

SAF-RC-048
100 Area and 300 Area Component of the
RCBRA Water Sampling
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Jill Thomson	H0-23	<u>NB 2/2/06</u> INITIAL/DATE
Jeanette Duncan	H9-02	<u>NB 2/2/06</u> INITIAL/DATE

COMMENTS:

SDG (J00049) SAF-RC-048

Rad only X Chem only Rad & Chem
X Complete Partial

Sample Location/Waste Site: U-3 Surface Water/U-3 Pore Water

RECEIVED
FEB 16 2006
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford



Radiochemical Analysis By

STL Richland

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: STLRL

Data Package Contains 21 Pages

Report No.: 31203

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J00049	RC-048	J11191	J6A170287-2	HVR5K1AA	9HVR5K10	6018041
		J11195	J6A170287-1	HVR5G1AA	9HVR5G10	6018041

Certificate of Analysis

Washington Closure Hanford
3190 George Washington Way
Richland, WA 99354

January 31, 2005

Attention: Joan Kessner

SAF Number	:	RC-048
Date SDG Closed	:	January 17, 2006
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	J00049
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

On January 17, 2006, two water samples were received at STL Richland (STLR) for chemistry analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J11195	HVR5G	WATER	01/17/06
J11191	HVR5K	WATER	01/17/06

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. 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 analyses were:

Washington Closure Hanford
January 31, 2006

Chemical Analysis
Hexavalent Chromium by EPA method 7196A

IV. Quality Control

The analytical results for each analysis performed includes 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.

QC and sample results are reported in the same units.

V. Comments

Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

The LCS, batch blank, sample, sample matrix spike (J11195), matrix spike duplicate (J11195) and sample duplicate (J11195) 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:



Hans Carman
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 $(\text{Result}/\text{Expected})-1$ 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: 26-Jan-06

STL Richland STLRL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 31203

SDG No: J00049

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RPD
6018041	7196_CR6								
	J11191								
	HVR5K1AA	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A	2.00E-03	2.00E-03	
	J11195								
	HVR5G1AA	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A	2.00E-03	2.00E-03	
	HVR5G1AE	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A	2.00E-03	2.00E-03	0.0
No. of Results: 3									

STL Richland

RPD - Relative Percent Difference.

rptSTLRchSaSummary2 V4.14.4 A97

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

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

Date: 26-Jan-06

Report No. : 31203

SDG No.: J00049

Batch	Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC MDA
7196_CR6									
6018041	MATRIX SPIKE								
	HVR5G1AC	HEXCHROME	5.47E-01 +- 0.0E+00		mg/L	N/A	104%	0.0	2.00E-03
	HVR5G1AD	HEXCHROME	5.46E-01 +- 0.0E+00		mg/L	N/A	104%	0.0	2.00E-03
6018041	LCS								
	HVTFW1AC	HEXCHROME	5.18E-01 +- 0.0E+00		mg/L	N/A	104%	0.0	2.00E-03
6018041	BLANK QC								
	HVTFW1AA	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A			2.00E-03
No. of Results: 4									

STL Richland Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSummary V4.14.4 A97 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I
SAMPLE RESULTS

Date: 26-Jan-06

Lab Name: STL Richland

SDG: J00049

Collection Date: 1/17/2006 12:50:00 PM

Lot-Sample No.: J6A170287-2

Report No.: 31203

Received Date: 1/17/2006 3:15:00 PM

Client Sample ID: J11191

COC No.: RC-048-130

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	Aliquot Size	Primary Detector
Batch: 6018041	7196_CR6				Work Order: HVR5K1AA		Report DB ID: 9HVR5K10					
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	1/18/06		100.0	
							2.00E-03	N/A			ML	

No. of Results: 1

Comments:

FORM I
SAMPLE RESULTS

Date: 26-Jan-06

Lab Name: STL Richland

SDG: J00049

Collection Date: 1/17/2006 2:00:00 PM

Lot-Sample No.: J6A170287-1

Report No. : 31203

Received Date: 1/17/2006 3:15:00 PM

Client Sample ID: J11195

COC No. : RC-048-134

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	Aliquot Size	Primary Detector
Batch: 6018041	7196_CR6				Work Order: HVR5G1AA		Report DB ID: 9HVR5G10					
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	1/18/06		50.0	
							2.00E-03	N/A			ML	

No. of Results: 1

Comments:

FORM II

Date: 26-Jan-06

DUPLICATE RESULTS

Lab Name: STL Richland

SDG: J00049

Collection Date: 1/17/2006 2:00:00 PM

Lot-Sample No.: J6A170287-1

Report No.: 31203

Received Date: 1/17/2006 3:15:00 PM

Client Sample ID: J11195

COC No.: RC-048-134

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	Aliquot Size	Primary Detector
Batch: 6018041	7196_CR6			Work Order: HVR5G1AE		Report DB ID: HVR5G1ER		Orig Sa DB ID: 9HVR5G10				
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	1/18/06		50.0	
	2.00E-03	U		RPD 0.0		2.00E-03		N/A			ML	

No. of Results: 1 Comments:

STL Richland

RPD - Relative Percent Difference.

rptSTLRchDupV4.1
4.4 A97

MDC|MDA,Le - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II
BLANK RESULTS

Date: 26-Jan-06

Lab Name: STL Richland

SDG: J00049

Matrix: WATER

Report No. : 31203

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6018041	7196_CR6				Work Order: HVTFW1AA	Report DB ID: HVTFW1AB						
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	1/18/06		100.0	
						2.00E-03		N/A			ML	

No. of Results: 1

Comments:

FORM II
LCS RESULTS

Date: 26-Jan-06

Lab Name: STL Richland

SDG: J00049

Matrix: WATER

Report No. : 31203

Parameter	Result	Count Qual Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 6018041	7196_CR6											
HEXCHROME	5.18E-01		0.0E+00	2.00E-03	mg/L	N/A	5.00E-01		104%	1/18/06	100.0	
						Rec Limits:	85	115	0.0		ML	

No. of Results: 1

Comments:

STL Richland Bias - (Result/Expected)-1 as defined by ANSI N13.30.

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V4.14.4 A97

FORM II

Date: 26-Jan-06

MATRIX SPIKE RESULTS

Lab Name: STL Richland

SDG: J00049

Lot-Sample No.: J6A170287-1

Report No.: 31203

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Count Qual Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Exp- ected	Exp Uncert	Analysis, Prep Date	Allquot Size	Analy Method, Primary Detector
Batch: 6018041 HEXCHROME	Work Order: HVR5G1AC 5.47E-01 2.00E-03		Report DB ID: HVR5G1CW 0.0E+00	2.00E-03	mg/L	N/A	103.99%	5.26E-01		1/18/06	50.0 ML	7196_CR6
Batch: 6018041 HEXCHROME	Work Order: HVR5G1AD 5.46E-01 5.47E-01		Report DB ID: HVR5G1DW 0.0E+00	2.00E-03	mg/L	N/A	103.80%	5.26E-01		1/18/06	50.0 ML	7196_CR6

Number of Results: 2

Comments:

STL Richland RER - Replicate Error Ratio = $(S-D)/\sqrt{(\text{sq}(TPUs)+\text{sq}(TPUd))}$ as defined by ICPT BOA.
 rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 V4.14.4 A97

FORM II

Date: 26-Jan-06

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: STL Richland

SDG: J00049

Lot-Sample No.: J6A170287-1

Report No.: 31203

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	Primary Detector
Batch: 6018041	7196_CR6			Work Order: HVR5G1AC		Report DB ID: HVR5G1CW		Orig Sa DB ID: HVR5G1DW					
HEXCHROME	5.47E-01			0.0E+00	2.00E-03	mg/L	N/A	103.99%	5.26E-01		1/18/06	50.0	
	5.46E-01	RPD	0.2									ML	
Batch: 6018041	7196_CR6			Work Order: HVR5G1AD		Report DB ID: HVR5G1DW		Orig Sa DB ID: HVR5G1CW					
HEXCHROME	5.46E-01			0.0E+00	2.00E-03	mg/L	N/A	103.80%	5.26E-01		1/18/06	50.0	
	5.47E-01	RPD	0.2									ML	
No. of Results: 2	Comments:												

STL Richland RER - Replicate Error Ratio = $(S-D)/[\text{sqrt}(\text{sq}(\text{TPUs})+\text{sq}(\text{TPUd}))]$ as defined by ICPT BOA.
 rptSTLRchMsDup2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 V4.14.4 A97

Work Order Number(s): HVR5G, HVR5K				
Lab Sample Numbers or SDG: J00049				
Method/Test/Parameter: Cr+6 in Water / RICH-WC-5003, Rev 7				
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?			✓	✓

BHI

STL RICHLAND

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-048-134		Page 1 of 1	
Collector TILLER, B		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code 7N Data Turnaround 45 Days	
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa		Sampling Location U-3, SURFACE WATER		SAF No. RC-048		Air Quality <input type="checkbox"/>			
Ice Chest No.		Field Logbook No. EL-1597		COA BESRAS6520		Method of Shipment GROUND TRANSPORT			
Shipped To Severn Trent Incorporated, Richland		Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS POTENTIAL RADIOACTIVE			Preservation	Cool 4C					
Special Handling and/or Storage COOL 4C J00049 J6A170287 Dm 030306			Type of Container	G/P					
			No. of Container(s)	1					
			Volume	250mL					
SAMPLE ANALYSIS			Chromium Hex - 7196						
Sample No.	Matrix *	Sample Date	Sample Time						
J11195	HVRSU	01-17-06	1400	X					
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		S=Soil SE=Settlement SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Filter WI=Wipe L=Liquid V=Vegetation X=Other	
B. Tiller / 01/17/06		01-17-06/1515		Jeff Jensen		01/17/06 1400			
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			
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	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-048-130	Page 1 of 1
Collector <i>Tiller</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days		
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location U-3, PORE WATER	SAF No. RC-048	Air Quality				
Ice Chest No.	Field Logbook No. EL-1592 <i>7A & H706</i>	COA BESRAS6520	Method of Shipment GROUND TRANSPORT				
Shipped To Severn Trent Incorporated, Richland	Offsite Property No. N/A	Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>POTENTIAL RADIOACTIVE</i>		Preservation Cool 4C					
Special Handling and/or Storage <i>COOL 4C</i>		Type of Container G/P					
		No. of Container(s) 1					
		Volume 250mL					
SAMPLE ANALYSIS		Chromium Hex - 7196					
Sample No.	Matrix *	Sample Date	Sample Time				
J11191	<i>HVASK</i>	<i>01-12-06</i>	<i>1750</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>B. Tiller / B. Tiller</i>	Date/Time <i>01-12-06 / 1515</i>	Received By/Stored In <i>Jeff Jensen</i>	Date/Time <i>01-17-06 1515</i>	<i>5.0 °C</i>		S=Soil SB=Soil/soil SO=Solid SI=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	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				
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			

Sample Check-in List

Date/Time Received: 11/20/06 1515

Client: BHE SDG #: J00099 NA SAF #: 10-098 NA

Work Order Number: JDA170287 Chain of Custody # 10-098-139, 130

Shipping Container ID: NA 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: 5.0-5.5 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:
 - tape hazard labels
 - custody seals appropriate samples labels
9. Samples are:
 - in good condition leaking
 - broken have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA pH<2 pH>2 adjusted pH
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: 01/17/06

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager _____ Date _____

STL RICHLAND

1/18/2006 5:56:24 AM

Sample Preparation/Analysis

Balance Id: _____

127642, Bechtel Hanford, Inc. , Bechtel
Hanford, Inc.

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

Pipet #: _____

Report Due: 03/03/2006

Sep1 DT/Tm Tech: _____

Batch: 6018041 WATER mg/L

PM, Quote: HC , 27023

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: _____

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HVR5G-1-AA								
J6A170287-1-SAMP								
[REDACTED]								
01/17/2006 14:00		AmtRec: 250P	#Containers: 1			Scr:	Alpha:	Beta:
2 HVR5G-1-AC-S								
J6A170287-1-MS								
[REDACTED]								
01/17/2006 14:00		AmtRec: 250P	#Containers: 1			Scr:	Alpha:	Beta:
3 HVR5G-1-AD-O								
J6A170287-1-MSD								
[REDACTED]								
01/17/2006 14:00		AmtRec: 250P	#Containers: 1			Scr:	Alpha:	Beta:
4 HVR5G-1-AE-X								
J6A170287-1-DUP								
[REDACTED]								
01/17/2006 14:00		AmtRec: 250P	#Containers: 1			Scr:	Alpha:	Beta:
5 HVR5K-1-AA								
J6A170287-2-SAMP								
[REDACTED]								
01/17/2006 12:50		AmtRec: 250P	#Containers: 1			Scr:	Alpha:	Beta:
6 HVTFW-1-AA-B								
J6A180000-41-BLK								
[REDACTED]								
01/17/2006 14:00		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 HVTFW-1-AC-C								
J6A180000-41-LCS								
[REDACTED]								
01/17/2006 14:00		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

J00049

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