

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

March 25, 2002

Attention: Joan Kessner

RECEIVED
JUN 10 2002
EDMC



SAF Number	:	B01-114
Date SDG Closed	:	March 14, 2002
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W03722
Data Deliverable	:	45 Day/Summary

I. Introduction

On February 28, 2002, two water samples were received at STL Richland (STLR) for chemical analysis. Upon receipt, the samples were 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>
EVPN3	B140B6	WATER	2/28/02
EVPM8	B12Y04	WATER	2/28/02

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

III. Quality Control

The analytical results for each analysis performed under SDG W03722 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.

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Page 2

Quality control sample results are reported in mg/L.

IV Comments

Chemical Analyses

Chromium Hex by EPA method 7196:

The LCS, batch blank, sample duplicate (B12Y04), sample matrix spike (B12Y04), matrix spike duplicate (B12Y04) and sample 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:



Barbara M. Gillespie
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,\dots)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c - Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty</i> . The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 23-Mar-02

STL Richland STLR

Ordered by Client Sample ID, Batch No.

Report No. : 19139

SDG No: W03722

Client ID	Work Order Number	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Yield	MDC MDA	RER
B12Y04	9EVP810	HEXCHROME	1.20E-02 +- 0.0E+00		mg/L	N/A	2.00E-03	
B12Y04 DUP	EVP8AE	HEXCHROME	1.20E-02 +- 0.0E+00		mg/L	N/A	2.00E-03	
B140B6	9EVPNE10	HEXCHROME	1.40E-02 +- 0.0E+00		mg/L	N/A	2.00E-03	

Number of Results: 3

QC Results Summary
STL Richland STLRL
 Ordered by QC Type, Batch No.

Date: 23-Mar-02

Report No. : 19139

SDG No.: W03722

QC Type	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC MDA
MATRIX SPIK	EVPM8AC	HEXCHROME	5.27E-01 +- 0.0E+00		mg/L	N/A	100.19%	0.0	2.00E-03
MATRIX SPIK	EVPM8AD	HEXCHROME	5.27E-01 +- 0.0E+00		mg/L	N/A	100.19%	0.0	2.00E-03
BLANK QC	EPV651AA	HEXCHROME	0.00E+00 +- 0.0E+00	U	mg/L	N/A			2.00E-03
LCS	EPV651AC	HEXCHROME	4.92E-01 +- 0.0E+00		mg/L	N/A	98.40%	0.0	2.00E-03

Number of Results: 4

FORM I

Date: 23-Mar-02

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W03722

Collection Date: 2/27/2002 2:10:00 PM

Lot-Sample No.: J2B280130-

Report No. : 19139

Received Date: 2/28/2002 8:06:00 AM

Client Sample ID: B12Y04

COC No. : B01-114-16

Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 2059298	Work Order:				Report DB ID: 9EVP810							
HEXCHROME	1.20E-02			0.0E+00	2.00E-03	mg/L	N/A	(6.) N/A	2/28/02		100.0 ML	EPA7196

Number of Results: 1

Comments:

8000

FORM I

Date: 23-Mar-02

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W03722

Collection Date: 2/27/2002 2:10:00 PM

Lot-Sample No.: J2B280130-

Report No. : 19139

Received Date: 2/28/2002 8:06:00 AM

Client Sample ID: B140B6

COC No. : B01-114-50

Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 2059298	Work Order:											
HEXCHROME	1.40E-02			0.0E+00	2.00E-03	mg/L	N/A	(7.) N/A	2/28/02		100.0 ML	EPA7196

Number of Results: 1

Comments:

6000

FORM II

Date: 23-Mar-02

DUPLICATE RESULTS

Lab Name: STL Richland

SDG: W03722

Collection Date: 2/27/2002 2:10:00 PM

Lot-Sample No.: J2B280130-

Report No. : 19139

Received Date: 2/28/2002 8:06:00 AM

Client Sample ID: B12Y04 DUP

COC No. : B01-114-16

Matrix: WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 2059298	Work Order:			Report DB ID: EVPM8AE		Orig Sa DB ID: 9EVPMB10						
HEXCHROME	1.20E-02			0.0E+00	2.00E-03	mg/L	N/A	(6.)	2/28/02		100.0	EPA7196
	1.20E-02	RPD	0.0					N/A			ML	

Number of Results: 1

Comments:

0010

FORM II
BLANK RESULTS

Date: 23-Mar-02

Lab Name: STL Richland

SDG: W03722

Lot-Sample No.: J2B280130-

Report No. : 19139

Matrix: WATER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 2059298	Work Order:			Report DB ID: EPV651AA								
HEXCHROME	0.00E+00	U		0.0E+00	2.00E-03	mg/L	N/A	0. N/A	2/28/02		100.0 ML	EPA7196

Number of Results: 1

Comments:

0011

FORM II
LCS RESULTS

Date: 23-Mar-02

Lab Name: STL Richland

SDG: W03722

Lot-Sample No.: J2B280130-

Report No. : 19139

Matrix: WATER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 2059298	Work Order:												
HEXCHROME	4.92E-01			0.0E+00	2.00E-03	mg/L	N/A	5.00E-01		98.40%	2/28/02	100.0	EPA7196
							Rec Limits:			0.0		ML	

Number of Results: 1

Comments:

0012

FORM II

Date: 23-Mar-02

MATRIX SPIKE RESULTS

Lab Name: STL Richland

SDG: W03722

Lot-Sample No.: J2B280130-

Report No. : 19139

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Exp- ected	Exp Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 2059298	Work Order:			Report DB ID: EVPM8AD		Orig Sa DB ID: 9EVP810							
HEXCHROME	5.27E-01			0.0E+00	2.00E-03	mg/L	N/A	100.19%	5.26E-01		2/28/02	100.0	EPA7196
	1.20E-02	RPD	1.9									ML	
HEXCHROME	5.27E-01			0.0E+00	2.00E-03	mg/L	N/A	100.19%	5.26E-01		2/28/02	100.0	EPA7196
	1.20E-02	RPD	1.9									ML	

Number of Results: 2

Comments:

0013

SEVERN

TRENT

SERVICES

Richland Laboratory
Data Review Check List
METALS

Work Order Number(s):		EVPMS & EVP65		BATCH# 2059298	
Lab Sample Numbers or SDG:		W03921 W03722		LOT# J2B280130	
Method/Test/Parameter:		CR+6 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 \leq 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 \leq 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?			✓	✓	



Data Review Checklist
 RADIOCHEMISTRY
 Second Level Review

QC Batch Number: 2059298 ~~2059298~~ smb

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Calibration			
1. Is the calibration documentation included?	✓		
B. Sample Analysis			
1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
C. QC Samples			
1. Is the blank yield within acceptance criteria?			✓
2. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
3. Does the blank result meet the Contract criteria?	✓		
4. Is the blank result < the Contract Detection Limit?	✓		
5. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
6. Is the LCS result within acceptance criteria?	✓		
7. Is the LCS yield within acceptance criteria?			✓
8. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
9. Do the MS/MSD results and yields meet acceptance criteria?	✓		
10. Do the duplicate sample results and yields meet acceptance criteria?	✓		
D. Other			
1. Are all Nonconformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Brian M. Dillman Date: 3/16/02

CHAIN OF CUSTODY

W-21020

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B01-114-16	Page 1 of 1
Collector Renee Nielson	Company Contact Virginia Rohay	Telephone No. 372-9100	Project Coordinator TRENT, SJ	Price Code 7N	Data Turnaround 45 Days	
Project Designation PFP Well Installation Sampling and Analysis - Water		Sampling Location 200 West; Well Number C3803; Well Name 299-W15-42		SAF No. B01-114	Air Quality <input type="checkbox"/>	
Ice Chest No. ERC 96-079	Field Logbook No. EL-1562-1	COA T20ZP1D722	Method of Shipment Hand deliver - Govt vehicle			
Shipped To Severn Trent Incorporated, Richland		Offsite Property No.		Bill of Lading/Air Bill No.		

POSSIBLE SAMPLE HAZARDS/REMARKS Historical data shows < 2,000 pci/gm Special Handling and/or Storage	Preservation	Cool 4C																			
	Type of Container	G/P																			
	No. of Container(s)	1																			
	Volume	500mL																			

SDG
W03722
J2B280130

SAMPLE ANALYSIS

Chromium Hex - 7196

Sample No.	Matrix *	Sample Date	Sample Time																		
B12Y04	EVFMS	2/27/02	1410	X																	

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				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
Relinquished By/Removed From <i>R. Nielson</i>	Date/Time 2/27/02	Received By/Stored In <i>REC #1A</i>	Date/Time 2/27/02 1623	** All requests for Cr VI at the Severn Trent Laboratory, MUST BE routed to Richland.				
Relinquished By/Removed From <i>REC #1A</i>	Date/Time 2/28/02 0754	Received By/Stored In <i>R. Nielson</i>	Date/Time 2/28/02					
Relinquished By/Removed From <i>R. Nielson</i>	Date/Time 2/28/02 0806	Received By/Stored In <i>Jul Hyman</i>	Date/Time 2/28/02					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

0018

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B01-114-50	Page 1 of 1
Collector Rence Nielson	Company Contact Virginia Rohay	Telephone No. 372-9100	Project Coordinator TRENT, SJ		Price Code 7N	Data Turnaround 45 Days
Project Designation PFP Well Installation Sampling and Analysis - Water	Sampling Location 200 West	SAF No. B01-114	Air Quality <input type="checkbox"/>			
Ice Chest No. <i>ERC 96-079</i>	Field Logbook No. EL-1562 -)	COA T202P1D722	Method of Shipment Hand deliver - Govt vehicle			
Shipped To Severn Trent Incorporated, Richland	Offsite Property No.	Bill of Lading/Air Bill No.				

POSSIBLE SAMPLE HAZARDS/REMARKS <i>Historical data show < 2,000 pci/gm</i>	Preservation	Cool 4C																		
	Type of Container	P																		
	No. of Container(s)	1																		
	Volume	500mL																		
Special Handling and/or Storage		Chromium Hex - 7196																		
SAMPLE ANALYSIS																				
Sample No.	Matrix *	Sample Date	Sample Time																	
B14086	<i>EVPNE</i>	<i>2/27/02</i>	<i>1410</i>	<i>X</i>																

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS												Matrix *
Relinquished By <i>R. Nielson</i>	Date/Time <i>1623 2/27/02</i>	Received By <i>Stored in</i>	Date/Time <i>1623 2/27/02</i>													S=Soil SE=Soilment SO=Solid S=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Testie WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By <i>Stored in</i>	Date/Time <i>0754 2/28/02</i>	Received By <i>R. Nielson</i>	Date/Time <i>0754 2-28-02</i>													
Relinquished By <i>R. Nielson</i>	Date/Time <i>0806 2/28/02</i>	Received By <i>AL</i>	Date/Time <i>08:06 2/28/02</i>													
Relinquished By	Date/Time	Received By	Date/Time													
Relinquished By	Date/Time	Received By	Date/Time													

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

6100

Sample Check-in List

Date/Time Received: 2/28/02 08:06

Client: BHI SDG #: W03722 NA [] SAF #: B01-114 NA []

Work Order Number: 2B280130 Chain of Custody # B01-114-16 +50

Shipping Container ID: ERC 96-079 Air Bill # _____

1. Custody Seals on shipping container intact? NA [] Yes No []
2. Custody Seals dated and signed? NA [] Yes No []
3. Chain of Custody record present? Yes No []
4. Cooler temperature: 4° NA [] 5. Vermiculite/packing materials is NA Wet [] Dry []
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [] Yes [] No
8. Samples have:

<input checked="" type="checkbox"/> tape	<input checked="" type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input checked="" type="checkbox"/> appropriate samples 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

 (Only for samples requiring head space)
10. Sample pH taken? NA pH < 2 [] pH > 2 []
11. Sample Location, Sample Collector Listed? * Yes No []
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 2/28/02 8:06

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager _____ Date _____

2/28/2002 10:57:18 AM

Sample Preparation/Analysis

Balance Id: _____

127642, BECHTEL HANFORD, INC.
Bechtel Hanford, Inc.

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Analy Due: 04/15/2002

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 2059298 WATER mg/L

PM, Quote: JW2, 27023

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None All Tests: 2059298 88EA,

Prep Tech: _____

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	QC Vial 2 Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date
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1 EVPMS-1-AA

J2B280130-1-SAMP

02/27/2002 14:10 AmtRec: 500P #Containers: 1 Scr Rst: Alpha: Beta:

2 EVPMS-1-AC-S

J2B280130-1-MS

02/27/2002 14:10 AmtRec: 500P #Containers: 1 Scr Rst: Alpha: Beta:

3 EVPMS-1-AD-D

J2B280130-1-MSD

02/27/2002 14:10 AmtRec: 500P #Containers: 1 Scr Rst: Alpha: Beta:

4 EVPMS-1-AE-X

J2B280130-1-DUP

02/27/2002 14:10 AmtRec: 500P #Containers: 1 Scr Rst: Alpha: Beta:

5 EVPNE-1-AA

J2B280130-2-SAMP

02/27/2002 14:10 AmtRec: 500P #Containers: 1 Scr Rst: Alpha: Beta:

6 EVP65-1-AA-B

J2B280000-298-BLK

02/27/2002 14:10 AmtRec: #Containers: 1 Scr Rst: Alpha: Beta:

0021

2/28/2002 10:57:22 AM

Sample Preparation/Analysis

Balance Id: _____

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

Pipet #: _____

EA Chromium, Hexavalent (7196A)

Sep1 DT/Tm Tech: _____

Analy Due: 04/15/2002

SI CLIENT: HANFORD

Sep2 DT/Tm Tech: _____

Batch: 2059298 mg/L

Prep Tech: _____

SEQ Batch, Test: None

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	QC Vial 2 Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date
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7 EVP65-1-AC-C

J2B280000-298-LCS

02/27/2002 14:10

AmtRec:

#Containers: 1

Scr Rst:

Alpha:

Beta:

Comments:

All Clients for Batch:

127642, BECHTEL HANFORD, INC.

Bechtel Hanford, Inc.

, JW2, 27023

EVPM81AA-SAMP Constituent List:

EVPM81AC-MS Constituent List:

EVPM81AD-MSD:

EVP651AA-BLK:

EVP651AC-LCS:

EVPM81AA-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

EVPM81AC-MS Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

EVPM81AD-MSD:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

EVP651AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

EVP651AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

0022

3/13/02 5:04:50 PM

ICOC Fraction Transfer/Status Report

ByDate: 2/11/02, 3/14/02, Batch: '2059298', User: *All Order by BatchNbr,WorkOrderNbr,DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
2059298				
AC		FABREM	2/28/02 8:00:46 AM	
SC		FABREM	InPrep 2/28/02 8:00:46 AM	RICH-WC-5003 REVISION 5
SC		FABREM	IsDisp 2/28/02 4:32:09 PM	RICH-HS-0001 REVISION 4
AC		FABREM	2/28/02 4:32:09 PM	

0023

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.