg/Kg	11.3	U	11.0	U			
Arsenic	7440-38-2	mg/Kg	2.4	B	1.8	B		0.6	10
Barium	7440-39-3	mg/Kg	91.5		85.8			5.7	200
Beryllium	7440-41-7	mg/Kg	0.26	B	0.24	U		0.02	5
Cadmium	7440-43-9	mg/Kg	0.75	U	0.73	U			
Calcium	7440-70-2	mg/Kg	5750		5730		0.3%		5000
Chromium	7440-47-3	mg/Kg	8.4		8.6			0.2	10
Cobalt	7440-48-4	mg/Kg	46.6		47.3			0.7	50
Copper	7440-50-8	mg/Kg	12.5		12.1			0.4	25
Iron	7439-89-6	mg/Kg	17700		17800		0.6%		100
Lead	7439-92-1	mg/Kg	3.3		3.8		14.1%		3
Magnesium	7439-95-4	mg/Kg	3900		3980			80	5000
Manganese	7439-96-5	mg/Kg	315		308		2.2%		15
Mercury	7439-97-6	mg/Kg	0.13		0.12			0.01	0.2
Nickel	7440-02-0	mg/Kg	10.1		10.9			0.8	40
Potassium	7440-09-7	mg/Kg	1350		1300			50	5000
Selenium	7782-49-2	mg/Kg	0.76	U	0.73	U			
Silver	7440-22-4	mg/Kg	1.0	U	0.98	U			
Sodium	7440-23-5	mg/Kg	688	B	675	B		13	5000
Thallium	7440-28-0	mg/Kg	1.0	U	0.98	U			
Vanadium	7440-62-2	mg/Kg	37.6		38.3			0.7	50
Zinc	7440-66-6	mg/Kg	40.2		40.7		1.2%		20

EVALUATION:

1. Field duplicates are not evaluated for precision if both results are non-detect.
2. If sample rsults are >5*CRDL, the RPD is used for evaluation.
3. If sample results are <5*CRDL, the DIF is used for evaluation.
4. All positive results have exhibited acceptable precision.

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Arsenic 2-17-95

	Concentration	Absorbance
WATER	x	y
	10	0.022
	25	0.051
	50	0.101
	100	0.199
	200	0.376

r	r^2
0.9996	0.9992

slope	x intercept
0.0019	-3.2679

1/slope	y intercept
536.2503	0.0062

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Selenium 2-17-95

	Concentration	Absorbance
WATER	x	y
	5	0.008
	25	0.032
	50	0.065
	100	0.126

r	r^2
0.9999	0.9998

slope	x intercept
0.0012	-1.3177

1/slope	y intercept
802.2240	0.0017

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Thallium 2-17-95

	Concentration	Absorbance
WATER	x	y
	10	0.023
	25	0.055
	50	0.106
	100	0.195

r	r^2
0.9991	0.9983

slope	x intercept
0.0019	-3.5008

1/slope	y intercept
525.9823	0.0068

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Lead 2-17-95

	Concentration	Absorbance
WATER	x	y
	3	0.010
	25	0.070
	50	0.136
	100	0.254
	200	0.468

r	r^2
0.9988	0.9977

slope	x intercept
0.0023	-5.5093

1/slope	y intercept
433.3583	0.0131

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Mercury 2-25-95

	Concentration	Absorbance
WATER	x	y
	0	-0.017
	1	0.495
	1	0.987
	5	5.069
	10	9.967

r	r^2
1.0000	0.9999

slope	x intercept
1.0000	0.0000

1/slope	y intercept
1.0000	0.0003

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Arsenic 2-21-95

	Concentration	Absorbance
SOLIDS	x	y
	10	0.022
	25	0.057
	50	0.116
	100	0.228
	200	0.440

r	r^2
0.9998	0.9995

slope	x intercept
0.0022	-1.5425

1/slope	y intercept
455.2651	0.0035

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Selenium 2-22-95

	Concentration	Absorbance
SOLIDS	x	y
	5	0.008
	25	0.035
	50	0.067
	100	0.132

r	r^2
1.0000	0.9999

slope	x intercept
0.0013	-1.4651

1/slope	y intercept
768.0608	0.0019

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Thallium 2-21-95

	Concentration	Absorbance
SOLIDS	x	y
	10	0.017
	25	0.045
	50	0.090
	100	0.171

r	r²
0.9995	0.9990

slope	x intercept
0.0017	-1.0851

1/slope	y intercept
586.8028	0.0019

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Lead 2-21-95

	Concentration	Absorbance
SOLIDS	x	y
	3	0.009
	25	0.058
	50	0.113
	100	0.214
	200	0.371

r	r²
0.9967	0.9935

slope	x intercept
0.0018	-7.5493

1/slope	y intercept
547.0162	0.0148

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

LINEAR REGRESSION ANALYSIS

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte/Calibration Date: Mercury 2-22-95

	Concentration	Absorbance
SOLIDS	x	y
	0	0.021
	1	0.587
	1	1.062
	5	4.704
	10	10.030

r	r^2
0.9994	0.9987

slope	x intercept
0.9894	-0.0117

1/slope	y intercept
1.0107	0.0158

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

PERCENT RECOVERY (ICV/CCV)

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte	ICV/CCV ID	Observed Value	True Value	%R
		O	A	
Aluminum WATER	ICV	102950.00	100000	103.0%
Aluminum WATER	CCV	26557.42	25000	106.2%
Arsenic WATER	ICV	98.40	100	98.4%
Arsenic WATER	CCV	101.20	100	101.2%
Selenium WATER	ICV	50.50	50	101.0%
Selenium WATER	CCV	50.90	50	101.8%
Lead WATER	ICV	105.60	100	105.6%
Lead WATER	CCV	99.80	100	99.8%
Thallium WATER	ICV	51.60	50	103.2%
Thallium WATER	CCV	51.40	50	102.8%
Mercury WATER	ICV	2.04	2	102.0%
Mercury WATER	CCV	5.07	5	101.4%
Aluminum SOLIDS	ICV	102950.50	100000	103.0%
Aluminum SOLIDS	CCV	26557.40	25000	106.2%
Arsenic SOLIDS	ICV	98.40	100	98.4%
Arsenic SOLIDS	CCV	100.30	100	100.3%
Selenium SOLIDS	ICV	51.30	50	102.6%
Selenium SOLIDS	CCV	49.00	50	98.0%
Lead SOLIDS	ICV	51.10	50	102.2%
Lead SOLIDS	CCV	45.00	50	90.0%
Thallium SOLIDS	ICV	107.40	100	107.4%
Thallium SOLIDS	CCV	103.60	100	103.6%
Mercury SOLIDS	ICV	2.03	2	101.5%
Mercury SOLIDS	CCV	5.13	5	102.6%

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

MATRIX SPIKE RECOVERY (MS)

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte	Sample ID	Spike Sample Result	Sample Result	Spike Added	%R
		SSR	SR	SA	
Aluminum	B0D2G8	2309.48	75.57	2000.00	111.7%
Arsenic	B0D2G8	41.60	0.00	40.00	104.0%
Thallium	B0D2G8	48.10	0.00	50.00	96.2%
Selenium	B0D2G8	10.60	0.00	10.00	106.0%
Lead	B0D2G8	19.20	0.00	20.00	96.0%
Mercury	B0D2D1	1.04	0.00	1.00	103.5%
Antimony	B0D2H0	312.24	0.00	426.70	73.2%
Arsenic	B0D2H0	11.19	2.69	8.54	99.5%
Thallium	B0D2H0	10.27	0.00	10.68	96.2%
Selenium	B0D2H0	1.99	0.00	2.14	92.8%
Lead	B0D2H0	7.62	3.09	4.27	106.1%
Mercury	B0D2H0	0.40	0.00	0.49	81.7%

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

PERCENT RECOVERY (LCS)

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte	Observed value	True value	%R
	OLCS	ALCS	
Aluminum WATER	2046.30	2000.00	102.3%
Selenium WATER	8.80	10.00	88.0%
Thallium WATER	49.10	50.00	98.2%
Lead WATER	18.90	20.00	94.5%
Arsenic WATER	41.90	40.00	104.8%
Mercury WATER	1.08	1.00	108.0%
Aluminum SOLIDS	3203.80	3740.00	85.7%
Selenium SOLIDS	186.40	185.00	100.8%
Thallium SOLIDS	42.10	49.90	84.4%
Lead SOLIDS	48.60	52.40	92.7%
Arsenic SOLIDS	337.30	349.00	96.6%
Mercury SOLIDS	13.10	13.00	100.8%

RELATIVE PERCENT DIFFERENCE

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte	Sample ID	Original (Sample) concentration	Duplicate concentration	RPD
		OS	D	
Aluminum	B0D2G8	75.57	63.93	16.7%
Selenium	B0D2G8	ND	ND	NC
Thallium	B0D2G8	ND	ND	NC
Lead	B0D2G8	ND	ND	NC
Arsenic	B0D2G8	ND	ND	NC
Mercury	B0D2G8	ND	ND	NC
Aluminum	B0D2H0	5393.30	5826.10	7.7%
Selenium	B0D2H0	ND	ND	NC
Thallium	B0D2H0	ND	ND	NC
Lead	B0D2H0	3.09	3.09	0.1%
Arsenic	B0D2H0	2.69	2.49	7.7%
Mercury	B0D2H0	ND	ND	NC

The laboratory did not report a duplicate value for the Mercury analysis. Each sample was digested and analyzed in triplicate. A duplicate is calculated on the first two results.

LATA INORGANIC (METALS) CALCULATION SPREADSHEET

PERCENT DIFFERENCE (ICP SERIAL DILUTION)

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte	Analyte Concentration before Dilution	Analyte Concentration after Serial Dilution	%D
	I	S	
Aluminum B0D2G8	75.57	0	100.0%
Aluminum B0D2H0	25280.5	26039.8	3.0%

INORGANICS RESULTS CALCULATION, WATER

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

Analyte	Sample ID	Units	Concentration from curve	Dilution Factor	Concentration (µg/L)
			CONCW	DFW	
Aluminum	B0D2D1	mg/L	0.0013	1	1.30
Arsenic	B0D2D1	µg/L	0.50	1	0.50
Selenium	B0D2D1	µg/L	-1.00	1	-1.00
Lead	B0D2D1	µg/L	0.20	1	0.20
Thallium	B0D2D1	µg/L	0.60	1	0.60
Mercury	B0D2D1	µg/L	0.01	1	0.01

INORGANICS RESULTS CALCULATION, SOIL

SDG: LK3764-LAS-028 Date: 18-Apr-95

LATA No.: VW403.31 Validator: MC WEBB

B0D2G3

Analyte	Concentration (Cal Curve)	Units	Run Dilution Factor	Final Volume (mL)	Weight of Sample (g)	Dry Weight Conversion (decimal)	Concentration (mg/Kg)
	CONCS	UNITS	DFS	VOL	WS	SS	
Aluminum	23.84	µg/ml	1	250	1.24	0.763	6299.41
Arsenic	10.40	µg/L	1	250	1.25	0.763	2.73
Thallium	0.08	µg/L	1	250	1.25	0.763	0.02
Selenium	0.60	µg/L	1	250	1.25	0.763	0.16
Lead	16.90	µg/L	1	250	1.25	0.763	4.43
Mercury	0.00	µg/L	1	100	0.24	0.763	0.00

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E

VALIDATION PROCEDURE:	☐ WHC-CM-5-3, Rev. 0		☒ WHC-SD-EN-SPP-002, Rev. 2		
PROJECT:	304 CONCRETION FACILITY CLOSURE		**SDG:**	LK3764-LAS-028	
VALIDATOR:	BJ MORRIS BM 5.5.95	**LATA NO:**	VW403.31	**DATE:**	17-Apr-95
REVIEWER:	AM FREIER	**LAB:**	LAS	**CASE:**	204512
SAF NO:	94-402	**QAPP NO:**	N/A	**SAP NO:**	WHC-SD-EN-AP-177

ANALYSES REQUESTED

☒ VOA 8240	☒ VOA 8260	
SAMPLE #s	MATRIX	**COMMENTS:**
B0D2G3 B0D2G4	SOLIDS	
B0D2G5 B0D2H0		
B0D2H1 B0D2H2		
B0D2H3 B0D2H4		
B0D2H5 B0D2J0		
B0D2J2 B0D2J4		
B0D2J9 B0D2K0		

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE	YES	NO	N/A
Is technical verification documentation present?	☒	☐	☐
Is a case narrative present?	☒	☐	☐

2. HOLDING TIMES	YES	NO	N/A
Are sample holding times acceptable?	☒	☐	☐

See HOLDING TIME SUMMARY form

3. INSTRUMENT TUNING/PERFORMANCE AND CALIBRATIONS	YES	NO	N/A
Is the GC/MS tuning/performance check acceptable?	☒	☐	☐
Were initial calibrations performed on all instruments at the proper frequency?	☒	☐	☐
Are initial calibrations acceptable?	☐	☒	☐
Were continuing calibrations performed on all instruments at the proper frequency?	☒	☐	☐
Are continuing calibrations acceptable?	☐	☒	☐
Validation calculation checks were performed and are acceptable.	☒	☐	☐

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

LATA GC/MS ORGANICS DATA VALIDATION CHECKLIST

4. BLANKS

	YES	NO	N/A
Were laboratory blanks analyzed?	X		
Are laboratory blank results acceptable?		X	

If NO(s) are checked, see BLANK AND SAMPLE DATA SUMMARY form

5. ACCURACY

	YES	NO	N/A
Were surrogates/System Monitoring Compounds analyzed at the proper frequency?	X		
Are all surrogate/System Monitoring Compound recoveries acceptable?		X	
Were spike samples (MS/MSD) analyzed at the proper frequency?	X		
Are all spike sample (MS/MSD) recoveries acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see ACCURACY DATA SUMMARY form

6. PRECISION

	YES	NO	N/A
Were MS/MSDs analyzed?	X		
Are all MS/MSD RPD values acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see PRECISION DATA SUMMARY form

7. FIELD QC SAMPLES

	YES	NO	N/A
Were field QC samples (field/trip blanks, duplicates, splits, performance audit) identified?	X		
Are field/trip blank results acceptable? (see Blank Data Summary form)			X
Are field duplicate RPD values acceptable? (see Field QC calculations)	X		
Are field split RPD values acceptable? (see Field QC calculations)			X
Are performance audit sample results acceptable?			X

Comments: The Field duplicates were: B0D2H0-B0D2H3, B0D2H1-B0D2H4, B0D2H2-B0D2H5

8. SYSTEM PERFORMANCE	YES	NO	N/A
Were internal standards analyzed?	X		
Are all internal standard areas acceptable?	X		
Are all internal standard retention times acceptable?	X		

9. COMPOUND IDENTIFICATION AND QUANTITATION	YES	NO	N/A
Is compound identification acceptable?	X		
Is compound quantitation acceptable?	X		
Are all TICs properly identified and coded?	X		

10. REPORTED RESULTS AND QUANTITATION LIMITS	YES	NO	N/A
Are results reported for all requested analyses?	X		
Are all results supported in the raw data?	X		
Do results meet the CRQLs?	X		
Validation calculation checks were performed and are acceptable.	X		

Comments:

VALIDATION SUMMARY

For deficiencies (major and minor) and comments, please refer to the Qualification Summary Table.

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: BJ MORRIS						DATE: 17-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: AM FREIER						LATA NO.: VW403.31	
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	*Required HT (days)*	ANALYSIS HT (days)	*Required HT (days)*	VAL Q
B0D2G3	SOLIDS	VOA-8240	31-Jan-95	NA	13-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	31-Jan-95	NA	7-Feb-95	NA	*NA*	7	*14*	NONE
B0D2G4	SOLIDS	VOA-8240	31-Jan-95	NA	14-Feb-95	NA	*NA*	14	*14*	NONE
		VOA-8260	31-Jan-95	NA	7-Feb-95	NA	*NA*	7	*14*	NONE
B0D2G5	SOLIDS	VOA-8240	31-Jan-95	NA	14-Feb-95	NA	*NA*	14	*14*	NONE
		VOA-8260	31-Jan-95	NA	7-Feb-95	NA	*NA*	7	*14*	NONE
B0D2H0	SOLIDS	VOA-8240	1-Feb-95	NA	15-Feb-95	NA	*NA*	14	*14*	NONE
		VOA-8260	1-Feb-95	NA	6-Feb-95	NA	*NA*	5	*14*	NONE
B0D2H1	SOLIDS	VOA-8240	1-Feb-95	NA	14-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	1-Feb-95	NA	6-Feb-95	NA	*NA*	5	*14*	NONE
B0D2H2	SOLIDS	VOA-8240	1-Feb-95	NA	15-Feb-95	NA	*NA*	14	*14*	NONE
		VOA-8260	1-Feb-95	NA	6-Feb-95	NA	*NA*	5	*14*	NONE
B0D2H3	SOLIDS	VOA-8240	1-Feb-95	NA	14-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	1-Feb-95	NA	6-Feb-95	NA	*NA*	5	*14*	NONE
B0D2H4	SOLIDS	VOA-8240	1-Feb-95	NA	14-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	1-Feb-95	NA	7-Feb-95	NA	*NA*	6	*14*	NONE
B0D2H5	SOLIDS	VOA-8240	1-Feb-95	NA	14-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	1-Feb-95	NA	7-Feb-95	NA	*NA*	6	*14*	NONE
B0D2J0	SOLIDS	VOA-8240	2-Feb-95	NA	15-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	2-Feb-95	NA	7-Feb-95	NA	*NA*	5	*14*	NONE
B0D2J2	SOLIDS	VOA-8240	2-Feb-95	NA	15-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	2-Feb-95	NA	7-Feb-95	NA	*NA*	5	*14*	NONE
B0D2J4	SOLIDS	VOA-8240	2-Feb-95	NA	15-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	2-Feb-95	NA	7-Feb-95	NA	*NA*	5	*14*	NONE
B0D2J9	SOLIDS	VOA-8240	2-Feb-95	NA	15-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	2-Feb-95	NA	7-Feb-95	NA	*NA*	5	*14*	NONE
B0D2K0	SOLIDS	VOA-8240	2-Feb-95	NA	15-Feb-95	NA	*NA*	13	*14*	NONE
		VOA-8260	2-Feb-95	NA	7-Feb-95	NA	*NA*	5	*14*	NONE

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

CALIBRATION DATA SUMMARY

SDG: LK3764-LAS-028			VALIDATOR: BJ MORRIS			DATE: 17-Apr-95	
PROJECT: 304 CONCRETION FACILITY CLOSURE			REVIEWER: AM FREIER			LATA NO.: VW403.31	
CALIBRATION DATE	ANALYTE	RF or CF	%RSD	%D	%R	SAMPLES AFFECTED	VAL Q
2-Chloroethylvinyl ether was not calibrated for Method 8240 due to instrument problems.						B0D2G3 B0D2G4 B0D2G5 B0D2H0 B0D2H1 B0D2H2 B0D2H3 B0D2H4 B0D2H5 B0D2J0 B0D2J2 B0D2J4 B0D2J9 B0D2K0	UJ

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST

BLANK DATA SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR:	BJ MORRIS				DATE:	17-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER:	AM FREIER				LATA NO.:	VW403.31
BLANK ID	ANALYTE	RESULT	LAB Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	VAL Q
Prep Blank (8240)	2-Hexanone	2.9			µg/Kg	14.25	NA	B0D2G3	U
Prep Blank (8260)	Acetone	6.1			µg/Kg	NA	61	B0D2G3 B0D2G4 B0D2G5 B0D2H2 B0D2H3 B0D2J0 B0D2J2 B0D2J4	U

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	Method Blank	LAL Sample ID:	19322MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	15-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021595-8240-C1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	101	70-121
Toluene-d8	117	81-117
Bromofluorobenzene	111	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	2.1	5.0	J
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	<10.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
Chloroform	67-66-3	<5.0	5.0	
2-Hexanone	591-78-6	2.9	5.0	J
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	X
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

BM 4-18-95

LOCKHEED ANALYTICAL SERVICES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	Blank	LAL Sample ID:	18776MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	06-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	020695-8260-J2
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	98	70-121
Toluene-d8	104	81-117
Bromofluorobenzene	100	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Acetone	67-64-1	6.1	10.	J
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
trans-1,2-Dichloroethene	156-50-5	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0	
Chloroform	67-66-3	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	1.5	5.0	J
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	1330-20-7	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	

BM 4-18-95

LATA GC/MS ORGANICS
DATA VALIDATION CHECKLIST
ACCURACY DATA SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR:	BJ MORRIS			DATE: 17-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER:	AM FREIER			LATA NO.: VW403.31	
				PERCENT RECOVERY (%R)				
HEIS-SN	ANALYTE	RESULTS	Lab Q	Matrix Spike	Matrix Spike Duplicate	Surrogate/ System Monitoring Compounds	SAMPLES AFFECTED	VAL Q
B0D2G3 (8240)	Toluene-d8					134.0%	B0D2G3	J

*Note: The associated compounds for the volatile surrogates are as follows:

1,2-Dichloroethane-d4	4-Bromofluorobenzene	Toluene-d8
Chloromethane	Chlorobenzene	Benzene
Bromomethane		Ethylbenzene
Vinyl Chloride		Styrene
Chloroethane		Toluene
Methylene Chloride		Xylenes
1,1-Dichloroethene		
1,1-Dichloroethane		
1,2-Dichloroethene		
Chloroform		
1,2-Dichloroethane		
1,1,1-Trichloroethane		
Carbon Tetrachloride		
Bromodichloromethane		
1,2-Dichloropropane		
cis-1,3-Dichloropropene		
Trichloroethene		
Dibromochloromethane		
1,1,2-Trichloroethane		
trans-1,3-Dichloropropene		
Bromoform		
Tetrachloroethene		
1,1,2,2-Tetrachloroethane		
Dichlorodifluoromethane		
Iodomethane		
Trichlorofluoromethane		
Dibromomethane		
2-Chloroethylvinyl ether		
1,3-Dichloro-2-butene		
1,2,3-Trichloropropane		

LOCKHEED ANALYTICAL SERVICES

GC/MS FOR VOLATILE ORGANICS
8240 VOLATILES

Client Sample ID:	B0D2G3	LAL Sample ID:	L3764-31
Date Collected:	31-JAN-95	Date Received:	04-FEB-95
Date Analyzed:	13-FEB-95	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021395-8240-C2
Percent Moisture:	23.72	Preparation Dilution:	0.975

SURROGATE RECOVERY (%)		
		QC Limits
1,2-Dichloroethane-d4	118	70-121
Toluene-d8	134 *	81-117
Bromofluorobenzene	130 *	74-121

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(s)
Chloromethane	74-87-3	3.0	6.4	J
Vinyl Chloride	75-01-4	<6.4	6.4	
Bromomethane	74-83-9	<6.4	6.4	
Chloroethane	75-00-3	<6.4	6.4	
Trichlorofluoromethane	75-69-4	<6.4	6.4	
Acetone	67-64-1	29.	13.	
1,1-Dichloroethene	75-35-4	<6.4	6.4	
Carbon Disulfide	75-15-0	<6.4	6.4	
Methylene Chloride	75-09-2	<6.4	6.4	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.4	6.4	
2-Butanone	78-93-3	<13.	13.	
Chloroform	67-66-3	<6.4	6.4	
2-Hexanone	591-78-6	5.7	6.4	J
1,1,1-Trichloroethane	71-55-6	<6.4	6.4	
Carbon tetrachloride	56-23-5	<6.4	6.4	
1,2-Dichloroethane	107-06-2	<6.4	6.4	
Benzene	71-43-2	3.0	6.4	J
Trichloroethene	79-01-6	<6.4	6.4	
1,2-Dichloropropane	78-87-5	<6.4	6.4	
Bromodichloromethane	75-27-4	<6.4	6.4	
2-Chloroethylvinylether	110-75-8	<26.	26.	X
4-Methyl-2-Pentanone	108-10-1	3.0	13.	J
cis-1,3-Dichloropropene	10061-01-5	<6.4	6.4	
Toluene	108-88-3	1.8	6.4	J
trans-1,3-Dichloropropene	10061-02-6	<6.4	6.4	
1,1,2-Trichloroethane	79-00-5	<6.4	6.4	
Tetrachloroethene	127-18-4	<6.4	6.4	
Dibromochloromethane	124-48-1	<6.4	6.4	
Chlorobenzene	108-90-7	<6.4	6.4	
Ethylbenzene	100-41-4	<6.4	6.4	
m,p-Xylene	1330-20-7	<6.4	6.4	
o-Xylene	95-47-6	<6.4	6.4	
Styrene	100-42-5	<6.4	6.4	
Bromoform	75-25-2	<6.4	6.4	
1,1,2,2-Tetrachloroethane	79-34-5	<6.4	6.4	
1,3-Dichlorobenzene	541-73-1	<6.4	6.4	
1,4-Dichlorobenzene	106-46-7	1.5	6.4	J
1,2-Dichlorobenzene	95-50-1	<6.4	6.4	

Volatile Organic Method 8240
Field QC Summary

LATA ID#: VW403.31		HEIS #:	B0D2H0		B0D2H3		RPD	DIF	CRQL
		Date:	1-Feb-95		1-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
Methylene Chloride	7440-61-1	µg/Kg	1.7	J	4.9	U	NA	1.7	10

LATA ID#: VW403.31		HEIS #:	B0D2H1		B0D2H4		RPD	DIF	CRQL
		Date:	1-Feb-95		1-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	RT	Units	Results	Q	Results	Q			
Unk. hydrocarbon	@21.96	µg/Kg	0.0	U	7.0	J	NA	7.0	10

LATA ID#: VW403.31		HEIS #:	B0D2H2		B0D2H5		RPD	DIF	CRQL
		Date:	1-Feb-95		1-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	RT	Units	Results	Q	Results	Q			
Unk. hydrocarbon	@21.93	µg/Kg	8.5	J	7.0	J	NA	1.5	10

EVALUATION:

1. Field duplicates are not evaluated for precision if both results are non-detect.
2. If sample rsults are >5*CRDL, the RPD is used for evaluation.
3. If sample results are <5*CRDL, the DIF is used for evaluation.
4. All positive results have exhibited acceptable precision.
5. Unknown TICs are considered a "match" if RT values are ±0.06 minutes.

Volatile Organic Method 8260
Field QC Summary

LATA ID#: VW403.31		HEIS #:	B0D2H0		B0D2H3		RPD	DIF	CRQL
		Date:	1-Feb-95		1-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
All analytes were non-detect.		µg/Kg							

LATA ID#: VW403.31		HEIS #:	B0D2H1		B0D2H4		RPD	DIF	CRQL
		Date:	1-Feb-95		1-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
All analytes were non-detect.		µg/Kg							

LATA ID#: VW403.31		HEIS #:	B0D2H2		B0D2H5		RPD	DIF	CRQL
		Date:	1-Feb-95		1-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
All analytes were non-detect.		µg/Kg							

EVALUATION:

1. Field duplicates are not evaluated if both results are non-detect.

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3764-LAS-028 Date: 34806.000

LATA No.: VW403.31 Validator: BJ MORRIS

VOA RELATIVE RESPONSE FACTOR

Analyte	Response for Analyte of Interest	Conc. of Internal Standard	Area of Internal Standard	Conc. of Analyte of Interest	RRF
(8240) Chloroethene	110958	50.00	76477	20.00	3.627
(8240) Bromoform	364387	50.00	372224	150.00	0.326
(8260) Vinyl Chloride	19378	50.00	77691	20.00	0.624
(8260) Benzene	216510	50.00	129718	50.00	1.669

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3764-LAS-028 Date: 17-Apr-95

LATA No.: VW403.31 Validator: BJ MORRIS

RELATIVE STANDARD DEVIATION

RRF1 Analyte: (8240) Vinyl Chloride

RRF1
0.907
1.214
1.458
1.597
1.401

MEAN	STDEV	RSD
1.315	0.2665	20.3

RELATIVE STANDARD DEVIATION

RRF2 Analyte: (8240) Chloroform

RRF2
4.545
4.400
4.052
3.357
2.776

MEAN	STDEV	RSD
3.826	0.7450	19.5

RELATIVE STANDARD DEVIATION

RRF3 Analyte: (8260) Dibromomethane

RRF3
0.438
0.399
0.388
0.363
0.339

MEAN	STDEV	RSD
0.385	0.0375	9.7

RELATIVE STANDARD DEVIATION

RRF4 Analyte: (8260) Bromoform

RRF4
0.693
0.674
0.606
0.602
0.555

MEAN	STDEV	RSD
0.626	0.0566	9.0

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3764-LAS-028 Date: 17-Apr-95

LATA No.: VW403.31 Validator: BJ MORRIS

VOA PERCENT DIFFERENCE

Analyte	Initial Calibration Average RRF	Continuing Calibration Average RRF	%D
(8240) Vinyl Chloride	1.315	1.287	2.1%
(8240) Chloroform	3.826	4.242	10.9%
(8260) 1,1-Dichloroethene	0.835	0.724	13.3%
(8260) Chloroform	1.398	1.461	4.5%

000176

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

SDG: LK3764-LAS-028 Date: 17-Apr-95

LATA No.: VW403.31 Validator: BJ MORRIS

VOA SURROGATE RECOVERY

Analyte	surrogate result	surrogate added	%R
(8240) Toluene-d8	58.35	50.00	116.7%
(8240) Bromofluorobenzene	52.16	50.00	104.3%
(8260) Toluene-d8	51.24	50.00	102.5%
(8260) Bromofluorobenzene	46.85	50.00	93.7%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

MATRIX SPIKE RECOVERY (MS/MSD)

SDG: LK3764-LAS-028 Date: 17-Apr-95

LATA No.: VW403.31 Validator: BJ MORRIS

Analyte	Sample ID	MS Result	MSD Result	Sample Result	Spike Added	MS%R	MSD%R
(8240) Benzene	B0D2G3	85.2	76.6	3.0	65.5	125.5%	112.4%
(8240) Toluene	B0D2G3	73.5	64.1	1.8	65.5	109.5%	95.1%
(8260) Trichloroethene	B0D2H2	53.4	51.7	0.0	53.6	99.6%	96.5%
(8260) Chloroethene	B0D2H2	60.1	59.6	0.0	53.6	112.1%	111.2%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

RELATIVE PERCENT DIFFERENCE

SDG: LK3764-LAS-028 Date: 17-Apr-95

LATA No.: VW403.31 Validator: BJ MORRIS

Analyte	Sample ID	MS %R	MSD %R	RPD
(8240) Benzene	B0D2G3	125.5	112.4	11.0%
(8240) Toluene	B0D2G3	109.5	95.1	14.1%
(8260) Trichloroethene	B0D2H2	99.6	96.5	3.2%
(8260) Chloroethene	B0D2H2	112.1	111.2	0.8%

LATA GC/MS ORGANICS
DATA VALIDATION CALCULATION SPREADSHEET

RESULTS CALCULATIONS FOR VOA SOIL/SEDIMENT SAMPLES (Low Level)

SDG: LK3764-LAS-028 Date: 17-Apr-95

LATA No.: VW403.31 Validator: BJ MORRIS

Analyte	Area of the Quant Ion for the Analyte of Interest	Area of the Quant Ion for the Internal Standard	Amount of Internal Standard added (ng)	Relative Response Factor	Weight of sample added (g)	Dry Weight Conversion (decimal)	Conc (µg/Kg)
BOD2G3							
(8240) Acetone	74301.00	56367.00	50.00	2.901	1.00	0.763	29.78
BOD2H2							
(8260) Acetone	7278.00	63049.00	50.00	0.584	1.00	0.932	10.60

000180

LATA RADIOCHEMISTRY DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E

VALIDATION PROCEDURE:	☐ WHC-CM-5-3, Rev. 0		☒ WHC-SD-EN-SPP-001, Rev. 1		
PROJECT:	304 CONCRETION FACILITY CLOSURE		**SDG:**	LK3764-LAS-028	
VALIDATOR:	AM FREIER 4/25/95	**LATA NO:**	VW403.31	**DATE:**	12-Apr-95
REVIEWER:	MC WEBB 5/4/95	**LAB:**	LAS	**CASE:**	N/A
SAF NO:	94-402	**QAPP NO:**	N/A	**SAP NO:**	WHC-SD-EN-AP-177

ANALYSES REQUESTED

☒ Uranium, Total LAL-91-0618

SAMPLE #s	MATRIX	SAMPLE #s	MATRIX
B0D2D1	WATER	B0D2G3 B0D2J1	SOLID
B0D2D2		B0D2G4 B0D2J2	
B0D2G8		B0D2G5 B0D2J3	
		B0D2H0 B0D2J4	
B0D2H6	LIQUID	B0D2H1 B0D2J5	
B0D2H7		B0D2H2 B0D2J9	
		B0D2J0 B0D2K0	

	YES	NO	N/A
1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE			
Is technical verification documentation present?	☒	☐	☐
Is a case narrative present?	☒	☐	☐
2. HOLDING TIMES			
Are sample holding times acceptable?	☒	☐	☐
Are samples preserved correctly?	☐	☒	☐

See HOLDING TIME SUMMARY form

	YES	NO	N/A
3. INSTRUMENT PERFORMANCE AND CALIBRATIONS			
Were instruments/detectors calibrated within one year of sample analysis?	☒	☐	☐
Are initial calibrations acceptable?	☒	☐	☐
Are standards NIST traceable?	☒	☐	☐
Are standards acceptable?	☒	☐	☐

Comments:

4. CONTINUING CALIBRATION	YES	NO	N/A
Background checked at proper frequency?			X
Background check acceptable?			X
Efficiency checked at proper frequency?			X
Efficiency check acceptable?			X
Calibration check standards NIST traceable?	X		
Calibration check standards acceptable?	X		

If NO(s) are checked, see CALIBRATION DATA SUMMARY form

5. BLANKS	YES	NO	N/A
Were method blanks analyzed?	X		
Are the method blanks free of analytes?	X		
Were method blank results acceptable?	X		
Validation calculation/transcription checks were performed and are acceptable.	X		

If NO(s) are checked, see BLANK DATA SUMMARY form

6. ACCURACY	YES	NO	N/A
Were spike samples analyzed at the proper frequency?	X		
Are all spike sample recoveries acceptable?		X	
Were laboratory control standards (LCS) analyzed at the proper frequency?	X		
Are all LCS recoveries acceptable?	X		
Was a tracer/chemical carrier added?			X
Was the tracer/chemical carrier recovery acceptable?			X
Are standard sources traceable?	X		
Are standards acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see ACCURACY DATA SUMMARY form

7. PRECISION	YES	NO	N/A
Were laboratory duplicates analyzed at the proper frequency?	X		
Are all duplicate RPD values acceptable?	X		
Validation calculation checks were performed and are acceptable.	X		

If NO(s) are checked, see PRECISION DATA SUMMARY form

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

8. FIELD QC SAMPLES

	YES	NO	N/A
Were field QC samples (equipment blanks, duplicates, splits, performance audit) identified?	X		
Are field/trip blank results acceptable? (see Blank Data Summary form)		X	
Are field duplicate RPD values acceptable? (see Field QC calculations)		X	
Are field split RPD values acceptable? (see Field QC calculations)			X
Are performance audit sample results acceptable?			X

Comments: Equipment blanks - B0D2D1, B0D2D2, B0D2G8, B0D2H6, B0D2H7

Field Duplicates - B0D2J1/B0D2J0, B0D2J3/B0D2J2, B0D2J5/B0D2J4

9. REPORTED RESULTS AND DETECTION LIMITS

	YES	NO	N/A
Are results reported for all requested analyses?	X		
Are all results supported in the raw data?	X		
Are results calculated properly?	X		
Do MDAs meet the RDLs?		X	
Validation calculation checks were performed and are acceptable.	X		

Comments: MDA > RDL for samples B0D2D2 & B0D2H6

VALIDATION SUMMARY

For deficiencies (major and minor) and comments, please refer to the Qualification Summary Table.

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

HOLDING TIME SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: AM FREIER					DATE: 12-Apr-95		
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: MC WEBB					LATA NO.: VW403.31		
HEIS-SN	MATRIX CODE	ANALYSIS	DATE COLLECTED	PREP DATE	ANALYSIS DATE	PREP HT (days)	***Required HT (days)***	ANALYSIS HT (days)	***Required HT (days)***	VAL Q
B0D2D1	WATER	Total Uranium	31-Jan-95	N/A	01-Mar-95	N/A	***N/A***	29	***180***	NONE
B0D2D2	WATER	Total Uranium	31-Jan-95	N/A	01-Mar-95	N/A	***N/A***	29	***180***	NONE
B0D2G3	SOLIDS	Total Uranium	31-Jan-95	N/A	02-Mar-95	N/A	***N/A***	30	***180***	NONE
B0D2G4	SOLIDS	Total Uranium	31-Jan-95	N/A	02-Mar-95	N/A	***N/A***	30	***180***	NONE
B0D2G5	SOLIDS	Total Uranium	31-Jan-95	N/A	02-Mar-95	N/A	***N/A***	30	***180***	NONE
B0D2G8	WATER	Total Uranium	1-Feb-95	N/A	01-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2H0	SOLIDS	Total Uranium	1-Feb-95	N/A	02-Mar-95	N/A	***N/A***	29	***180***	NONE
B0D2H1	SOLIDS	Total Uranium	1-Feb-95	N/A	02-Mar-95	N/A	***N/A***	29	***180***	NONE
B0D2H2	SOLIDS	Total Uranium	1-Feb-95	N/A	02-Mar-95	N/A	***N/A***	29	***180***	NONE
B0D2H6	LIQUID	Total Uranium	2-Feb-95	N/A	01-Mar-95	N/A	***N/A***	27	***180***	NONE
B0D2H7	LIQUID	Total Uranium	2-Feb-95	N/A	01-Mar-95	N/A	***N/A***	27	***180***	NONE
B0D2J0	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2J1	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2J2	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2J3	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2J4	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2J5	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2J9	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE
B0D2K0	SOLIDS	Total Uranium	2-Feb-95	N/A	02-Mar-95	N/A	***N/A***	28	***180***	NONE

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

BLANK DATA SUMMARY

SDG:	LK3764-LAS-028		VALIDATOR: AM FREIER		DATE: 12-Apr-95	
PROJECT:	304 CONCRETION FACILITY CLOSURE		REVIEWER: MC WEBB		LATA NO.: VW403.31	
BLANK ID	ANALYTE	RESULT	LAB Q	UNITS	SAMPLES AFFECTED	VAL Q
Equipment Blank B0D2G8	Total Uranium	0.1178		µg/L	NONE	NONE
Equipment Blank B0D2D1	Total Uranium	0.207		µg/L	NONE	NONE
Equipment Blank B0D2D2	Total Uranium	0.517		µg/L	NONE	NONE
Equipment Blank B0D2H6	Total Uranium	0.794		µg/L	NONE	NONE
Equipment Blank B0D2H7	Total Uranium	0.315		µg/L	NONE	NONE

Comments:

1. Data qualification is not required based on equipment blanks, however equipment blank results are noted here to alert the data user to uncertainties in the data set during decision making processes.
2. All of the equipment blanks have detected amounts of uranium and are unacceptable.

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

ACCURACY DATA SUMMARY

SDG:	LK3764-LAS-028			VALIDATOR:	AM FREIER			DATE:	12-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE			REVIEWER:	MC WEBB			LATA NO.:	VW403.31
					PERCENT RECOVERY (%R)				
HEIS-SN	ANALYTE	RESULTS	Spiking Level	Lab Q	Matrix Spike	Tracer/ Carrier Yield	Laboratory Control Standard	SAMPLES AFFECTED	VAL Q
B0D2H0	Total Uranium	2.931	1.88		128.0%			B0D2G3 B0D2J1 B0D2G4 B0D2J2 B0D2G5 B0D2J3 B0D2H0 B0D2J4 B0D2H1 B0D2J5 B0D2H2 B0D2J9 B0D2J0 B0D2K0	J

000186

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

PRECISION DATA SUMMARY

SDG:	LK3764-LAS-028				VALIDATOR:	AM FREIER				DATE:	12-Apr-95
PROJECT:	304 CONCRETION FACILITY CLOSURE				REVIEWER:	MC WEBB				LATA NO.:	VW403.31
HEIS-SN	ANALYTE	RESULTS	LAB Q	UNITS	RDL	2 RDL	5 RDL	DUPE RPD	DUPE CRDL	SAMPLES AFFECTED	VAL Q
B0D2G8	Total Uranium	0.118		µg/L	0.1	N/A	0.5	N/A	<RDL	NONE	NONE
B0D2H0	Total Uranium	2.93		µg/g	1	N/A	5	N/A	<2xRDL	NONE	NONE

RADIOCHEMISTRY
FIELD DUPLICATE EVALUATION

LATA ID#: VW403.31		HEIS #:	B0D2J0		B0D2J1		RPD	DIF	RDL
		Date:	2-Feb-95		2-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
Total Uranium	7440-61-1	µg/g	20.1	J	13.7	J	37.6%		1

LATA ID#: VW403.31		HEIS #:	B0D2J2		B0D2J3		RPD	DIF	RDL
		Date:	2-Feb-95		2-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
Total Uranium	7440-61-1	µg/g	10.29	J	12.05	J	15.8%		1

LATA ID#: VW403.31		HEIS #:	B0D2J4		B0D2J5		RPD	DIF	RDL
		Date:	2-Feb-95		2-Feb-95				
		Matrix:	SOLIDS		SOLIDS				
			ORIGINAL		DUPLICATE				
Constituent	CAS #	Units	Results	Q	Results	Q			
Total Uranium	7440-61-1	µg/g	9.65	J	11.92	J	21.0%		1

EVALUATION:

1. Field duplicates are not evaluated for precision if both results are non-detect.
2. If sample results are >5*RDL, the RPD is used for evaluation.
3. If sample results are <5*RDL, the DIF is used for evaluation.
4. Total Uranium precision is outside the RPD criteria for B0D2J0/B0D2J1.

LATA RADIOCHEMISTRY CALCULATION SPREADSHEET

MATRIX SPIKE RECOVERY (MS)

SDG: LK3764-LAS-028 Date: 12-Apr-95

LATA No.: VW403.31 Validator: AM FREIER

Analyte	Sample ID	Spike Sample Result	Sample Result	Spike Added	%R
Total Uranium	B0D2G8	9.99	0.12	10.00	98.8%
Total Uranium	B0D2H0	5.35	2.93	1.88	128.4%

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

PERCENT RECOVERY (LCS)

SDG: LK3764-LAS-028 Date: 12-Apr-95

LATA No.: VW403.31 Validator: AM FREIER

Analyte	Batch ID	Observed value	True value	%R
Total Uranium	18896	99.07	100.00	99.1%
Total Uranium	18897	112.44	100.00	112.4%

LATA RADIOCHEMISTRY CALCULATION SPREADSHEET

RELATIVE PERCENT DIFFERENCE

SDG: LK3764-LAS-028 Date: 12-Apr-95

LATA No.: VW403.31 Validator: AM FREIER

Analyte	Sample ID	Original (Sample) concentration	Duplicate concentration	RPD
Total Uranium	B0D2G8	0.12	0.11	4.3%
Total Uranium	B0D2H0	2.93	2.92	0.3%

LATA RADIOCHEMISTRY
CALCULATION SPREADSHEET

RESULTS CALCULATION TOTAL URANIUM BY KPA

SDG: LK3764-LAS-028 Date: 12-Apr-95

LATA No.: VW403.31 Validator: AM FREIER

Analyte	Batch ID	Initial sample reading	Dilution factor	Result
Total Uranium	B0D2H6	0.16	5.00	0.79
Total Uranium	B0D2G4	2.08	1.79	3.72

LATA RADIOCHEMISTRY CALCULATION SPREADSHEET

MINIMUM DETECTABLE ACTIVITY (MDA)

SDG: LK3764-LAS-028 Date: 12-Apr-95

LATA No.: VW403.31 Validator: AM FREIER

Analyte	Sample ID	Std Dev of bkgrnd	Dilution	RDL	MDA
Total Uranium	B0D2D1	0.011	1.00	0.10	0.05
Total Uranium	B0D2H2	0.017	1.96	1.00	0.15

Laboratory Case Narratives

CASE NARRATIVE
INORGANIC METALS ANALYSES
WATER

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- Five water samples were logged in as project L3764 for total metals analysis. The samples were prepared as LAS Batch 204WH1 and analyzed for selected analytes as requested on the chain of custody. Samples BOD2G8 (L3764-1) for metals and BOD2D1 (L3764-3) for mercury were used for matrix spike and duplicate, post-digestion spike and serial dilution analyses. All data flags due to the performance of the above-mentioned QC samples are also associated with every sample digested with this batch.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The level of analytes in the method blanks were less than the reporting detection limits.

Internal Quality Control

All internal quality control were within acceptance limits.

Sample Results

- The following qualifiers are reported on the basis of the techniques employed to perform the analyses:

"P" ICP-AES
"F" GFAA
"AV" Cold Vapor AA

Nalini Prabhakar
Prepared By

03/16/95
Date

CASE NARRATIVE
INORGANIC METALS ANALYSES
SOIL

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- Fourteen soil samples were logged in as projects L3764 for total metals analysis. The samples were prepared and analyzed as Batch 204WH2 for selected analytes as requested on the chain of custody. Sample BOD2H0 (L3764-7) was used for matrix spike, duplicate, post-digestion spike and serial dilution analyses. All flags due to the performance of the above-mentioned QC sample are also associated with every sample digested with this batch.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The concentration levels of all the requested analytes in the method blank were below the reporting detection limits.

Internal Quality Control

All Internal Quality Control were within acceptance limits with the following exceptions:

- The matrix spike recovered outside the control limits for antimony and cobalt. However, the acceptable recoveries of the prep blank spike for antimony and cobalt indicate that the analytical system was operating correctly and that the out-of-control recoveries may be attributed to matrix interferences. Also a post-digestion spike was performed for antimony and cobalt and recovered well.

- For cobalt and iron, the relative percent difference between the sample and the duplicate was out of control limit of +/- 20%. All other analytes were acceptable. All cobalt and iron results are flagged with a "*".

- A duplicate precision is not reported for mercury, as the procedure does not adequately address how to report the triplicate results. At the customers request, the samples were analyzed in triplicate, all solid samples submitted for this method are reported as the mean of the three values with a +/- 2 sigma error.

Sample Results

- Due to matrix interference , the following samples were analyzed via Method of Standard Addition (MSA) for lead. The sample result is flagged with an "S".

BOD2J0 BOD2J2 BOD2J5

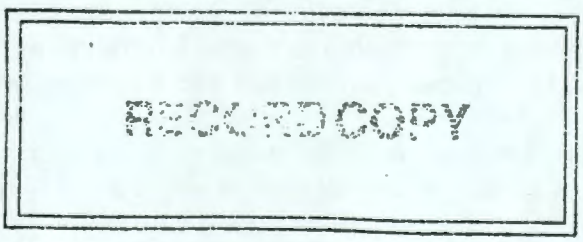
- The following qualifiers are reported on the basis of the techniques employed to perform the analyses:

"F" GFAA
"P" ICP-AES
"AV"Cold Vapor AA

The preparation log (form XIII) indicates one mercury digestion for each sample. However, as per the customers request, the samples were digested and analyzed in triplicates. Due to software field size limitation the duplicate and the triplicate sample do not show on this form. Please refer to the bench sheets for additional information.

Nalini Prabhakar — March 17, 1995

Prepared By — **Date**



ldms-007

Lockheed Analytical Services

Log-in No.: L3764
Quotation No.: Q400000
SAF: 94-402
Document File No.: 0204512
WHC Document Control No.: 151
SDG No.: LK3764
Page 6

REC

CASE NARRATIVE
ORGANIC ANALYSES

Sample Delivery Group No.: LK3764

Analytical Method 8240

The samples were analyzed in three analytical batches.

Analytical Batch 021395-8240-C2

The samples were analyzed within the required holding time on February 13 and 14, 1995. All initial and continuing calibrations were within QC criteria with the exception of 2-Chloroethylvinylether which was not detected in the initial or continuing calibrations due to instrument problems. Target compound 2-Chloroethylvinylether will be flagged with the X Qualifier to indicate that it was not calibrated in the initial calibration. Since the compound 2-Chloroethylvinylether was not detected in any of the associated samples, data quality is not adversely affected. All associated Bromofluorobenzene (BFB) analyses for the instrument performance checks (Tunes) were within QC criteria. There were no target compounds detected in the Method Blank (19318MB). Surrogate recoveries were within QC limits for all samples except samples B0D2G3 (L3764-31), B0D2G4 (L3764-32), B0D2G5 (L3764-33), and Laboratory Control Sample (19318LCS) due to matrix effect. Samples B0D2G3 (L3764-31), B0D2G4 (L3764-32), B0D2G5 (L3764-33) were reanalyzed in analytical batch 021495-8240-C1 with similar results. Both analyses results were reported in this data package. All compound recoveries were within QC limits in the Matrix Spike (19318MS), Matrix Spike Duplicate (19318MSD), and 19318LCS. The Relative Percent Differences (RPDs) between the 19318MS and 19318MSD recoveries were within QC criteria. All internal standard area counts and retention times were within method criteria. Target compounds and Tentatively Identified Compounds (TICs) were detected in sample B0D2G3 (L3764-31). TICs were also detected in samples B0D2G4 (L3764-32) and B0D2G5 (L3764-33).

Analytical Batch 021495-8240-C1

The samples were analyzed within the required holding time on February 14, 1995. All initial and continuing calibrations were within QC criteria with the exception of 2-Chloroethylvinylether which was not detected in the initial or continuing calibrations due to instrument problems. Target compound 2-Chloroethylvinylether will be flagged with the X Qualifier to indicate that it was not calibrated in the initial calibration. Since the compound 2-Chloroethylvinylether was not detected in any of the associated samples, data quality is not adversely affected. All associated Bromofluorobenzene (BFB) analyses for the instrument performance checks (Tunes) were within QC criteria. There were no target compounds

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detected in the Method Blank (19320MB). Surrogate recoveries were within QC limits for all samples except samples B0D2H1 (L3764-14), B0D2G3 (L3764-31RE), B0D2G4 (L3764-32RE), and B0D2G5 (L3764-33RE) due to matrix effect. Sample B0D2H1 (L3764-14) was reanalyzed in analytical batch 021595-8240-C1 with similar results. Both analyses results were reported in this data package. Samples B0D2G3 (L3764-31RE), B0D2G4 (L3764-32RE), and B0D2G5 (L3764-33RE) were originally analyzed in analytical batch 021395-8240-C2 with similar results. Both analyses results were reported in this data package. Refer to analytical batch 021395-8240-C2 for the associated Matrix Spike (19318MS) and Matrix Spike Duplicate (19318MSD) results. All compound recoveries were within QC limits in the Laboratory Control Sample (19320LCS). All internal standard area counts were within method criteria except for sample B0D2G5 (L3764-33RE). All retention times were within method criteria. Tentatively Identified Compounds (TICs) were detected in samples B0D2H4 (L3764-20) and B0D2H5 (L3764-21).

Analytical Batch 021595-8240-C1

The samples were analyzed within the required holding time on February 15, 1995. All initial and continuing calibrations were within QC criteria with the exception of 2-Chloroethylvinylether which was not detected in the initial or continuing calibrations due to instrument problems. Target compound 2-Chloroethylvinylether will be flagged with the X Qualifier to indicate that it was not calibrated in the initial calibration. Since the compound 2-Chloroethylvinylether was not detected in any of the associated samples, data quality is not adversely affected. All associated Bromofluorobenzene (BFB) analyses for the instrument performance checks (Tunes) were within QC criteria. The Method Blank (19322MB) contained Bromomethane and 2-Hexanone at 2.1 µg/kg and 2.9 µg/kg, respectively. All associated samples with detected Bromomethane and 2-Hexanone as in the 19322MB were flagged with the Qualifier B. Surrogate recoveries were within QC limits for all samples except samples B0D2H1 (L3764-14RE), B0D2K0 (L3764-48), and B0D2K0 (L3764-48RE) due to matrix effect. Sample B0D2H1 (L3764-14RE) was originally analyzed in analytical batch 021495-8240-C1 with similar results. Both analyses results were reported in this data package. All compound recoveries were within QC limits in the Laboratory Control Sample (19322LCS). Refer to analytical batch 021395-8240-C2 for the associated Matrix Spike (19318MS) and Matrix Spike Duplicate (19318MSD) results. All internal standard area counts and retention times were within method criteria. Target compounds were detected in several of the associated samples analyzed. Tentatively Identified Compounds (TICs) were detected in samples B0D2H2 (L3764-15) and B0D2J4 (L3764-59).

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Analytical Method 8260

The samples were analyzed in two analytical batches.

Analytical Batch 020695-8260-J2

The samples were analyzed within the required holding time on February 6 and 7, 1995. All initial and continuing calibrations and all associated Bromofluorobenzene (BFB) analyses for the instrument performance checks (Tunes) were within QC criteria. The Method Blank (18776MB) contained target compounds Acetone and Toluene at 6.1 µg/kg and 1.5 µg/kg, respectively and one Tentatively Identified Compound (TIC). All associated samples with detected compounds as in the 18776MB were flagged with the Qualifier B. Surrogate recoveries were within QC limits for all samples. All compound recoveries were within QC limits in the Laboratory Control Sample (18776LCS). Refer to analytical batch 020795-8260-J1 for the associated Matrix Spike (18776MS) and Matrix Spike Duplicate (18776MSD) results. All internal standard area counts and retention times were within method criteria. Target compounds were detected in several of the associated samples analyzed.

Analytical Batch 020795-8260-J1

The samples were analyzed within the required holding time on February 7, 1995. All initial and continuing calibrations and all associated Bromofluorobenzene (BFB) analyses for the instrument performance checks (Tunes) were within QC criteria. The Method Blank (18819MB) contained one Tentatively Identified Compound (TIC). All associated samples with a detected TIC as in the 18819MB were flagged with the Qualifier B. Surrogate recoveries were within QC limits for all samples. All compound recoveries were within QC limits in the Matrix Spike (18776MS), Matrix Spike Duplicate (18776MSD), and Laboratory Control Sample (18819LCS). The Relative Percent Differences (RPDs) between the 18776MS and 18776MSD recoveries were within QC limits for each spiked analyte. All internal standard area counts and retention times were within method criteria. Target compounds were detected in several of the associated samples analyzed and one TIC was detected in sample B0D2J0 (L3764-60).

Prepared By
Patricia Lonergan

March 19, 1995

dm 5-17-
~~DIC~~

CASE NARRATIVE
RADIOCHEMICAL ANALYSES

The routine calibration and quality control analyses performed for this batch include as applicable: instrument calibration, initial and continuing calibration verification, quench monitoring standards, instrument background analysis, method blanks, yield tracer, laboratory control samples, matrix spike samples, duplicate samples.

Holding Time Requirements

All holding time requirements were met.

Analytical Method

Total Uranium

The total uranium analysis was performed using LAL-91-SOP-0168. The samples were analyzed as three different batches - 18896, 18897, and 18901. No problems were encountered during analysis and all QC criteria were met except as noted below:

The run log entry was not made for batch 18896 and 18897; hence, the only run log provided is for batch 18901.

Batch 18897 had slightly high matrix spike recovery due to the inhomogeneity of the sample and the closeness in activity of the sample and the spiking solution.

Batch 18901 had a very low MS recovery due to the inhomogeneity of the sample and the higher amount of activity of the sample with respect to the spike.

Carrie Poniewaz
Prepared By

March 19, 1995
Date

ldms-17-011

Chain-of-Custody Information

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 008791

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: E
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B0D201	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	WATER	None	1-31-95 1 0840	500 mL aG
✓ B0D202	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	WATER	None	1 0845	500 mL aG
✓ B0D201	TOTAL URANIUM (LAL-91-0168)	/		/		WATER	NONE	1 0840	120 mL aG
✓ B0D202	TOTAL URANIUM (LAL-91-0168)	/		/		WATER	NONE	1 0845	120 mL aG

Relinquished By R.Z. Steffler	Received By	Date/Time: 2/3/95 1100	Special Lab Instructions/Conditions: cooler#: SWL-476
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	

Laboratory Section: Received By: Lalo Davis 2-4-95 9:00am Date/Time
Title: Sample Custodian 2-4-95 9:00am Date/Time

Sample Disposition: Disposed By: Date/Time Disposal Method: Date/Time

000204

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08793

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: CO
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B0D2G3	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C. R25 1-31-95	1-31-95 / 1010	500 aG
✓ B0D2G4	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C. R25 1 31 95	/ 1020	500 aG
✓ B0D2G5	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C. R25 1 31 95	/ 1035	500 aG
✓ B0D2G3	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1010	120 aG
✓ B0D2G4	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1020	120 aG
✓ B0D2G5	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1035	120 aG
✓ B0D2G3	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1010	250 aG
✓ B0D2G4	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1020	250 aG
✓ B0D2G5	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1035	250 aG
✓ B0D2G3	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1010	250 aG
✓ B0D2G4	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1020	250 aG

Relinquished By R.Z. Steffler	Received By [illegible]	Date/Time: 12/13/94 1100	
Relinquished By [illegible]	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	

Special Lab Instructions/Conditions:
cooler #: SML-476

Laboratory Section: Received By: Hank Davis 2-4-95/9:00 Date/Time Title: Sample Custodian 2-4-95/9:00 Date/Time

Sample Disposition: Disposed By: Date/Time Disposal Method: Date/Time

0002052

BOD2G3 BOD2G4 BOD2G5

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08793

Page 2

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator : RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: C
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B00265	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	1-31-95 / 1035	250 aC

Relinquished By R.Z. Steffler — Received By [signature] — Date/Time: 2/3/95 1145
Relinquished By [signature] — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____

Special Lab Instructions/Conditions:

Laboratory Section: Received By: Paul C Davis 2-4-95/9:00am Date/Time — Title: Sample Custodian 2-4-95/9:00am Date/Time

Sample Disposition: Disposed By: _____ Date/Time _____ — Disposal Method: _____ Date/Time _____

000206

Lab 5 0334 12/

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C # 008801

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator : RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: E
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

L3764

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Containe Size/Ty
✓ B002G8	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	WATER	None	2-1-95 1 0930	500 mL a
~~B~~	~~ICP Metals- TAL (6010)~~	/	RZS 2-1-95	/	~~As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)~~	~~WATER~~	~~None~~	/	~~500 mL a~~
✓ B002G8	TOTAL URANIUM (LAL-91-0168)	/		/		WATER	NONE	2-1-95 1 0930	120 mL a
~~B~~	~~TOTAL URANIUM (LAL-91-0168)~~	/	RZS 2-1-95	/		~~WATER~~	~~NONE~~	/	~~120 mL a~~

000207

Relinquished By	R.Z. Steffler	Received By	P.E. Fuhrmann	Date/Time:	2/3/95 1100
Relinquished By	P.E. Fuhrmann	Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	
Relinquished By		Received By		Date/Time:	

Special Lab Instructions/Conditions:
Cooler #: SML-476

Laboratory Section: Received By: Paul C. Dawson 2-4-95/9:00AM Date/Time Sample Custodian Title: 2-4-95/9:00AM Date/Time

Sample Disposition: Disposed By: Date/Time Disposal Method: Date/Time

0228

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08802

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: CO
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B0D2H0	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C.	2-1-95 / 1120	500 aG
✓ B0D2H1	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C.	/ 1135	500 aG
✓ B0D2H2	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C.	/ 1150	500 aG
✓ B0D2H0	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1120	120 aG
✓ B0D2H1	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1135	120 aG
✓ B0D2H2	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1150	120 aG
✓ B0D2H0	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1120	250 aGs
✓ B0D2H1	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1135	250 aGs
✓ B0D2H2	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1150	250 aGs
✓ B0D2H0	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1120	250 aGs
✓ B0D2H1	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1135	250 aGs

Relinquished By R.Z. Steffler	Received By [illegible]	Date/Time: 2/3/95 1160	
Relinquished By [illegible]	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	

Special Lab Instructions/Conditions:
cooler #: SML-476

Laboratory Section: Received By: [illegible] 2-4-95/9:00am Date/Time
Title: Sample Custodian 2-4-95/9:00am Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

802000

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08802

Page 2

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator : RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: C
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B0D2H2	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	2-1-95 11150	250 z

9508 1776

000209

Relinquished By R.Z. Steffler Received By R.E. Hendrix Date/Time: 2/1/95 1110
Relinquished By [illegible] Received By _____ Date/Time: _____
Relinquished By _____ Received By _____ Date/Time: _____
Relinquished By _____ Received By _____ Date/Time: _____
Relinquished By _____ Received By _____ Date/Time: _____

Special Lab Instructions/Conditions:

Laboratory Section: Received By: Paul C. Davis 2-4-95/9:00am Date/Time Title: Sample Custodian 2-4-95/9:00am Date/Time

Sample Disposition: Disposed By: _____ Date/Time _____ Disposal Method: _____ Date/Time _____

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08802

Page 3

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: C
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ BOD2H3	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	2-1-95 / 1120	250 aG
✓ BOD2H4	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1135	250 aG
✓ BOD2H5	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1150	250 aG
✓ BOD2H3	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1120	250 aG
✓ BOD2H4	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1135	250 aG
✓ BOD2H5	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1150	250 aG

Relinquished By R.Z. Steffler	Received By P.E. Brickhouse	Date/Time: 2/3/95 1500	Special Lab Instructions/Conditions:
Relinquished By P.E. Brickhouse	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	

Laboratory Section: Received By: Paul C Davis 2-4-95/9:00 am Date/Time
Title: Sample Custodian 2-4-95/9:00 am Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

00210

Lockheed 0332

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08815

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: CO
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B002J0	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C. RZS 2-2-95	2-2-95 / 1020	500 aG
✓ B002J2	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C. 2-2-95	/ 1030	500 aG
✓ B002J4	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3~~/ 4 DEG C. RZS 2-2-95	/ 1045	500 aG
✓ B002J0	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1020	120 aG
✓ B002J2	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1030	120 aG
✓ B002J4	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/	120 aG
✓ B002J0	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C	/ 1020	250 aG
✓ B002J2	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1030	250 aG
✓ B002J4	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	/ 1045	250 aG
✓ B002J0	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1020	250 aG
✓ B002J2	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	/ 1030	250 aG

Relinquished By R.Z. Steffler	Received By	Date/Time: 2-3-95 1100	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	
Relinquished By	Received By	Date/Time:	

Special Lab Instructions/Conditions:
COOLER #: SML-156

Laboratory Section: Received By: Paul C Davis 2-4-95/9:00am Date/Time
Title: Sample Custodian 2-4-95/9:00am Date/Time

Sample Disposition: Disposed By: Date/Time
Disposal Method: Date/Time

000211

Lab 5-17

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08815

Page 2

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: C
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B002J4	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	2-2-95 / 1045	250 aG
✓ B00D2H6	ICP Metals - TAL (6010)	/		/	As (7060), Pb (7421), Se (7740), Tl (7841), Hg (7471)	Liquid	None	2-2-95 / 0810	50 mL
B00D2H6	Total Uranium (LAL-91-C-168)	/		/		Liquid	None	2-2-95	250 mL
B00D2H7	ICP Metals - TAL (6010)	/		/	As (7060), Pb (7421), Se (7740), Tl (7841), Hg (7471)	Liquid	None	2-2-95 / 0815	50 mL
B00D2H7	Total Uranium (LAL-91-0168)	/		/		Liquid	None	2-2-95 / 0815	250 mL

Relinquished By: R.Z. Steffler — Received By: V.E. Hoffman — Date/Time: 2-3-95 1100
Relinquished By: V.E. Hoffman — Received By: — Date/Time:
Relinquished By: — Received By: — Date/Time:
Relinquished By: — Received By: — Date/Time:
Relinquished By: — Received By: — Date/Time:

Special Lab Instructions/Conditions:

Laboratory Section: Received By: Paul C. Davis 2-4-95/9:00am Date/Time — Title: Sample Custodian 2-4-95/9:00am Date/Time

Sample Disposition: Disposed By: — Date/Time — Disposal Method: — Date/Time

212000

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08815

Page 3

SAF #: 94-402
Date: 12/13/94

Custody Form Initiator : RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: CO
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B002J1	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3/4 DEG C.~~ RZS 2-2-95	2-2-95 / 1020	500 aG
✓ B002J3	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3/4 DEG C.~~ RZS 2-2-95	/ 1030	500 aG
✓ B002J5	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3/4 DEG C.~~ RZS 2-2-95	/ 1045	500 aG
✓ B002J1	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1020	120 aG
✓ B002J3	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1030	120 aG
✓ B002J5	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	/ 1045	120 aG

000213

Relinquished By	R.Z. Steffler	Received By		Date/Time: 12-3-95 1100
Relinquished By		Received By		Date/Time:
Relinquished By		Received By		Date/Time:
Relinquished By		Received By		Date/Time:
Relinquished By		Received By		Date/Time:

Special Lab Instructions/Conditions:

Laboratory Section: Received By: Paul C. Davis 12-4-95 Date/Time 0900 Title: Sample Custodian 12-4-95 Date/Time 0900

Sample Disposition: Disposed By: Date/Time Disposal Method: Date/Time

A-6001-500 (11/94)

Westinghouse Hanford Company

Chain of Custody / Sample Analysis Request

C-O-C #: 08813

SAF #: 94-402
Date: 12/13/94
Custody Form Initiator: RZ STEFFLER

Project Designation: 304 CONCRETION FACILITY
Sampling Location: CO
Company Contact: HENDRIX, MICHELLE Phone: (509) 372-0550
Customer Contact: WRIGHT, J.L. Phone: (509)

Laboratory: Lockheed
Protocol: RCRA

Sample Id	Analysis	/	Analysis Parameters	/	Sub Analysis	Matrix	Preservative	Sample Date / Time	Container Size/Type
✓ B002J9	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3/ 4 DEG C.~~ RZS 2-2-95	2-2-95 / 1230	500 a
✓ B002K0	ICP Metals- TAL (6010)	/		/	As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)	SOLIDS	~~HNO3/ 4 DEG C.~~ RZS 2-2-95	2-2-95 / 1240	500 a
~~B~~	~~ICP Metals- TAL (6010)~~	~~/~~	~~RZS 2-2-95~~	~~/~~	~~As(7060), Pb(7421), Se(7740), Tl(7841), Hg(7471)~~	~~SOLIDS~~	~~HNO3/ 4 DEG C.~~	~~/~~	~~500 a~~
✓ B002J9	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	2-2-95 / 1230	120 a
✓ B002K0	TOTAL URANIUM (LAL-91-0168)	/		/		SOLIDS	NONE	2-2-95 / 1240	120 a
~~B~~	~~TOTAL URANIUM (LAL-91-0168)~~	~~/~~	~~RZS 2-2-95~~	~~/~~		~~SOLIDS~~	~~NONE~~	~~/~~	~~120 a~~
✓ B002J9	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	2-2-95 / 1230	250
✓ B002K0	VOA (SW-846 8240)	/		/	ethyl acetate, methl ethyl ketone, (2-butanone)	SOLIDS	Cool to 4 Deg. C.	2-2-95 / 1240	250 a
~~B~~	~~VOA (SW-846 8240)~~	~~/~~	~~RZS 2-2-95~~	~~/~~	~~ethyl acetate, methl ethyl ketone, (2-butanone)~~	~~SOLIDS~~	~~Cool to 4 Deg. C.~~	~~/~~	~~250 a~~
✓ B002J9	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	2-2-95 / 1230	250 a
✓ B002K0	VOA (SW-846 8260)	/		/		SOLIDS	Cool to 4°C	2-2-95 / 1240	250 a

Relinquished By R.Z. Steffler — Received By E Richards — Date/Time: 2-3-95 12:00
Relinquished By E Richards — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____
Relinquished By _____ — Received By _____ — Date/Time: _____

Special Lab Instructions/Conditions: per RZS 2-3
COOLER #: ~~SML-150~~ SML-516

Laboratory Section: Received By: Paula Davis 2-4-95/9:00 — Date/Time
Title: Sample Custodian 2-4-95/9:00 — Date/Time

Sample Disposition: Disposed By: _____ — Date/Time
Disposal Method: _____ — Date/Time

0002147

SML-516

SAMPLE STATUS REPORT FOR N 4674, RAD SCREEN BOD2D1 TIME: 2/ 1/95 8: 9
DISPATCHED: 1/31/95 12:57 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 1/95 8: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

AMPLE STATUS REPORT FOR N 4675. RAD SCREEN BOD2D2 TIME: 2/ 1/95 8:23
DISPATCHED: 1/31/95 12:57 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 1/95 8: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000216

Chk 5-17-95
042

SAMPLE STATUS REPORT FOR: N 4677. RAD SCREEN BOD2G3 TIME: 2/ 1/95 8:10
DISPATCHED: 1/31/95 12:57 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 1/95 8: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000217

05

005

222 S COUNTING ROOM 08:22 02/01/95

SAMPLE STATUS REPORT FOR N 4678. RAD SCREEN BOD2G4 TIME: 2/ 1/95 8:10
DISPATCHED: 1/31/95 12:57 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 1/95 8: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000218

052

SAMPLE STATUS REPORT FOR IN 4679, RAD SCREEN BOD2G5 TIME: 2/ 1/95 8:10
DISPATCHED: 1/31/95 12:57 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 1/95 8: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000219

051

02/01/95 08:22 222 S COUNTING ROOM 007

SAMPLE STATUS REPORT FOR N 4708. RAD SCREEN BOD2G8 TIME: 2/ 2/95 7:5
DISPATCHED: 2/ 1/95 13:52 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 2/95 7:50

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

Jan 5-17-9

000220 044

02045

SAMPLE STATUS REPORT FOR N 4709. RAD SCREEN BOD2H0 TIME: 2/ 2/95 7:57
DISPATCHED: 2/ 1/95 13:52 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 2/95 7:51

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

Ldw-5-17-95
047

02045

AMPLE STATUS REPORT FOR N 4710. RAD SCREEN BOD2H1 TIME: 2/ 2/95 8:2
DISPATCHED: 2/ 1/95 13:52 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 2/95 7:51

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000222

Lan 5-17-9
046
0304

SAMPLE STATUS REPORT FOR N 4711. RAD SCREEN BOD2H2 TIME: 2/ 2/95 7:5
DISPATCHED: 2/ 1/95 13:53 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 2/ 2/95 7:51

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGI CODE
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

B002H3

SAMPLE STATUS REPORT FOR N 796. RAD SCREEN ~~S4043~~ TIME: 6/20/94 8:
DISPATCHED: 6/17/94 13:28 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 6/20/94 7:59

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARG CODE
****	********	**********	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	J12UP

END OF REPORT

000224

9513357.1784

B002H4

SAMPLE STATUS REPORT FOR N 796. RAD SCREEN ~~S4043~~ TIME: 6/20/94 8:
DISPATCHED: 6/17/94 13:28 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 6/20/94 7:59

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANs?	CHARG CODI
****	********	**********	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	J12UI

END OF REPORT

000225

Ldn 5-17-9
049
0204

B0D2H5

SAMPLE STATUS REPORT FOR N 796. RAD SCREEN ~~94043~~ 12 TIME: 6/20/94 8:
DISPATCHED: 6/17/94 13:28 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 6/20/94 7:59

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARG CODE
****	********	**********	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	J12UP

END OF REPORT

ldm 5-17-4
~~05C~~

000226

~~020451~~

AMPLE STATUS REPORT FOR N 4714. RAD SCREEN BOD2H6 TIME: 2/ 3/95 10:
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE
RECEIVED: 2/ 3/95 7:56

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

AMPLE STATUS REPORT FOR N 4715. RAD SCREEN BOD2H7 TIME: 2/ 3/95 10:2
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 3/95 7:56

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000228

Vdm5-1
D6C

0204J

AMPLE STATUS REPORT FOR N 4717. RAD SCREEN BOD2J0 TIME: 2/ 3/95 10:2
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 3/95 7:56

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

000229

AMPLE STATUS REPORT FOR N 4718. RAD SCREEN BOD2J2 TIME: 2/ 3/95 10:2
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 3/95 7:56

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

LDW5-174
06

000230

02645

AMPLE STATUS REPORT FOR N 4719. RAD SCREEN BOD2J4 TIME: 2/ 3/95 10:2
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 3/95 7:56

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

PRE

AMPLE STATUS REPORT FOR N 4721. RAD SCREEN BOD2J9 TIME: 2/ 3/95 10:2
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 3/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

Ldm5-17
~~061~~

000232

~~030451~~

9513357.1788

AMPLE STATUS REPORT FOR N 4722. RAD SCREEN BOD2K0 TIME: 2/ 3/95 10:2
DISPATCHED: 2/ 2/95 14:27 SAMPLE HAS NOT BEEN SLURPED PAGE 1
RECEIVED: 2/ 3/95 7:57

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	K34FF

END OF REPORT

Ldm 5-17-95

000233

Supplemental Information

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST

INFORMATION REQUEST FORM (IRF)

To: Jeanette Duncan, WHC/BHI **Date:** 4/12/95

Primary FAX: 372-2106 **Secondary FAX: 372-1616**

PROJECT NAME:	304 CONCRETION FACILITY CLOSURE
SDG NUMBER:	LK3764-LAS-028
LATA NO.:	VW403.31
LABORATORY:	LAS
CASE NUMBER:	N/A
ANALYSIS METHOD:	Total Uranium
ANALYSIS DATE:	3/1/95
ITEM(S) MISSING:	Accurate value used in calculation of MDC/MDA for
	batch # 18896.

Comments: According to the attached pages two different values are given for the MDA for batch # 18896. Which one is correct?

RETURN TO LATA

Attention: AM FREIER

4-12-95

INFORMATION RECEIVED FROM WHC (INITIALS/DATE): _____

INFORMATION ACCEPTABLE?: YES ☐ NO ☐

If NO is checked, send a new LIRF to request additional information.

Lockheed Analytical Laboratory

Uranium Total by KPA (0168)

U TOTAL KPA LAL-0168_18896

LALID	Count Date	Nuclide	Final Activity	Total Error	MDA	Count Error	Aliqout	Dilution Factor
					0.049			
18896DUP1	03/01/95	Uranium	0.113	0.011	0.049	0.010	10	1
18896LCS1	03/01/95	Uranium	99.074	6.693	0.494	4.501	1	10
18896MBB1	03/01/95	Uranium	0.000	0.025	0.049	0.000	1	1
18896MS1	03/01/95	Uranium	9.993	0.677	0.049	0.457	10	1
L3764-2	03/01/95	Uranium	0.118	0.009	0.049	0.007	10	1
L3764-5	03/01/95	Uranium	0.207	0.012	0.049	0.007	10	1
L3764-6	03/01/95	Uranium	0.517	0.034	0.148	0.022	10	3
L3764-64	03/01/95	Uranium	0.794	0.050	0.247	0.030	10	5
L3764-66	03/01/95	Uranium	0.315	0.019	0.049	0.010	10	1

LCS Recovery = 99.1/100.0 = 99.1%. MS1 Recovery = 9.875/10.000 = 98.8%. SMP1,DUP1 RER = 0.21

Control Chart Worksheet
Method Blank
U-KPA

Date	Batch #	MBB (ug)	1 STDEV	MDC (ug/L)
2/15/95	16818392	0	0.025	0.117
2/15/95	16818394	0	0.025	0.115
2/16/95	16818395	0	0.025	0.115
2/21/95	16818620	0	0.025	0.115
2/22/95	16818604	0	0.025	0.115
2/24/95	16819579	0	0.025	0.115
2/28/95	16818607	0	0.018	0.086
2/28/95	16818899	0	0.011	0.049
3/1/95	16819728	0	0.011	0.049
3/1/95	16818608	0	0.011	0.049
3/1/95	16818609	0	0.011	0.049
3/1/95	16819816	0.06	0.017	0.078
3/2/95	16818896	0	0.017	0.078
3/2/95	16818897	0	0.017	0.078
3/4/95	16819611	0	0.017	0.078
3/7/95	16819130	0	0.017	0.078
3/8/95	16818897	0	0.017	0.078
3/8/95	16819760	0	0.017	0.078
3/9/95	16819133	0	0.013	0.062
3/9/95	16818901	0	0.013	0.062

STDEV = Standard deviation of last 20 MBB's. MDC = 4.65 * STDEV.

LDW 5. 28

VW403.31

Hanford Environmental Restoration Team
(BHI, CH2M HILL, IT, TMA)
345 Hills, H4-23
Richland, Washington 99352

Commercial FAX Number: (509) 372-2106

Company Name: LATA

Contact Name: AM Freier

FAX Number: 943-9903 | Telephone Number: 943-0244

Sender: Pat Reich

Comments:

Attached is Michelle Hendrix's response to your Information Request of 4/12/95 on Package LK3764-LAS-028.

Thank You
Pat Reich

Number of Pages (Including Coversheet: 3

Date Sent: 4-19-95

If there are any problems with this transmission, please call sending party on (509) 372-2547.

9513357.1791

DATA VALIDATION CHECKLIST

INFORMATION REQUEST FORM (IRF)

To: Jeanette Duncan, WHC/BHI Date: 4/12/95

Primary FAX 372-2106 Secondary FAX 372-1616

PROJECT NAME:	304 CONCRETION FACILITY CLOSURE
SDG NUMBER:	LK3764-LAS-028
LATA NO.:	VW403.31
LABORATORY:	LAS
CASE NUMBER:	N/A
ANALYSIS METHOD:	Total Uranium
ANALYSIS DATE:	3/1/95
ITEM(S) MISSING:	Accurate value used in calculation of MDC/MDA for
	batch # 18896.

Comments: According to the attached pages two different values are given for the MDA for batch # 18896. Which one is correct?

RETURN TO LATA

Attention: AM FREIER 4-12-95

INFORMATION RECEIVED FROM WHC (INITIALS/DATE): _____

INFORMATION ACCEPTABLE?: YES ☐ NO ☐

If NO is checked, send a new LIRF to request additional information.

DON'T SAY IT --- *Write It!*

DATE: April 18, 1995

TO: LATA

FROM: Michelle Hendrix H4-23
Telephone: 372-0550

cc: Jim McCabe H4-23
Jeanette Duncan H4-23

SUBJECT: Accurate Value Used in Calculation of MDC/MDA for batch #18896

The correct value used in calculation of MDA/MDC for Total Uranium is 0.049 for batch # 18896 as indicated on page 36 of the data package. Page 38 is incorrect. This page indicates that batch # 18896 was analyzed on 3/2/95 and therefore would be associated with a different MDC (0.078). The batch was actually analyzed on 3/1/95 so 0.049 is the correct value. Page 38 cannot be corrected in a timely fashion due to a software reporting problem. Proceed with the validation using 0.049 in the calculations.

04/25/95 10:28 ☎509 3721546 001

Post-it™ brand Fax Transmittal Memo 7671 9513357 1292

To JANET Johns
Company LATA
Location
Fax #
Telephone #
Comments

No. of Pages
Today's Date
Time
From Jim McCabe
Company
Location
Dept. Charge
Fax #
Telephone #
Original Disposition: ☐ Destroy ☐ Return ☐ Call for pickup

this is the original "LIRF" & what Michelle gave me today.

Jim

LATA RADIOCHEMISTRY
DATA VALIDATION CHECKLIST 12950011

INFORMATION REQUEST FORM (IRF)

To: Jeanette Duncan, WHC/BHI Date: 4/12/95

Printed/Typed Name Signature/FAX/Telephone

PROJECT NAME:	304 CONCRETION FACILITY CLOSURE
SDG NUMBER:	LK3764-LAS-028
LATA NO.:	VW403.31
LABORATORY:	LAS
CASE NUMBER:	N/A
ANALYSIS METHOD:	Total Uranium
ANALYSIS DATE:	3/1/95
ITEM(S) MISSING:	Accurate value used in calculation of MDC/MDA for batch # 18696.

Comments: According to the attached pages two different values are given for the MDA for batch # 18696. Which one is correct?

RETURN TO LATA

Attention: AM FREIER 4-12-95

INFORMATION RECEIVED FROM WHC (INITIALS/DATE): _____

INFORMATION ACCEPTABLE?: YES ☐ NO ☐

If NO is checked, send a new LIRF to request additional information.

PNO-DVF-015, R2

40331RAD.XLS, LIRF-1
4/11/95, 1:06 PM

APR-12-95 WED 13:04 LATA - RAD P.02

000241

Lockheed
Environmental Systems & Technologies Co.

Lockheed Analytical Services
975 Kelly Johnson Drive
Las Vegas, Nevada 89119-3705

Phone: (702) 361-0220
Phone: (800) 582-7606
Fax: (702) 361-8146

April 19, 1995

Ms. Michelle Hendrix
Westinghouse Hanford Co.
345 Hills
Richland, WA 99352

Dear Ms. Hendrix:

This letter is intended to clarify your question on the apparent discrepancy between the reported MDA values in QC batch #18896 for the total uranium analysis by KPA.

It is LAS routine procedure to determine the MDA value by using the standard deviation of the most recent 20 method blank results:

MDA = 4.65 x Standard-deviation-of-last-20-MBB's

The MDA value pulled into each worksheet is the MDA value at the beginning of each day. For example, in this case the MDA at the beginning of March 1, 1995 was 0.049 ug/L. This value was loaded into our software at the beginning of the day. During the day we had some uranium in a method blank of another QC batch, so the MDA increased to 0.078 ug/L. This is reflected in the control chart information, where the software updates the MDA as each method blank is entered, rather than at the beginning of each day. This difference between the software packages results in the discrepancy between the MDA value reported on the control chart and the MDA reported on the batch results sheet.

We hope you find that our response is sufficient to clarify your question on the differing MDA values. If you require any additional information, please do not hesitate to call me at (702) 361-0220 Ext. 289 or Ms. Kathleen Hall at (509) 943-4423.

Sincerely,

James Jordan
Client Services Representative

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

INFORMATION REQUEST FORM (IRF)

To: Jeanette Duncan, WHC/BHI Date: 4/25/95

Primary FAX: 372-2106 Secondary FAX: 372-1616

PROJECT NAME:	304 CONCRETION FACILITY CLOSURE
SDG NUMBER:	LK3764-LAS-028
LATA NO.:	VW403.31
LABORATORY:	LAS
CASE NUMBER:	N/A
ANALYSIS METHOD:	Mercury
ANALYSIS DATE:	2/22/95
ITEM(S) MISSING:	

Comments: Analysis date is 2-22-95; Preparation date is 2-23-95.

Please explain discrepancy.

RETURN TO LATA

Attention: MC WEBB

4-25-95

INFORMATION RECEIVED FROM WHC (INITIALS/DATE): _____

INFORMATION ACCEPTABLE?: YES ☐ NO ☐

If NO is checked, send a new LIRF to request additional information.

LATA INORGANIC (METALS)
CALCULATION SPREADSHEET

INFORMATION REQUEST FORM (IRF)

To: Jeanetta Duncan, WHC/BHI Date: 4/25/95

Primary FAX: 372-2106 Secondary FAX: 372-1510

PROJECT NAME:	304 CONCRETION FACILITY CLOSURE
SDG NUMBER:	LK3764-LAS-028
LATA NO.:	VW403.31
LABORATORY:	LAS
CASE NUMBER:	N/A
ANALYSIS METHOD:	Mercury
ANALYSIS DATE:	2/22/95
ITEM(S) MISSING:	

Comments: Analysis date is 2-22-95; Preparation date is 2-23-95.
Please explain discrepancy.

RETURN TO LATA

Attention: MC WEBB

4.25.95

INFORMATION RECEIVED FROM WHC (INITIALS/DATE): MW 5-8-95

INFORMATION ACCEPTABLE?: YES ☒ NO ☐

If NO is checked, send a new LIRF to request additional information.

Post-it® Fax Note 7671	Date 5-9-95	# of pages ▶ 1
To Jeanette Duncan	From Marsha Webb	
Co./Dept.	Co.	
Phone # 372-3395	Phone # 943-0244	
Fax # 372-2106	Fax #	

XLS, LIRF-1
8:52 AM

APR-25-95 TUE 9:54 LATA -

951335.FAX

Lockheed Analytical Services

1955 Jadwin Suite #360
Richland. WA 99352
(509) 943-4423
FAX (509) 943-4218

FAX TRANSMISSION COVER SHEET

Date: 4,27,95

To: Michelle Hendrix

FAX: 372-1614

Subject: LK3764 Hg analysis

Sender: KATHLEEN M. HALL

YOU SHOULD RECEIVE 7 **PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL (509) 943-4423**

Here are corrected data sheets. The prep date was entered into the database incorrectly. I'll follow with hard copies.

CLP

13
PREPARATION LOG

Lab Name: LOCKHEED_ANALYTICAL_SVC__ Contract: HANFORD_____

Lab Code: LOCK__ Case No.: 94-402__ SAS No.: _____ SDG No.: LK3764S_

Method: AV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
BOD2H0S	02/22/95	0.22	100
BOD2G3	02/22/95	0.24	100
BOD2G4	02/22/95	0.20	100
DOD2G5	02/22/95	0.20	100
BOD2H0	02/22/95	0.20	100
BOD2H0D	02/22/95	0.22	100
BOD2H1	02/22/95	0.22	100
BOD2H2	02/22/95	0.20	100
BOD2J0	02/22/95	0.20	100
BOD2J1	02/22/95	0.21	100
BOD2J2	02/22/95	0.22	100
BOD2J3	02/22/95	0.26	100
BOD2J4	02/22/95	0.27	100
BOD2J5	02/22/95	0.23	100
BOD2J9	02/22/95	0.22	100
BOD2K0	02/22/95	0.20	100
LCSS	02/22/95	0.20	100
LCSW	02/22/95		100
PBS	02/22/95	0.20	100

FORM XIII - TN ILM03.0

Hg
6010

LOCKHEED ANALYTICAL SERVICES / DIGESTION BENCH SHEET FOR SOIL SAMPLES / 9010

WORKSHEET NUMBER: 7471 MERCURY_19270

PWO : LAL | DATE ASSIGNED : 15-FEB-95 | SUPERVISOR'S INITIALS : AC
ACCOUNT NAME : Westinghouse Hanford C | DATE DUE : 4/24/95 | ASSIGNED ANALYST :
LAL BATCH NO. : 204-WHC | DATE COMPLETED : 2-23-95 | ANALYST SIGNATURE : M Anderson

MATRIX : SOIL | CAL STD STOCK SOLN (ID: 95046A CONC: 1ppm) | LCS SOURCE: # 822
DIGESTION TYPE : 7471 MERCURY | ICV STOCK SOLN (ID: 94333A CONC: 1ppm) | SPIKE SOURCE: 95046A
WATER BATH TEMP : 95C | HOLDING TIME EXPIRES: 2/28

NO	QC	LAL ID	CLIENT ID		SAMPLE WEIGHT (G)	ADJSTD SAM VOL (mL)	SPIKE VOLUME (mL)	REAGENT VOLUME (mL)	SAMPLE DESCRIPTION COLOR INITIAL	COLOR FINAL	SOLID TEXTURE	ARTIFACTS	COMMENTS (ARTIFACT DESC)
		STANDARD 1				100	0.000	50					0.0 PPB CAL STD
		STANDARD 2				100	0.0500	50					0.5 PPB CAL STD
		STANDARD 3				100	0.100	50					1.0 PPB CAL STD
		STANDARD 4				100	0.300	50					5.0 PPB CAL STD
		STANDARD 5				100	1.000	50					10.0 PPB CAL STD
		ICV				100	0.200	50					2.0 PPB CAL STD
1	DUP	T92700UP1	L3764-7		0.20	100		50	Brown	Colorless	M		
2	DUP	T92700UP2	L3764-7		0.20								
3	DUP	T92700UP3	L3764-8		0.21								
4	DUP	T92700UP4	L3764-8		0.21								
5	DUP	T92700UP5	L3764-9		0.20								
6	DUP	T92700UP6	L3764-9		0.20								
7	DUP	T92700UP7	L3764-25		0.21								
8	DUP	T92700UP8	L3764-25		0.23								
9	DUP	T92700UP9	L3764-26		0.20								
10	DUP	T92700UP10	L3764-26		0.20								
11	DUP	T92700UP11	L3764-27		0.20								
12	DUP	T92700UP12	L3764-27		0.21								
13	DUP	T92700UP13	L3764-43		0.21								
14	DUP	T92700UP14	L3764-43		0.22								
15	DUP	T92700UP15	L3764-44		0.20								
16	DUP	T92700UP16	L3764-44		0.22								
17	DUP	T92700UP17	L3764-51		0.21								
18	DUP	T92700UP18	L3764-51		0.25								
19	DUP	T92700UP19	L3764-52		0.21								
20	DUP	T92700UP20	L3764-52		0.25								
21	DUP	T92700UP21	L3764-53		0.22								
22	DUP	T92700UP22	L3764-53		0.23								
23	DUP	T92700UP23	L3764-67		0.20								

COLOR CODES: BLACK, BROWN, BLUE, COLORLESS, GREY, GREEN, ORANGE, RED, VIOLET, WHITE, YELLOW
TEXTURE: FINE (FLOURY), MEDIUM (SANDY), COARSE (LARGE CRYSTALS OR ROCK)

CONT. ON PAGE 2

SPIKE SOURCE AND VOLUME VERIFIED BY: CA DATE: 2/28/95

DIGESTION REQUIRED ? YES: NO: IF YES, WHY ?

526

Hg
SOIL

LOCKHEED ANALYTICAL SERVICES / DIGESTION BENCH SHEET FOR SOIL SAMPLES / 8810I

WORKSHEET NUMBER: 7471 MERCURY_10370

PUO : L&L | DATE ASSIGNED : 15-FEB-95 | SUPERVISOR'S INITIALS : RC
ACCOUNT NAME : Westinghouse Hanford C | DATE DUE : 11MAR95 | ASSIGNED ANALYST :
L&L BATCH NO. : 204-WH2 | DATE COMPLETED : | ANALYST SIGNATURE :

MATRIX : SOIL | CAL STD STOCK SOLN (ID:_____ CONC:_____) | LCS SOURCE:_____
DIGESTION TYPE : 7471 MERCURY | ICV STOCK SOLN (ID:_____ CONC:_____) | SPIKE SOURCE:_____
WATER BATH TEMP : _____ | HOLDING TIME EXPIRES: 2/28

NO	QC	L&L ID	CLIENT ID		SAMPLE WEIGHT (G)	ADJSTD SAM VOL (mL)	SPIKE VOLUME (mL)	REAGENT VOLUME (mL)	SAMPLE DESCRIPTION COLOR INITIAL	COLOR FINAL	SOLID TEXTURE	ARTIFACTS	COMMENTS (ARTIFACT DESC)
		STANDARD 1				100	0.000	50					0.0 PPB CAL STD
		STANDARD 2				100	0.0500	50					0.5 PPB CAL STD
		STANDARD 3				100	0.100	50					1.0 PPB CAL STD
		STANDARD 4				100	0.500	50					5.0 PPB CAL STD
		STANDARD 5				100	1.000	50					10.0 PPB CAL STD
		ICV				100	0.200	50					2.0 PPB CAL STD
24	DUP	19270DUP24	L3764-67		0.22				Brown		M		
25	DUP	19270DUP25	L3764-68		0.27								
26	DUP	19270DUP26	L3764-68		0.23								
27	DUP	19270DUP27	L3764-69		0.23								
28	DUP	19270DUP28	L3764-69		0.21								
29	LCS	19270LCSS	LCSS204WH2		0.20						F		
30	LCS	19270LCSW	LCSW204WH2				0.1						
31	MB	19270MB	PBS204WH2						F				
32	MS	19270MS	L3764-7		0.22		0.1		Brown		M		
33	*	L3764-7	B002M8		0.20								
34		L3764-8	B002R1		0.22				Brown				
35		L3764-9	B002R2		0.20								
36		L3764-25	B002Q3		0.24				Brown		M	Lg/wood	
37		L3764-26	B002Q4		0.80								
38		L3764-27	B002Q5		0.20								
39		L3764-43	B002J9		0.22								
40		L3764-44	B002K0		0.20								
41		L3764-51	B002J0		0.20								
42		L3764-52	B002J2		0.212								
43		L3764-53	B002J4		0.257								
44		L3764-67	B002J1		0.21								
45		L3764-68	B002J3		0.26								
46		L3764-69	B002J5		0.23								

COLOR CODES: BLACK, BROWN, BLUE, COLORLESS, GREY, GREEN, ORANGE, RED, VIOLET, WHITE, YELLOW
TEXTURE: FINE (POWDERY), MEDIUM (SANDY), COARSE (LARGE CRYSTALS OR ROCKS)

SPIKE SOURCE AND VOLUME VERIFIED BY:_____ DATE:_____

REDIGESTION REQUIRED ? YES:___ NO:___ IF YES, WHY ?_____

527

000248

Lockheed Analytical Services
Analysis Tracking Sheet

7471 MERCURY_19270

Account Name: 969 WESTINGHOUSE
LAL Batch No. 204-wb2

Date Assigned: 2/10/95
Date Due: 3/11/95
Date Completed:

Supervisor's Initials: BC
Assigned Analyst:
Analyst Signature:

Matrix: Soil
Total no. of samples in this workgroup: 46 (includes QC samples)
Product: 7471 MERCURY
No. of pages: 2
Spec Instructions: HT EXP 3/28

No.	QC	LAL ID	CLIENT ID	Hg
1	DUP	19270DUP1	L3764-7	1
2	DUP	19270DUP10	L3764-20	1
3	DUP	19270DUP11	L3764-27	1
4	DUP	19270DUP12	L3764-37	1
5	DUP	19270DUP13	L3764-43	1
6	DUP	19270DUP14	L3764-43	1
7	DUP	19270DUP15	L3764-44	1
8	DUP	19270DUP16	L3764-44	1
9	DUP	19270DUP17	L3764-51	1
10	DUP	19270DUP18	L3764-51	1
11	DUP	19270DUP19	L3764-52	1
12	DUP	19270DUP2	L3764-7	1
13	DUP	19270DUP20	L3764-52	1
14	DUP	19270DUP21	L3764-53	1
15	DUP	19270DUP22	L3764-53	1
16	DUP	19270DUP23	L3764-57	1
17	DUP	19270DUP24	L3764-57	1
18	DUP	19270DUP25	L3764-58	1
19	DUP	19270DUP26	L3764-58	1
20	DUP	19270DUP27	L3764-59	1
21	DUP	19270DUP28	L3764-59	1
22	DUP	19270DUP3	L3764-8	1
23	DUP	19270DUP4	L3764-8	1
24	DUP	19270DUP5	L3764-9	1
25	DUP	19270DUP6	L3764-9	1
26	DUP	19270DUP7	L3764-25	1
27	DUP	19270DUP8	L3764-26	1
28	DUP	19270DUP9	L3764-26	1
29	LCS	19270LCSS	LCSS204WH2	1
30	LCS	19270LCSW	LCSW204WH2	1

528

000249

Lockheed Analytical Services
Analysis Tracking Sheet
7471 MERCURY 19270

Account Name: [illegible] WESTINGHOUSE
LAL Batch No. 204-with 2

Date Assigned: 2/10/95
Date Due: 3/11/95
Date Completed: 2-22-95 on 2/21/95

Supervisor's Initials: DC
Assigned Analyst:
Analyst Signature:

Matrix: Soil
Total no. of samples in this workgroup: 46 (includes QC samples)
Product: 7471 MERCURY
No. of pages: 3
Spec instructions: HT EXP 2/28

No.	QC	LAL ID	CLIENT ID	Hg
31	MS	19270M5	PB6284WH2	1
32	MS	19270M6	L3764-7	1
33		L3764-7	B0D2H5	1
34		L3764-6	B0D8H1	1
35		L3764-5	B0D2H2	1
36		L3764-26	B0D2G3	1
37		L3764-28	B0D2G4	1
38		L3764-27	B0D2G5	1
39		L3764-43	B0D2J9	1
40		L3764-44	B0D2K0	1
41		L3764-51	B0D2J0	1
42		L3764-52	B0D2J2	1
43		L3764-53	B0D2J4	1
44		L3764-57	B0D2J1	1
45		L3764-56	B0D2J3	1
46		L3764-58	B0D2J5	1

529

000250

9513357.1197

WORK GROUP REPORT (WKQZ)

Feb 15 1995, 03:30 pm

Work Group: 7471 MERCURY_19270 for Department: 9 Metal Prep.

Created: 15-FEB-95 Due: 11-MAR-95 Operator:

19270DUP1	DUP		L3764-7	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP10	DUP		L3764-26	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP11	DUP		L3764-27	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP12	DUP		L3764-27	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP13	DUP		L3764-43	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP14	DUP		L3764-43	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP15	DUP		L3764-44	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP16	DUP		L3764-44	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP17	DUP		L3764-51	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP18	DUP		L3764-51	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP19	DUP		L3764-52	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP2	DUP		L3764-7	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP20	DUP		L3764-52	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP21	DUP		L3764-53	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP22	DUP		L3764-53	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP23	DUP		L3764-67	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP24	DUP		L3764-67	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP25	DUP		L3764-68	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP26	DUP		L3764-68	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP27	DUP		L3764-69	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP28	DUP		L3764-69	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP3	DUP		L3764-8	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP4	DUP		L3764-8	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP5	DUP		L3764-9	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP6	DUP		L3764-9	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP7	DUP		L3764-25	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP8	DUP		L3764-26	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270DUP9	DUP		L3764-26	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270CCSI	LCS		LCSS204WK2	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270LCSW	LCS		LCSW204WK2	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270MB	MB		PBS204WK2	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
19270MS	MS		L3764-7	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	
L3764-25	Westinghouse Hanford		800283	S	7471	MERCURY	Soil	WIP	U	13-FEB-95	133
L3764-26	Westinghouse Hanford		800284	S	7471	MERCURY	Soil	WIP	U	13-FEB-95	133
L3764-27	Westinghouse Hanford		800285	S	7471	MERCURY	Soil	WIP	U	13-FEB-95	133
L3764-43	Westinghouse Hanford		800299	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-44	Westinghouse Hanford		800300	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-51	Westinghouse Hanford		800307	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-52	Westinghouse Hanford		800308	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-53	Westinghouse Hanford		800309	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-67	Westinghouse Hanford		800321	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-68	Westinghouse Hanford		800323	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-69	Westinghouse Hanford		800325	S	7471	MERCURY	Soil	WIP	U	15-FEB-95	133
L3764-7	Westinghouse Hanford		800280	S	7471	MERCURY	Soil	WIP	U	14-FEB-95	133
L3764-8	Westinghouse Hanford		800281	S	7471	MERCURY	Soil	WIP	U	14-FEB-95	133
L3764-9	Westinghouse Hanford		800282	S	7471	MERCURY	Soil	WIP	U	14-FEB-95	133

Comments:

L3764-25	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-26	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-27	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-43	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-44	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-51	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-52	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-53	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-67	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-68	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-69	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-7	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"
L3764-8	TEMP 2	"SAF # 94-402"	"METALS=As,Pb,Se,Tl"

530

000251

FROM THE DESK OF: JEFF LERCH
SAMPLE MANAGEMENT
372-2596/H4-14

TO: Contract Validators DATE: 5/12/95

SUBJECT: **DEFINITION OF RADIOCHEMISTRY DATA REPORTING QUALIFIERS**

Through the validation review and comment process, radiochemistry data reporting qualifier definitions for "U" and "UJ" have been revised as follows:

U Indicates the constituent was analyzed for, but was not detected at a concentration above the Minimum Detectable Activity (MDA). The concentration reported is the sample result corrected for sample aliquot size, dilution factors, and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.

UJ Indicates the constituent was analyzed and was not detected at a concentration above the Minimum Detectable Activity (MDA). Due to a quality control deficiency identified during data validation, the result reported may not accurately reflect the sample concentration. The associated data should be considered usable for decision making purposes.

The contract validators are directed to replace the qualifier definitions found in WHC-SD-EN-SPP-001, Rev 1, Section 3.4.2 with the ones listed above.

This direction will be implemented formally in the next revision of the referenced document.

END OF PACKAGE

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