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LK16/32



Lockheed Analytical Services

BECHTEL HANFORD, INC.

ANALYTICAL DATA REPORT

FOR

HEXAVALENT CHROMIUM AND TOTAL CHROMIUM



RECORD COPY

LOG-IN NUMBER:	<u>L3312</u>
QUOTATION NUMBER:	<u>Q400000-B</u>
SAF:	<u>B94-089</u>
DOCUMENT FILE NUMBER:	<u>1112596A</u>
WHC DOCUMENT CONTROL NO.:	<u>103</u>
SDG NUMBER:	<u>LK16</u>

1-4-95



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

December 1, 1994

Phone: (702) 361-0220
 Phone: (800) 582-7605
 Fax: (702) 361-8146

Ms. Doris Ayres
 Bechtel Hanford, Inc.
 345 Hills P.O. Box 969
 Richland, WA 99352

RE: Log-in No.:	L3312
Quotation No.:	Q400000-B
SAF:	B94-089
Document File No.:	1112596A
WHC Document File No.:	103
SDG No.:	LK16

The attached data report contains the analytical results of samples that were submitted to Lockheed Analytical Services on 12 November 1994.

The temperature of the cooler upon receipt was 2°C. Sample containers received agree with the chain-of-custody documentation. Sample containers were received intact. Samples were not received in time to meet the analytical holding time requirements for Chromium VI by method 7196.

A list of data qualifiers, chain-of-custody forms, sample receiving checklist, and log-in report are also enclosed representing the samples received within this group.

If you have any questions concerning the analysis or the data please call Kathleen M. Hall at (509) 943-4423.

" I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory Manager or a designee, as verified by the following signature".

Sincerely,


 Kathleen M. Hall
 Project Manager

kmh:sm

cc: Client Services
 Document Control

iii
 1-5-95

**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).

Preparation and Analysis Requirements

- One water sample was received for SAF: B94-089 and prepared as batch 1112WH and analyzed for selected analytes as requested on the chain of custody.

Client ID	LAL #		Method
BOD8Q8	L3312-3	DUP, MS	7196 Hexavalent Chromium

Holding Time Requirements

- The sample for Method 7196 Hexavalent Chromium was received from the client out of holding time. Analyses proceeded at the direction of the client and the applicable samples are flagged with an "H".

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.

Kay McCann

November 22, 1994

Prepared By _____

Date _____

**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 1, 1994
Date

9713509.0979

LOGIN CHAIN OF CUSTODY REPORT (ln01)
Nov 12 1994, 01:36 pm

Login Number: L3312
Account: 596 Bechtel Hanford, Inc. * Richland, WA
Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L3312-1 temp 2 Location: RFG01-43 Water 1 S SCREENING	B0D8Q8	10-NOV-94	12-NOV-94	22-DEC-94
		Hold:09-MAY-95		
L3312-2 temp 2 Location: RFG01-20A Water 1 S 218.2 CHROMIUM	B0D8Q8	10-NOV-94	12-NOV-94	22-DEC-94
		Hold:09-MAY-95		
L3312-3 temp 2 Location: RFG01-20A Water 1 S 7196 CHROMIUM (VI)	B0D8Q8	10-NOV-94	12-NOV-94	22-DEC-94
		Hold:11-NOV-94		
L3312-4 Location: Water 1 S EDD - DISK DEL. Water 1 S INORG TYPE 2 RPT	REPORT TYPE	12-NOV-94	12-NOV-94	22-DEC-94

Page 1

Signature: Paul C DavisDate: 11-12-94 04

111259604

Westinghouse Hanford Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 L3312

Date Turnaround

Priority
 Normal

Collector <i>Doug Bowers</i>	Company Contact RC SMITH/DB BLUMENKRANZ	Telephone No. (509) 372-2537
Project Designation 100-HR-3 PUMP & TREAT - ROUTINE SAMPLES	Sampling Location 100 AREAS	SAF No. B94-089
Ice Chest No. <i>FW5-041</i>	Field Logbook No. <i>N/A</i>	Method of Shipment EMERY
Shipped To LOCKHEED	Offsite Property No. <i>W05-0-0073-23</i>	Bill of Lading/Air Bill No. <i>1402135823</i>

Possible Sample Hazards/Remarks	Preservative	Type of Container			No. of Container(s)	Volume	Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE	CHROMIUM - TOTAL	CHROMIUM (VI)	ACTIVITY SCREEN
	HNO3 <2	COOL 4	COOL 4							
					1	1000ml				
					1	500ml				
					1	20ml				

Sample No.	Matrix*	Date Sampled	Time Sampled															
<i>B0D808</i>	<i>W</i>	<i>11/10/94</i>	<i>1355</i>	<i>X</i>	<i>X</i>	<i>X</i>												

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix*
Relinquished By <i>Doug Bowers</i>	Date/Time <i>0825</i>	Received By <i>Kel Whitten</i>	Date/Time <i>0825</i>
Relinquished By <i>Doug Bowers</i>	Date/Time <i>11-11-94</i>	Received By <i>B. Whitten</i>	Date/Time <i>11-11-94</i>
Relinquished By <i>Kel Whitten</i>	Date/Time <i>0825</i>	Received By <i>B. Whitten</i>	Date/Time <i>11-11-94</i>
Relinquished By <i>0</i>	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
 NOTE: Data Deliverable - Summary
 Analysis for Chromium(VI) by SW-846 7196 is being requested for INFORMATION ONLY. The ERC Contractor recognizes that the 24-hour holding time will not be met.

Matrix*
 S = Soil
 SE = Sediment
 SO = Solid
 SL = Sludge
 W = Water
 O = Oil
 A = Air
 DS = Drum Solids
 DL = Drum Liquids
 T = Tissue
 WI = Wipe
 L = Liquid
 V = Vegetation
 X = Other

LABORATORY SECTION	Received By <i>Paul J Davis</i>	Title <i>SAMPLE CUSTODIAN</i>	Date/Time <i>11-12-94 12:55pm</i>
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

05
11/25/94

9713509.0981

SAMPLE STATUS REPORT FOR N 3819. RAD SCREEN BOD8Q8 TIME: 11/11/94 8:17
 DISPATCHED: 11/10/94 13: 3 SAMPLE HAS NOT BEEN SLURPED
 RECEIVED: 11/11/94 8: 0

EXT. DETER. RESULTS OR STATUS
 **** *****
 4271 TOT-ACT < 5.00000E 01 pCi/G

OUT OF GOOD CHARGE
 RANGE? ANS? CODE
 *** *** *****
 N Y PE35A

END OF REPORT

13310

11/11/94

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 11-12-94 12:55pm Client Name Westinghouse Hanford
 Project/Client # SHF B94-089 Batch or Case # N/A
 Cooler ID (if noted on outside of cooler) 625-041

1. Condition of shipping container? GOOD
2. Custody Seals on cooler intact? Yes No
3. Custody Seals dated and signed? Yes No
4. Chain of Custody record is taped on inside of cooler lid? Yes No
5. Vermiculite/packing material is: Wet Dry
6. Each sample is in a plastic bag? Yes No
7. Number of sample containers in cooler: 3
8. Samples have:

<input type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input type="checkbox"/> appropriate sample labels
9. Samples are:

<input checked="" type="checkbox"/> in good condition	<input type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles
<input type="checkbox"/> other	
10. Coolant Present? Yes No Sample Temperature 22
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 # 1402135823 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 PAUL C. DAVIS Date/Time 11-12-94 12:55pm

Sample Login

Login Review Checklist

Lot Number 43312

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 omitted.

Sample Summary Report

Yes No

N/A

- | | | | | |
|----|---|---|---|---|
| 1. | Are all sample IDs correct? | X | — | — |
| 2. | Are all samples present? | X | — | — |
| 3. | Are all matrices correct?
<small>(e.g., TCLP analyzes should be on a TCLP leachate, field blanks should be water)</small> | X | — | — |
| 4. | Are all analyses on the chain of custody/login quotation included? | X | — | — |
| 5. | Are analyses logged in for the correct container?
<small>(e.g., analyses requiring preservation logged in for a preserved container and vice versa)</small> | X | — | — |
| 6. | Are samples logged in according to laboratory batching procedures?
<small>(e.g., TCLP regular leaching and associated metals/semivolatile organics should be logged in on the same bottle)</small> | X | — | — |

Login Chain of Custody Report

- | | | | | |
|----|--|---|---|---|
| 1. | Are the Collect, Receive, and Due dates correct for every sample? | X | — | — |
| 2. | Have appropriate sample comments been included?
<small>(e.g., MS/MSD designation, comments from the client concerning method modifications)</small> | X | — | — |

Sample Receiving Checklist

- | | | | | |
|----|--|---|---|---|
| 1. | Are any discrepancies between the chain of custody and the login noted? <u> </u> <u> </u> <u> </u> | — | — | — |
| | <small>(e.g., client IDs different on chains of custody and bottle labels, samples not sent, samples lost from breakage)</small> | | | |

Paul Davis

11-12-94

Paul Davis

11-12-94

Primary review signature

Date

Secondary review signature

Date

9713509.0985

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

Client Sample Number	LAL Sample Number	SDG Number	Matrix	Method
BOD8Q8	L3312-1 L3312-2 L3312-3		Water Water Water	SCREENING 218.2 CHROMIUM 7196 CHROMIUM (V
REPORT TYPE	L3312-4 L3312-4		Water Water	EDD - DISK DEL. INORG TYPE 2 RPT

9213579 0986

LOCKHEED ANALYTICAL SERVICES
COMMON IONS AND ADDITIONAL ANALYTES
Sample Results

Client Sample ID: B0D8Q8	Date Collected: 10-NOV-94
Matrix: Water	Date Received: 12-NOV-94

Constituent	Units	Method	Result	Reporting Det Limit	Data Qualifier(s)	Date Analyzed	LAS Batch ID	LAS Sample ID
Chromium, hexavalent	mg/L	7196	0.094	0.02	H	12-NOV-94	15702	L3312-3

TOTAL CHROMIUM RESULTS

Client Sample ID: BOD8Q8	Date Collected: 11-10-94	Matrix: water
LAL Batch ID(s): 1112 wh	Date Received: 11-12-94	

Constituents	Method	Concentration (mg/L)	IDL (mg/L)	RDL (mg/L)	Data Qualifier(s)	Date Analyzed	LAL ID
Chromium	218.2	0.10	0.005	0.050	D(1:5)	11-26-94	L3312-2

Comments: