



CERTIFICATE OF ANALYSIS

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July 6, 2000

RECEIVED
SEP 07 2000

Attention: Joan Kessner

EDMC

SAF Number	:	C00-022
Date SDG Closed	:	June 29, 2000
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W03205
Data Deliverable	:	45 Day / Summary



I. Introduction

On June 15, 2000, one water sample was received at STL Richland (STLR) for chemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

<u>STLR ID#</u>	<u>BHI ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
9DER4G10	B0Y6C9	WATER	6/15/00

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analysis was: **Chemical Analysis**
Chromium Hex by EPA method 7196

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STL Richland

III. Quality Control

The analytical results for each analysis performed under SDG W03205 include a minimum of one Laboratory Control Sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

Quality control sample results are reported in mg/L.

IV. Comments

Chemical Analyses

Chromium Hex by EPA method 7196:

The LCS, batch blank, sample, sample duplicate (B0Y6C9) and sample matrix spike/matrix spike duplicate (B0Y6C9) results are within contractual requirements.

I certify that this Certificate of Analysis 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.

Reviewed and approved:

A handwritten signature in cursive script that reads "Jackie Waddell".

Jackie Waddell
Project Manager

DUPLICATE RESULTS

LAB NAME: STL Richland SDG: /RPT GRP: W03205 / 10803
 LOT,RPT DB ID: - DER4G14R MATRIX: WATER
 CLIENT ID: B0Y6C9 DATE RECEIVED: 6/15/2000 3:10:00 P
 ORIG LAB ID: 9DER4G10

ANALYTE	DUP RESULT	COUNTING Q ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
HEXCHROME	1.90E-02	N/A	N/A	2.00E-03	mg/L	N/A	EPA7196	1.90E-02	0.00%

Number of Results:

MATRIX SPIKE RESULTS

LAB NAME: STL Richland SDG: /RPT GRP: W03205 / 10803
 LAB SAMPLE ID: DER4G13W MATRIX: WATER

ANALYTE	SPIKE RESULT* Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
HEXCHROME	5.23E-01	N/A	N/A	2.00E-03	mg/L	1.90E-02	5.26E-01	99.43%

Number of Results: 1

*Spike Result Corrected For Sample Result
 Result = IDL When Not Detecte
 (Q)ualifiers: U = Analyte result < MDA/IDL,
 J = No U qualifier and result < RDL.



Richland Laboratory
Data Review Check List
METALS

Quanterra

Work Order Number(s): DER4G BATCH # 0167508 LOT# JOF150296-001				
Lab Sample Numbers or SDG: WD3205				
Method/Test/Parameter: Cr+16 IN WATER RICHWC 5003 R.4				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
A. Initial Calibration				
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank(ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples				
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?			✓	✓
5. ICP only: One serial dilution performed per SDG?			✓	✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	✓

CHAIN OF CUSTODY

Figure 1. Sample Check-in List

Date/Time Received: 6/15/00 1510 SDG#: W03205
 Work Order Number: JOF150296 SAF#: COO-022
 Shipping Container ID: SM2 580 Chain of Custody #: COO-022-2

1. Outermost shipping container damaged? Yes No
2. Custody Seals on shipping container intact? Yes No
3. Custody Seals dated and signed? Yes No
4. Chain-of-Custody record present? Yes No
5. Chain-of-Custody includes the following information:
 - Client name Yes No
 - Project name or number Yes No
 - Sample date/time for each sample Yes No
 - Container types, sizes and number of containers Yes No
 - Short description of sample, i.e., matrix Yes No
 - Analyses requested Yes No
 - Preservation used or "none" or N/A if not applicable Yes No
 - Date and time of relinquish and receipt Yes No
 - Signatures of those persons relinquishing and receiving Yes No
6. Sample numbers on chain of custody match those on sample containers? Yes No
7. Collection date and date of laboratory receipt are within project specific holding time requirements? Yes No 3
8. Cooler temperature: _____
9. Vermiculite/packing materials is: Wet Dry

10. Samples have: tape hazard labels
 custody seals appropriate sample labels

11. Samples are: in good condition leaking
 broken have air bubbles

12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: Frank A. Culver Date: 6/15/00 15:10
 Telephone/Fax/E-mailed to: _____ On _____ By _____

Client Sample Screening Results

16-Jun-00

(B) 6/16/00

DAI
6/19/00

CLIENT CODE	ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B	
PTW	BOY610DER4G		6/16/2000 11:00:00 AM	QUAD21C	6/16/2000 2:18:14 PM	BOY610DER4G	30	16	0.456666667	49	0.72	
	DER4G	LIQUID		Bkg:	6/16/2000 2:24:39 AM	BKG	600	46	0.076666667	548	0.913333333	
Anal Date:	6/16/00	Tot Sa, Alq:	5.00E-01	, 1.00E+01	Alp:	(Dpm/ 1.32E+00	{uCi/ 2.98E-05	(pCi/ 5.96E+01	+ 2.4E+01	CAT	4.2E-01	Lab
Ppt mg:	1.1	Units:	L	, ml	Bet:	Alq): 1.15E+00	Sa): 2.59E-05	L/g): 5.19E+01	+ 2.0E+01	I	9.6E-01	Alq
												U/g

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16-Jun-00

RQC050

Severn Trent Laboratories, Inc.
WET CHEM BATCHSHEET

Run Date: 6/15/00
Time: 17:17:16

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD:	EA Hexavalent Chromium	6A)					
QC BATCH #:	0167508		INITIALS:			DATA ENTRY:	
PREP DATE:	6/15/00		PREP			INITIALS	
USER:	ROSSR		ANAL			DATE	

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
DER6K-1-01	J-0F150000-508-B	XX I 88 EA 5I			INTRA-LAB BLANK
DER6K-1-02	J-0F150000-508-C	XX I 88 EA 5I			INTRA-LAB CHECK
DER4G-1-01	J-0F150296-001	XX I 88 EA 5I			BOY6C9
DER4G-1-03	J-0F150296-001-D	XX I 88 EA 5I			BOY6C9
DER4G-1-02	J-0F150296-001-S	XX I 88 EA 5I			BOY6C9
DER4G-1-04	J-0F150296-001-X	XX I 88 EA 5I			BOY6C9 DUP

Control Limits

(85-115)

(85-115)

(85-115)

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COC Signature Page

Lot or Batch #: 0167508	Initials/Date	Procedure #
Released By	<u>RM 6/15/00</u>	<u>RichWC5003</u>
Received	<u>M.J. 6/15/00</u>	<u>RICHWC5003 R.4</u>
Released By	<u>M.J. 6/19/00</u>	<u>n/a</u>
Received		
Released By		<u>n/a</u>
Received		
Released By		<u>n/a</u>
Received		
Released By		<u>n/a</u>
Received		
Released By		<u>n/a</u>
Received		
Released By		<u>n/a</u>
Received		