

SAF-RC-173
Groundwater Sampling –
100-HR-3 Decision Unit
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution Required

COMMENTS:

SDG J01138

SAF-RC-173

Rad only

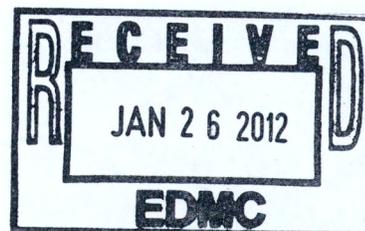
Chem only

Rad & Chem

Complete

Partial

Sample Location: C7861 (116-H-7); ADD ON 1



Analytical Data Package Prepared For
Washington Closure Hanford



Radiochemical Analysis By
TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 21 Pages

Report No.: 47035

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J01138	RC-173	B2C6D4	J1F160482-1	MJ92X1AA	9MJ92X10	1167185

Certificate of Analysis

TestAmerica Laboratories, Inc.

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 20, 2011

Attention: Joan Kessner

SAF Number	:	RC-173
Date SDG Closed	:	June 16, 2011
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	J01138
Data Deliverable	:	21 Day Summary

CASE NARRATIVE

I. Introduction

On June 16, 2011, one water sample was received at TestAmerica for chemistry analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B2C6D4	MJ92X	WATER	6/16/11

II. Sample Receipt

The sample was 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 analysis was:

Chemical Analysis
Hexavalent Chromium by EPA method 7196A

Washington Closure Hanford
June 20, 2011

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

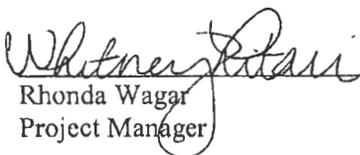
Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

The LCS, batch blank, sample, sample duplicate (B2C6D4), sample matrix spike (B2C6D4), and sample matrix spike duplicate (B2C6D4) 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:

for 
Rhonda Wagar
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica 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, $R = \text{constants} * f(x,y,z,...)$. 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 TestAmerica.
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 CRDL (RL)	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations. Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "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 4321 C 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 TestAmerica 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: 20-Jun-11

TestAmerica TARL

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

Report No. : 47035

SDG No: J01138

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1167185	7196_CR6								
	B2C6D4								
	MJ92X1AA	HEXCHROME	6.00E-03 +- 0.0E+00		mg/L	N/A	2.00E-03	3.50E-01	
	MJ92X1AE	HEXCHROME	7.00E-03 +- 0.0E+00		mg/L	N/A	2.00E-03	3.50E-01	15.4
No. of Results:		2							

TestAmerica RPD - Relative Percent Difference.

rptSTLRchSaSum
mary2 V5.2.15
A2002

QC Results Summary

Date: 20-Jun-11

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 47035

SDG No.: J01138

Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
7196_CR6									
1167185	MATRIX SPIKE, B2C6D4								
	MJ92X1AC	HEXCHROME	2.73E-01 +- 0.0E+00		mg/L	N/A	104%	0.0	2.00E-03
	MJ92X1AD	HEXCHROME	2.75E-01 +- 0.0E+00		mg/L	N/A	105%	0.0	2.00E-03
1167185	LCS,								
	MKACA1AC	HEXCHROME	5.01E-01 +- 0.0E+00		mg/L	N/A	100%	0.0	2.00E-03
1167185	BLANK QC,								
	MKACA1AA	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A			2.00E-03
No. of Results: 4									

TestAmerica

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

ptSTLRchQcSummary V5.2.15
A20 02

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

FORM I

Date: 20-Jun-11

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J01138

Collection Date: 6/16/2011 10:30:00 AM

Lot-Sample No.: J1F160482-1

Report No. : 47035

Received Date: 6/16/2011 1:35:00 PM

Client Sample ID: B2C6D4

COC No. : RC-173-068

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/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1167185	7196_CR6			Work Order: MJ92X1AA			Report DB ID: 9MJ92X10					
HEXCHROME	6.00E-03			0.0E+00	2.00E-03	mg/L	N/A	(3.)	6/16/11 05:45 p		100.0	
							3.50E-01	N/A			ML	

No. of Results: 1 Comments:

FORM I

Date: 20-Jun-11

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J01138

Collection Date: 6/16/2011 10:30:00 AM

Lot-Sample No.: J1F160482-1

Report No. : 47035

Received Date: 6/16/2011 1:35:00 PM

Client Sample ID: B2C6D4

COC No. : RC-173-068

Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Count 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
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FORM II

Date: 20-Jun-11

DUPLICATE RESULTS

Lab Name: TestAmerica

SDG: J01138

Collection Date: 6/16/2011 10:30:00 AM

Lot-Sample No.: J1F160482-1

Report No. : 47035

Received Date: 6/16/2011 1:35:00 PM

Client Sample ID: B2C6D4

COC No. : RC-173-068

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/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1167185	7196_CR6				Work Order: MJ92X1AE			Report DB ID: MJ92X1ER		Orig Sa DB ID: 9MJ92X10		
HEXCHROME	7.00E-03			0.0E+00	2.00E-03	mg/L	N/A	(3.5)	6/16/11 05:45 p		100.0	
	6.00E-03			RPD 15.4			3.50E-01	N/A			ML	

No. of Results: 1 Comments:

TestAmerica RPD - Relative Percent Difference.

rptSTLRchDupV5.2 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

FORM II
BLANK RESULTS

Date: 20-Jun-11

Lab Name: TestAmerica

SDG: J01138

Matrix: WATER

Report No. : 47035

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	Primary Detector
Batch: 1167185	7196_CR6				Work Order: MKACA1AA			Report DB ID: MKACA1AB				
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	6/16/11 05:45 p		100.0	
						3.50E-01		N/A			ML	

No. of Results: 1 Comments:

FORM II
LCS RESULTS

Date: 20-Jun-11

Lab Name: TestAmerica

SDG: J01138

Matrix: WATER

Report No. : 47035

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	Primary Detector
Batch: 1167185	7196_CR6					Work Order: MKACA1AC		Report DB ID: MKACA1AS					
HEXCHROME	5.01E-01			0.0E+00	2.00E-03	mg/L		N/A	5.00E-01	100%	6/16/11 05:45 p	100.0	
							Rec Limits:	70	130	0.0		ML	

No. of Results: 1 Comments:

FORM II

Date: 20-Jun-11

MATRIX SPIKE RESULTS

Lab Name: TestAmerica

SDG: J01138

Lot-Sample No.: J1F160482-1, B2C6D4

Report No. : 47035

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Count Qual Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 1167185 HEXCHROME	Work Order: MJ92X1AC 2.73E-01 6.00E-03	Report DB ID: MJ92X1CW	MJ92X1CW	2.00E-03	mg/L	N/A	103.80%	2.63E-01	6/16/11 05:45 p	100.0 ML	7196_CR6
Batch: 1167185 HEXCHROME	Work Order: MJ92X1AD 2.75E-01 2.73E-01	Report DB ID: MJ92X1DW	MJ92X1DW	2.00E-03	mg/L	N/A	104.56%	2.63E-01	6/16/11 05:45 p	100.0 ML	7196_CR6

Number of Results: 2

Comments:

13

FORM II

Date: 20-Jun-11

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica

SDG: J01138

Lot-Sample No.: J1F160482-1, B2C6D4

Report No. : 47035

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1167185	7196_CR6			Work Order: MJ92X1AC		Report DB ID: MJ92X1CW		Orig Sa DB ID: MJ92X1DW				
HEXCHROME	2.73E-01			0.0E+00	2.00E-03	mg/L	N/A	103.80%	2.63E-01	6/16/11 05:45 p	100.0	
	2.75E-01	RPD	0.7								ML	
Batch: 1167185	7196_CR6			Work Order: MJ92X1AD		Report DB ID: MJ92X1DW		Orig Sa DB ID: MJ92X1CW				
HEXCHROME	2.75E-01			0.0E+00	2.00E-03	mg/L	N/A	104.56%	2.63E-01	6/16/11 05:45 p	100.0	
	2.73E-01	RPD	0.7								ML	
No. of Results: 2	Comments:											

Batch Number(s): 1167185				
Lab Sample Numbers or SDG: J01138				
Method/Test/Parameter: Cr+6 in Water / RL-WC-003				
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?			✓	✓

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
E. Other			✓	
1. Are all nonconformances included and noted?				✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:

Analyst: _____

Date: 06-16-11

Second-Level Review: _____

[Handwritten signature]

Date: 6/17/11

TestAmerica Laboratories, Inc.

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-173-068	PAGE 1 OF 1
COLLECTOR <i>Zunker, Christie, B. Hingsley</i>		COMPANY CONTACT KESSNER, JH	TELEPHONE NO. 375-4688	PROJECT COORDINATOR KESSNER, JH	PRICE CODE 7N	DATA TURNAROUND 45 Days / 45 Days <i>2 day TAT</i>
SAMPLING LOCATION C7861 (116-H-7); ADD ON 1		PROJECT DESIGNATION Groundwater Sampling - 100-HR-3 Decision Unit		SAF NO. RC-173	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO. <i>HNF-N-491-14 Pg. 28</i>	ACTUAL SAMPLE DEPTH <i>41'3"</i>	COA 302509ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A <i>Rwink</i>			

MATRX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C	
		HOLDING TIME	24 Hours	
		TYPE OF CONTAINER	gG	
		NO. OF CONTAINER(S)	1	
		SPECIAL HANDLING AND/OR STORAGE	VOLUME	500mL
		SAMPLE ANALYSIS	Chromium Hex - 7196 (100 Area RIFS);	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2C6D4	WATER <i>MYQAX</i>	6/16/11	1030	<input checked="" type="checkbox"/>

Quote # 27023
 SDG # J01138
 LOT # J1F160482
 Report: SAH Fall
Rwink



CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS ** All Test America samples requesting Hex Cr must be processed at the Richland facility.
RELINQUISHED BY/REMOVED FROM <i>Zunker Christie</i>	DATE/TIME <i>6/16/11 1335</i>	RECEIVED BY/STORED IN <i>Lucas Volz</i>	DATE/TIME <i>6/16/11 1335</i>	
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	
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: 6.16.11 1335 GM Screen Result: (Airlock) .4 Initials RR
 (Sample Receiving) .3 Initials RR
 Client: WCH SDG #: JD1138 NA [] SAF #: RC-173 NA []
 Lot Number: J1F160482
 Chain of Custody # RC-173-068
 Shipping Container ID: Hand Delivered NA []

Samples received inside shipping container/cooler/box Yes [] Continue with 1 through 4. Initial appropriate response.
 No NG Go to 5, add comment to #16.

- 1. Custody Seals on shipping container intact? Yes [] No [] No Custody Seal []
- 2. Custody Seals dated and signed? Yes [] No [] No Custody Seal []
- 3. Cooler temperature: 11.5 °C NA []
- 4. Vermiculite/packing materials is NA [] Wet [] Dry []

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes RR No []
- 6. Number of samples received (Each sample may contain multiple bottles): 2 sample
- 7. Containers received: 2x 500MLAG TOTAL 2 containers

8. Sample holding times exceeded? NA [] Yes [] No RR

9. Samples have:
RR tape hazard labels
RR custody seals appropriate sample labels

10. Matrix: RR I (Water)
 ___ S (Air, Niosh 7400) ___ T (Biological, Ni-63)

11. Samples:
RR are in good condition ___ are leaking
 ___ are broken ___ have air bubbles (Only for samples requiring no head space)
 ___ Other

12. Sample pH appropriate for analysis requested Yes W No [] NA []
 (If acidification is necessary, then document sample ID, initial pH, amount of HNO₃ added and pH after addition on table overleaf)
 RPL ID # of preservative used : _____

13. Were any anomalies identified in sample receipt? Yes [] No RR

14. Description of anomalies (include sample numbers): NA RR

06/16/2011 5:40:37 PM

Sample Preparation/Analysis

Balance Id:

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 07/07/2011

Sep1 DT/Tm Tech:

Batch: 1167185 WATER mg/L
SEQ Batch, Test: None All Tests: 1167185 88EA,

PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

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:
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1 MJ92X-1-AA

J1F160482-1-SAMP

06/16/2011 10:30		AmtRec: 1X500MLAG					Scr:	Alpha:	Beta:
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2 MJ92X-1-AC-S

J1F160482-1-MS

06/16/2011 10:30		AmtRec: 1X500MLAG					Scr:	Alpha:	Beta:
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3 MJ92X-1-AD-D

J1F160482-1-MSD

06/16/2011 10:30		AmtRec: 1X500MLAG					Scr:	Alpha:	Beta:
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4 MJ92X-1-AE-X

J1F160482-1-DUP

06/16/2011 10:30		AmtRec: 1X500MLAG					Scr:	Alpha:	Beta:
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5 MKACA-1-AA-B

J1F160000-185-BLK

06/16/2011 17:40 pd		AmtRec:					Scr:	Alpha:	Beta:
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6 MKACA-1-AC-C

J1F160000-185-LCS

06/16/2011 17:40 pd		AmtRec:					Scr:	Alpha:	Beta:
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6/16/2011 5:40:38 PM

Sample Preparation/Analysis

Balance Id:

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/07/2011

Sep1 DT/Tm Tech:

Batch: 1167185

mg/L

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:
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Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27023

MJ92X1AA-SAMP Constituent List:

MJ92X1AC-MS Constituent List:

MJ92X1AD-MSD:

MKACA1AA-BLK:

MKACA1AC-LCS:

MJ92X1AA-SAMP Calc Info:

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

MJ92X1AC-MS Calc Info:

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

MJ92X1AD-MSD:

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

MKACA1AA-BLK:

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

MKACA1AC-LCS:

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