START 9613451.2029

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LK29

Lockheed Analytical Services

JAN 1995 RECEIVED SDLA

BECHTEL HANFORD, INC.

ANALYTICAL DATA REPORT

FOR

IGNITABILITY, METALS,
TX, AND pH

JUN 1996 RECEIVED EDMC

RECORD COPY

LOG-IN NUMBER:	L3500
QUOTATION NUMBER:	Q400000-B
SAF:	B94-109
DOCUMENT FILE NUMBER:	1213596B
WHC DOCUMENT CONTROL NO.:	124
SDG NUMBER:	LK29

0014

CASE NARRATIVE
INORGANIC NON-METALS ANALYSES
WATER

The routine calibration and quality control analyses performed for this batch include as applicable: initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), matrix spike sample(s), and duplicate sample(s).

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.

Sample Results

- Due to the sample matrix, pH was determined using pH paper.

Shellee McGrath
Prepared By

December 28, 1994
Date

002

CASE NARRATIVE
INORGANIC ANALYSES
METALS

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).

Holding Times-

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

Method Blanks-

The method blanks were free of contamination.

Internal Quality Control-

All Internal Quality Control were within acceptance limits.

Shellee McGrath
Prepared By

December 28, 1994
Date

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Lockheed Analytical Services

DATA QUALIFIERS FOR INORGANIC ANALYSES

[Revised 08/28/92]

For Use on the Analytical Data Reporting Forms	
B	***For CLP Analyses Only*** -- Reported value is less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).
C	***For Routine, Non-CLP Analyses Only*** -- Any constituent that was also detected in the associated blank whose concentration was greater than the reporting detection limit (RDL).
D	Presence of high levels of interfering constituents required dilution of sample which increased the RDL by the dilution factor.
E	Estimated value due to presence of interference.
H	Sample analysis performed outside of method-or client-specified maximum holding time requirement.
M	***For CLP Analyses Only*** -- Duplicate injection precision criterion was not met.
N	Matrix spike recovery exceeded acceptance limits.
S	Reported value was determined from the method of standard addition.
U	***For CLP Reporting Only*** -- Constituent was analyzed for but not detected (sample quantitation must be corrected for dilution and percent moisture).
W	***For AAS Only*** -- Post-digestion spike for Furnace AAS did not meet acceptance criteria and sample absorbance is less than 50% of spike absorbance.
X, Y, or Z	Analyst-defined qualifier.
*****	Relative percent difference (RPD) for duplicate analysis exceeded acceptance limits.
+	Correlation coefficient (r) for the MSA is less than 0.995.
For Use on the QC Data Reporting Forms	
a[1]	The spike recovery and/or RPD for matrix spike and matrix spike duplicates cannot be evaluated due to insufficient spiking level compared to the elevated sample analyte concentration.
b[1]	The RPD cannot be computed because the sample and/or duplicate concentration was below the RDL.

[1] Used as footnote designations on the QC summary form.

004

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OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD- B94-086
Record of Disposition No.

DATE: 12/16/94

LABORATORY: ~~Quanterra~~ Lockheed 12/21/94

PROJECT TITLE/NO.: 100 N Waste Container

NCR NO.:

SAMPLE IDENTIFICATION NUMBERS: B0DD56

DESCRIPTION OF EVENT:

Sample cannot be analyzed for total organic halides due to organic nature of sample. pH of sample cannot be taken with pH probe due to organic nature of sample.

DISPOSITION OF SAMPLES:

Method will be modified to analyze for total halides and to take pH using pH paper rather than pH probe.

APPROVAL SIGNATURES:

Janice M Scott — Janice M. Scott — 12/16/94
OSM Project Coordinator (Print/Sign Name) — Date

Ryan J Johnson — 12/27/94
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

005

9613451.2034

LOGIN CHAIN OF CUSTODY REPORT (ln01)
Dec 14 1994, 09:09 am

Login Number: L3500
Account: 596 Bechtel Hanford, Inc. * Richland, WA
Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	PR	Due Date
L3500-1	BODD56	06-DEC-94	13-DEC-94		28-DEC-94
temp 6					
Location: 157					
Liq. Waste 7 S SCREENING		Hold:04-JUN-95			
L3500-2	BODD56	06-DEC-94	13-DEC-94		28-DEC-94
temp 6; Metals=As,Pb,Se,Tl					
Location: 157					
Liq. Waste 7 S 1010 IGNITABILITY					
Liq. Waste 7 S 6010 ICP METALS					
Liq. Waste 7 S 7000 FURNACE METALS		Hold:04-JUN-95			
Liq. Waste 7 S 9020 TOX		Hold:13-DEC-94			
Liq. Waste 7 S 9040 PH		Hold:13-DEC-94			
L3500-3	REPORT TYPE	06-DEC-94	13-DEC-94		28-DEC-94
Location:					
Water 1 S EDD - DISK DEL.					
Water 1 S INORG TYPE 3 RPT					

Signature: MMille 006

Date: 12-14-94

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Westinghouse Hanford Company

L3500

CHAIN OF CUSTODY # 120694N-5

Custody Form Initiator Ryan Johnson

Company Contact Ryan Johnson / Janice Scott

Telephone (509) 373-4206

Project Designation/Sampling Locations Container 224B-94-000500 SAF# B94-109

Collection Date 12-06-94

Ice Chest No. NA

Field Logbook No. NA

Bill of Lading/Airbill No. NA

Offsite Property No. NA

Method of Shipment Air

Shipped to Lockheed Analytical Services, 975 Kelly Drive, Las Vegas, NV 89119

Possible Sample Hazards/Remarks Flammable

Sample Identification

B0DD56 - One ~~250~~ 500 mL amber glass jar; One 40mL vial

[] Field Transfer of Custody

Chain of Possession (Sign and Print Names)

Relinquished By	Date	Time	Received By	Date	Time
[signature]	12/8/94	0800	[signature]	12/8/94	[illegible]
			N Miller	12-13-94	1515

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

** Sample Matrix - Universal Foam Systems Inc - Universal Solvent. There is approximately 8 ounces available for sampling.

** Priority Turnaround - 90-day accumulation clock initiated on September 12, 1994.

** Data Deliverable - Summary

A-6000-407 (12/92) WEF061

007

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WESTINGHOUSE HANFORD COMPANY

9613451.2036

SAMPLE ANALYSIS REQUEST 224B-94-006500 SAF # B94-109

Collector Ryan Johnson Date 12-06-94

Company Contact Ryan Johnson / Janice Scott Telephone (509) 373-4206

Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Container Analysis Requested-Method Number
BOD056	L	12-06-94	1000	One ~~250~~ 500 mL amber glass jar -
				ICP Metals 6010
				AA Metals 7060
				7421
				7740
				7841
				TOX 9020
				pH 9040/9045
				Flashpoint 1010
BOD056	L	12-06-94	1000	One 40mL vial - Activity Scan

*Type of Sample

A = Air
DL = Drum Liquids
DS = Drum Solids
T = Tissue
L = Liquids
O = Oil
S = Soil
W = Water
SE = Sediment
SL = Sludge
SO = Solid
Wi = Wipes
X = Other

Field Information: Universal Foam Systems Inc - Universal Solvent

Special Handling and/or Storage: none

Possible Sample Hazards: flammable

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SAMPLE STATUS REPORT FOR N 3936. RAD SCREEN B940065 TIME: 11/23/94 8:42
DISPATCHED: 11/21/94 10:11 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/22/94 13:31

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	UNWH8

END OF REPORT

224B-94-006500
SAF # B94-109
HEIS # B0D056

NOV 1994
Received
Restoration Waste
Management

009

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Sample Login

Login Review Checklist

Lot Number L3500

The login review should be conducted by that person logging in the samples as well as a peer. Please use this checklist to ensure that such reviews occur in a uniform basis. Please sign and date below to verify that a login review has occurred. This checklist should be affixed to each login package prior to distribution.

For an effective login review, at a minimum, five reports from the login process are required. These are the chain of custody (or equivalent), the login chain of custody report, the sample summary report, the sample receiving checklist, and the login quotation. Before beginning a review, ensure that these five components are available. For jobs with single component samples, the sample summary report may be ommitted.

Sample Summary Report N/A	Yes	No
1. Are all sample IDs correct?	Y	
2. Are all samples present?	Y	
3. Are all matrices correct? (e.g., TCLP analyses should be on a TCLP leachate, field blanks should be water)	Y	
4. Are all analyses on the chain of custody/login quotation included?	Y	
5. Are analyses logged in for the correct container? (e.g., analyses requiring preservation logged in for a preserved container and vice versa)	X	
6. Are samples logged in according to laboratory batching procedures? (e.g., TCLP regular leaching and associated metals/semivolatile organics should be logged in on the same bottle)	X	

Login Chain of Custody Report	Yes	No
1. Are the Collect, Receive , and Due dates correct for every sample?	Y	
2. Have appropriate sample comments been included? (e.g., MS/MSD designation, comments from the client concerning method modifications)	Y	

Sample Receiving Checklist	Yes	No
1. Are any discrepancies between the chain of custody and the login noted? (e.g., client IDs different on chains of custody and bottle labels, samples not sent, samples lost from breakage)		NA

Primary review signature	Date	Secondary review signature	Date
[illegible]	12-14-94	Derek Henderson	12-14-94

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Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 13 DEC 94 / 1530 Client Name Westinghouse

Project/Client # SAF-094-109 Batch or Case # N/A

Cooler ID (if noted on outside of cooler) N/A

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: 6
8. Samples have:
   - ____ tape
   - ____ hazard labels
   - X custody seals
   - X appropriate sample labels
9. Samples are:
   - 0 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) 120694N-5

    Request for Analysis #(s) N/A

    Airbill # 515 087 229 Carrier Viking
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 Anthony M. Miller Date/Time 13 DEC 94 / 0830

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Lockheed Analytical Services
Sample Receiving Checklist

Client Name: Westinghouse Job No. L3500 Cooler ID:

COOLER CONDITION UPON RECEIPT			
Temperature of cooler upon receipt:	6°C		
temperature of temp. blank upon receipt:			
	Yes	No	* Comments/Discrepancies
custody seals intact	X		
chain of custody present	X		
blue ice (or equiv.) present/frozen	X		
rad survey completed	X		

SAMPLE CONDITION UPON RECEIPT			
	Yes	No	* Comments/Discrepancies
all bottles labeled	X		
samples intact	X		
proper container used for sample type	X		
sample volume sufficient for analysis	X		
proper pres. indicated on the COC			MA
VOA's contain headspace			MA
are samples bi-phasic (if so, indicate sample ID'S):			MA

MISCELLANEOUS ITEMS			
	Yes	No	* Comments/Discrepancies
samples with short holding times		X	
samples to subcontract		X	

ADDITIONAL COMMENTS/DISCREPANCIES

Completed by / date: [signature] 12-14-94

Sent to the client (date/initials): ** Client's signature upon receipt:

*Notes: * = contact the appropriate CSR of any discrepancies immediately upon receipt*

*** = please review this information and return via facsimile to the appropriate CSR (702) 361-8146*

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version 2.0 (11/11/94)

9613451.2041

Lockheed Analytical Laboratory
SAMPLE SUMMARY REPORT (su02)
Bechtel Hanford, Inc. * Richland, WA

Client Sample Number	LAL Sample Number	SDG Number	Matrix	Method
BODD56 -	L3500-1		Liq. Waste	SCREENING -
	L3500-2		Liq. Waste	1010 IGNITABILITY
	L3500-2		Liq. Waste	6010 ICP METALS-
	L3500-2		Liq. Waste	7000 FURNACE META
	L3500-2		Liq. Waste	9020 TOX -
	L3500-2		Liq. Waste	9040 PH -
REPORT TYPE -	L3500-3		Water	EDD - DISK DEL.-
	L3500-3		Water	INORG TYPE 3 RPT

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RCRA CHARACTERISTICS TESTING (SW-846)
SAMPLE RESULTS

Client Sample ID: BODD56	Date Collected: 12-06-94	Matrix: liquid waste
LAL Batch ID(s): 1213 wh	Date Received: 12-13-93	

Constituent	Method	Result	Reporting Detection Limit	Data Qualifier(s)	Date Analyzed	LAL Sample ID
pH, in pH units	9041	6	NA		12-28-94	L3500-2
Ignitability - Flash Point, in °F	1010	165	NA		12-28-94	L3500-2

Comments:

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LOCKHEED ANALYTICAL SERVICES

COMMON IONS AND ADDITIONAL ANALYTES

Sample Results

Client Sample ID: BODD56	Date Collected: 06-DEC-94
Matrix: Liq. Waste	Date Received: 13-DEC-94

Constituent	Units	Method	Result	Reporting Det|Limit	Data Qualifier(s)	Date Analyzed	LAS Batch|ID	LAS Sample|ID
Tx - Total Halides	mg/kg	TX	59.	30		28-DEC-94	17129	L3500-2

TOTAL METALS RESULTS

Client Sample ID: BODD56	Date Collected: 12-06-94	Matrix: liquid waste
LAL Batch ID(s): 1213 wh	Date Received: 12-13-94	

Constituents	Method	Concentration (mg/kg)	IDL (mg/kg)	RDL (mg/kg)	Data Qualifier(s)	Date Analyzed	LAL ID
Aluminum	6010	<14	14	40	U	12-20-94	L3500-2
Antimony	6010	<10	10	12	U	12-20-94	L3500-2
Arsenic	7060	<0.6	0.6	2.0	U	12-19-94	L3500-2
Barium	6010	<2.2	2.2	40	U	12-20-94	L3500-2
Beryllium	6010	<0.2	0.2	1.0	U	12-20-94	L3500-2
Cadmium	6010	<0.8	0.8	1.0	U	12-20-94	L3500-2
Calcium	6010	<6.0	6.0	1000	U	12-20-94	L3500-2
Chromium	6010	0.81	0.8	2.0	B	12-20-94	L3500-2
Cobalt	6010	<1.8	1.8	10	U	12-20-94	L3500-2
Copper	6010	<1.6	1.6	5.0	U	12-20-94	L3500-2
Iron	6010	<3.0	3.0	20	U	12-20-94	L3500-2
Lead	7421	<0.4	0.4	0.60	U	12-19-94	L3500-2
Magnesium	6010	<7.2	7.2	1000	U	12-20-94	L3500-2
Manganese	6010	<0.4	0.4	3.0	U	12-20-94	L3500-2
Nickel	6010	<2.8	2.8	8.0	U	12-20-94	L3500-2
Potassium	6010	<124	124	1000	U	12-20-94	L3500-2
Selenium	7740	<0.6	0.6	1.0	U	12-19-94	L3500-2
Silver	6010	<1.4	1.4	2.0	U	12-20-94	L3500-2
Sodium	6010	<14	14	1000	U	12-20-94	L3500-2
Thallium	7841	<0.6	0.6	2.0	U	12-19-94	L3500-2
Vanadium	6010	<1.6	1.6	10	U	12-20-94	L3500-2
Zinc	6010	<1.6	1.6	4.0	U	12-20-94	L3500-2

Comments: