

0072026

Analytical Data Package Prepared For

Fluor Hanford

Radiochemical Analysis By

STL Richland

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

Assigned Laboratory Code: STLRL

Data Package Contains _____ Pages

Report No.: 33177

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W04993	R06-013	B1KB49	J6H180154-3	JCM2R1AA	9JCM2R10	6230466
		B1KB50	J6H180154-4	JCM261AA	9JCM2610	6230466
		B1KB51	J6H180154-2	JCM1W1AA	9JCM1W10	6230466
		B1KB52	J6H180154-1	JCM1K1AA	9JCM1K10	6230466

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JAN 22 2007
EDMC



STL Richland
2800 George Washington Way
Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590
www.stl-inc.com

Certificate of Analysis

Fluor Hanford
P.O. Box 1000, T6-03
Richland, WA 99352

August 31, 2006

Attention: John Trechter

SAF Number	:	R06-013
Date SDG Closed	:	August 17, 2006
Number of Samples	:	Four (4)
Sample Type	:	Soil
SDG Number	:	W04993
Data Deliverable	:	15 / 15-Day Summary

CASE NARRATIVE

I. Introduction

On August 17, 2006, four soil samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned to lot J6H180154 and assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

<u>FH ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1KB52	JCM1K	SOIL	8/17/06
B1KB51	JCM1W	SOIL	8/17/06
B1KB49	JCM2R	SOIL	8/17/06
B1KB50	JCM26	SOIL	8/17/06

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.

Fluor Hanford
August 31, 2006

The requested analyses were:

Liquid Scintillation Counting
Selenium-79 by method RICH-RC-5043

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.

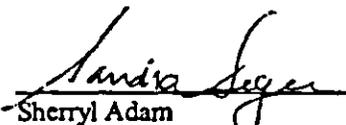
V. Comments

Gas Proportional Counting
Selenium-79 by method RICH-RC-5043

There is currently not an available standard for Selenium 79 and an LCS was not analyzed. The batch blank, sample and sample duplicate (B1KB52) 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:


Sherryl Adam
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, $R = \text{constants} * f(x,y,z,...)$. 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</i> , the combined uncertainty. 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%. $Lc = (1.645 * \sqrt{2 * (BkgrndCnt/BkgrndCntMin)/SCntMin}) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct)$. 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%. $MDC = (4.65 * \sqrt{(BkgrndCnt/BkgrndCntMin)/SCntMin}) + 2.71/SCntMin * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct)$. 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 = $(S-D)/[\sqrt{(TPUs^2 + TPUd^2)}]$ 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: 31-Aug-06

STL Richland STLRL

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

Report No. : 33177

SDG No: W04993

Batch	Client Id Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RPD
6230466	SE79_SEP_IE_LSC								
	B1KB49								
	JCM2R1AA	SE-79	1.87E-01 +/- 9.61E-01	U	pCi/g	87%	1.94E+00	1.00E+01	
	B1KB50								
	JCM261AA	SE-79	2.54E-01 +/- 5.09E-01	U	pCi/g	84%	1.01E+00	1.00E+01	
	B1KB51								
	JCM1W1AA	SE-79	2.83E-02 +/- 5.01E-01	U	pCi/g	80%	1.02E+00	1.00E+01	
	B1KB52								
	JCM1K1AA	SE-79	1.72E-01 +/- 4.92E-01	U	pCi/g	86%	9.87E-01	1.00E+01	
	B1KB52 DUP								
	JCM1K1AC	SE-79	2.04E-02 +/- 4.89E-01	U	pCi/g	85%	9.93E-01	1.00E+01	157.5
No. of Results: 5									

STL Richland

RPD - Relative Percent Difference.

rptSTLRchSaSummary2 V5.0.1
A2002

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: 31-Aug-06

Report No. : 33177

SDG No.: W04993

Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC/MDA
SE79_SEP_IE_LSC	6230466	BLANK QC							
	JCN291AA	SE-79	-2.01E-03 +/- 8.17E-01	U	pCi/g	52%			1.66E+00
No. of Results: 1									

STL Richland Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSum 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
 mary V5.0.1 A2002 gamma scan software.

FORM I
SAMPLE RESULTS

Date: 31-Aug-06

Lab Name: STL Richland

SDG: W04993

Collection Date: 8/16/2006 3:30:00 PM

Lot-Sample No.: J6H180154-3

Report No.: 33177

Received Date: 8/17/2006 2:15:00 PM

Client Sample ID: B1KB49

COC No.: R06-013-012

Matrix: SOIL SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	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: 6230466	SE79_SEP_IE_LSC			Work Order: JCM2R1AA		Report DB ID: 9JCM2R10					
SE-79	1.87E-01 U	8.0E-01	9.6E-01	1.94E+00	pCi/g	87%	0.1	8/31/06 05:07 a		1.02	LSC3
						9.29E-01	1.00E+01			G	

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 31-Aug-06

Lab Name: STL Richland
Lot-Sample No.: J6H180154-4
Client Sample ID: B1KB50

SDG: W04993
Report No.: 33177
COC No.: R06-013-014

Collection Date: 8/16/2006 3:30:00 PM
Received Date: 8/17/2006 2:15:00 PM
Matrix: SOIL SOLID

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: 6230466	SE79_SEP_IE_LSC				Work Order: JCM261AA		Report DB ID: 9JCM2610					
SE-79	2.54E-01	U	4.3E-01	5.1E-01	1.01E+00	pCi/g	84%	0.25	8/31/06 06:00 a		2.03	LSC3
							4.85E-01	1.00E+01			G	

No. of Results: 1 Comments:

STL Richland MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
rptSTLRchSample 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.
V5.0.1 A2002

FORM I

Date: 31-Aug-06

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W04993

Collection Date: 8/16/2006 10:00:00 AM

Lot-Sample No.: J6H180154-2

Report No.: 33177

Received Date: 8/17/2006 2:15:00 PM

Client Sample ID: B1KB51

COC No.: R06-013-016

Matrix: SOIL SOLID

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: 6230466	SE79_SEP_JE_LSC				Work Order: JCM1W1AA		Report DB ID: 9JCM1W10					
SE-79	2.83E-02	U	4.2E-01	5.0E-01	1.02E+00	pCi/g	80%	0.03	8/31/06 04:14 a		2.12	LSC3
							4.86E-01	1.00E+01			G	

No. of Results: 1 Comments:

FORM I

Date: 31-Aug-06

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W04993

Collection Date: 8/16/2006 11:00:00 AM

Lot-Sample No.: J6H180154-1

Report No.: 33177

Received Date: 8/17/2006 2:15:00 PM

Client Sample ID: B1KB52

COC No.: R06-013-018

Matrix: SOIL SOLID

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: 6230466	SE79_SEP_IE_LSC				Work Order: JCM1K1AA		Report DB ID: 9JCM1K10					
SE-79	1.72E-01	U	4.1E-01	4.9E-01	9.87E-01	pCi/g	86%	0.17	8/31/06 02:28 a		2.02	LSC3
					4.73E-01		1.00E+01	0.7			G	

No. of Results: 1 Comments:

FORM II

Date: 31-Aug-06

DUPLICATE RESULTS

Lab Name: STL Richland

SDG: W04993

Collection Date: 8/16/2006 11:00:00 AM

Lot-Sample No.: J6H180154-1

Report No.: 33177

Received Date: 8/17/2006 2:15:00 PM

Client Sample ID: B1KB52 DUP

COC No.: R06-013-018

Matrix: SOIL SOLID

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: 6230468	SE79_SEP_IE_LSC				Work Order: JCM1K1AC				Orig Sa DB ID: 9JCM1K10			
SE-79	2.04E-02	U	4.1E-01	4.9E-01	9.93E-01	pCi/g	85%	0.02	8/31/06 03:21 a		2.04	LSC3
	1.72E-01	U	RPD 157.5			1.00E+01		0.08			G	

No. of Results: 1 Comments:

STL Richland RPD - Relative Percent Difference.

rptSTLRchDupV5.0 MDC|MDA,Le - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

.1 A2002 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: 31-Aug-06

Lab Name: STL Richland
Matrix: SOIL

SDG: W04993
Report No.: 33177

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6230466	SE79_SEP_IE_LSC											
					Work Order: JCN291AA		Report DB ID: JCN291AB					
SE-79	-2.01E-03	U	6.8E-01	8.2E-01	1.66E+00	pCi/g	52%	0.	8/31/06 06:53 a		2.0	LSC3
					7.95E-01	1.00E+01		0.			G	

No. of Results: 1 Comments:

Lot No., Due Date: J6H180154; 09/01/2006
Client, Site: 108302; RUS TEDF HANFORD
QC Batch No., Method Test: 6230466; RSE79 Se-79 by LSC
SDG, Matrix: W04993; SOIL

- 1.0: COC
 - 1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A
- 2.0: QC Batch
 - 2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A
 - 2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A
 - 2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A
 - 2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A
- 3.0: QC & Samples
 - 3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A
 - 3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A
 - 3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A
 - 3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A
 - 3.5 Are the sample yields and MDAs within contract limits? Yes No N/A
- 4.0: Raw Data
 - 4.1 Were results calculated in the correct units? Yes No N/A
 - 4.2 Were analysis volumes entered correctly? Yes No N/A
 - 4.3 Were Yields entered correctly? Yes No N/A
 - 4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A
 - 4.5 Were raw counts reviewed for anomalies? Yes No N/A
- 5.0: Other
 - 5.1 Are all nonconformances included and noted? Yes No N/A
 - 5.2 Are all required forms filled out? Yes No N/A
 - 5.3 Was the correct methodology used? Yes No N/A
 - 5.4 Was transcription checked? Yes No N/A
 - 5.5 Were all calculations checked at a minimum frequency? Yes No N/A
 - 5.6 Are worksheet entries complete and correct? Yes No N/A
- 6.0 Comments on any No response:

First Level Review

Paul Anderson

Date

9-31-06

SEVERN
TRENT

STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

OC Batch Number: 6230416
W0 4993

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

Comments on any "No" response: _____

Second Level Review: Sherry R Adam Date: 8-31-86

ST. RICHLAND

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R06-013-018

PAGE 1 OF 1

COLLECTOR HOGAN, JG
SAMPLING LOCATION 200-W-42
ICE CHEST NO.

JGH180154
W04993
Due 9-1-06

COMPANY CONTACT TRECHTER, JE
TELEPHONE NO. 373-7046
PROJECT DESIGNATION 200-UW-1 Operable Unit, Soil from Trench between 216-U-8 and 216-U-12
FIELD LOGBOOK NO. COA
OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR TRECHTER, JE
SAF NO. R06-013
METHOD OF SHIPMENT GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8C
AIR QUALITY
DATA TURNAROUND 15 Days

SHIPPED TO Severn Trent Incorporated, Richland

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1KB52		S	5-16-06	1:00	4X60mL G/P Selenium-79 (Se-79)	Jemik	None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM JG HOGAN	DATE/TIME 8-17-06 1720	RECEIVED BY/STORED IN F M HALL	DATE/TIME 8-17-06 1720
RELINQUISHED BY/REMOVED FROM F M HALL	DATE/TIME 8-17-06 1415	RECEIVED BY/STORED IN S. Smith	DATE/TIME 8-17-06 1415
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

Reporting format the same as GPP, including QC. All samples, except VOAs, have been taken using the multiple-increment sampling program. This requires the entire sample provided in each bottle to be used in analysis. VOAs will be analyzed as usual.

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

STL RICHLAND

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R06-013-016

PAGE 1 OF 1

COLLECTOR HOGAN, JG
SAMPLING LOCATION 200-W-42
ICE CHEST NO.
Due 9106

COMPANY CONTACT TRECHTER, JE
TELEPHONE NO. 373-7046
PROJECT DESIGNATION 200-UW-1 Operable Unit, Soil from Trench between 216-U-8 and 216-U-12
FIELD LOGBOOK NO. DTS-SANS-H112
COA 121600ES20
OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR TRECHTER, JE
SAF NO. R06-013
METHOD OF SHIPMENT GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8C
AIR QUALITY

DATA TURNAROUND 15 Days / 15 Days

SHIPPED TO Severn Trent Incorporated, Richland

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1KBS1		S	8/16/06	1000	4X50mL G/P Selenium-79 (Se-79)	JCMIW	None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM: SG HOGAN, JG DATE/TIME: 8/16/06 1320 RECEIVED BY/STORED IN: FM Hall DATE/TIME: 8/16/06 1320

RELINQUISHED BY/REMOVED FROM: FM Hall DATE/TIME: 8/16/06 1415 RECEIVED BY/STORED IN: S. Smith DATE/TIME: 8/16/06 1415

RELINQUISHED BY/REMOVED FROM: DATE/TIME: RECEIVED BY/STORED IN: DATE/TIME:

Reporting format the same as GPP, including QC. All samples, except VOAs, have been taken using the multiple-increment sampling program. This requires the entire sample provided in each bottle to be used in analysis. VOAs will be analyzed as usual.

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R06-013-012

PAGE 1 OF 1

COLLECTOR
HOGAN, JG
SAMPLING LOCATION
200-W-42
ICE CHEST NO.

COMPANY CONTACT
TRECHTER, JE
TELEPHONE NO.
373-7046
PROJECT DESIGNATION
200-UW-1 Operable Unit, Soil from Trench between 216-U-8 and 216-U-12
FIELD LOGBOOK NO.
DTS-SAWS-H 11Z
COA
121600ES20
OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
TRECHTER, JE
SAF NO.
R06-013
METHOD OF SHIPMENT
GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8C
AIR QUALITY

DATA
TURNAROUND
15 Days /
15 Days

SHIPPED TO
Severn Trent Incorporated, Richland

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1KB49		S	8/16/06	1530	4X60g G/P Selenium-79 (Se-79)	JCMAR	None

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN

DATE/TIME

SPECIAL INSTRUCTIONS

Reporting format the same as GPP, including QC. All samples, except VOAs, have been taken using the multiple-increment sampling program. This requires the entire sample provided in each bottle to be used in analysis. VOAs will be analyzed as usual.

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

ST. RICHLAND

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R06-013-014

PAGE 1 OF 1

COLLECTOR HOGAN, XG
SAMPLING LOCATION 200-W-42
ICE CHEST NO.

J64 180154
W04993

COMPANY CONTACT TRECHTER, JE
TELEPHONE NO. 373-7046
PROJECT DESIGNATION 200-UW-1 Operable Unit, Soil from Trench between 216-U-8 and 216-U-12
FIELD LOGBOOK NO. COA
DTS-SAN3-H112 121600ES20
OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR TRECHTER, JE
SAF NO. R06-013
METHOD OF SHIPMENT GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO. N/A

PRICE CODE SC
AIR QUALITY
DATA TURNAROUND 15 Days / 15 Days

SHIPPED TO Severn Trent Incorporated, Richland

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
BIK850		S	8-16-06	1530	4x60ml G/P Selenium-79 (Se-79)	Jemal	None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

JG Hogan

8-17-06

F.M. Hall

8-17-06

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

F.M. Hall

8-17-06

J. Smith

8-17-06

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

1320
Reporting format the same as GPP, including QC. All samples, except VOAs, have been taken using the multiple-increment sampling program. This requires the entire sample provided in each bottle to be used in analysis. VOAs will be analyzed as usual.



STL

Sample Check-in List

Date/Time Received: 8-17-06 14:15

Client: RUS SDG #: W04993 NA SAF #: R06-013 NA

Work Order Number: J6 H180154 Chain of Custody # R06-013-018, 016, 012, 014

Shipping Container ID: N/A Air Bill # N/A

16x
60ml

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: _____ NA 5. Vermiculite/packing materials is NA Wet Dry
6. Number of samples in shipping container: 4
7. Sample holding times exceeded? NA Yes No
8. Samples have:
 - _____ tape
 - _____ custody seals
 - _____ hazard labels
 - _____ appropriate samples labels
9. Samples are:
 - _____ in good condition
 - _____ broken
 - _____ leaking
 - _____ have air bubbles
 - (Only for samples requiring head space)
10. Sample pH taken? SOL 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): N/A

Sample Custodian: A. Smith Date: 8-17-06 14:15

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

8/25/2006 8:04:28 AM

Sample Preparation/Analysis

Balance Id:1120373922

108302, Fluor Hanford Inc
Management Federal Servi

. Waste

CW Se-79 PrpRC5013, SepRC5043
TM Selenium-79 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/01/2006

Sep1 DT/Tm Tech:

Batch: 6230466 SOIL
SEQ Batch, Test: None

pCl/g

PM, Quote: SA , 27045

Sep2 DT/Tm Tech:

Prep Tech: ,BarbosaH

Work Order, Lot, Sample Date Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Ini/Date	Comments:
1 JCM1K-1-AA J6H180154-1-SAMP 08/16/2006 11:00		2.02g,in	SETA0125 08/25/06						
		AmtRec: 4X60ML	#Containers: 4				Scr: Alpha: Beta:		
2 JCM1K-1-AC-X J6H180154-1-DUP 08/16/2006 11:00		2.04g,in	SETA0126 08/25/06						
		AmtRec: 4X60ML	#Containers: 4				Scr: Alpha: Beta:		
3 JCM1W-1-AA J6H180154-2-SAMP 08/16/2006 10:00		2.12g,in	SETA0127 08/25/06						
		AmtRec: 4X60ML	#Containers: 4				Scr: Alpha: Beta:		
4 JCM2R-1-AA J6H180154-3-SAMP 08/16/2006 15:30		1.02g,in	SETA0128 08/25/06						
		AmtRec: 4X60ML	#Containers: 4				Scr: Alpha: Beta:		
5 JCM26-1-AA J6H180154-4-SAMP 08/16/2006 15:30		2.03g,in	SETA0129 08/25/06						
		AmtRec: 4X60ML	#Containers: 4				Scr: Alpha: Beta:		
6 JCN29-1-AA-B J6H180000-466-BLK 08/16/2006 11:00		2.00g,in	SETA0130 08/25/06						
		AmtRec:	#Containers: 1				Scr: Alpha: Beta:		
7 JCN29-1-AC-BN J6H180000-466-IBLK 08/16/2006 11:00									
		AmtRec:	#Containers: 1				Scr: Alpha: Beta:		

STL Richland Key: In - Initial Amt, fi - Final Amt, dl - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7
Prep_SamplePrep v4.8.24

21

STL RICHLAND

8/25/2006 8:04:30 AM

Sample Preparation/Analysis

Balance Id:

CW Se-79 PrpRC5013, SepRC5043
 TM Selenium-79 by Liquid Scint
 SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 09/01/2006

Sep1 DT/Tm Tech:

Batch: 6230466 pCi/g
 SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Comments:

All Clients for Batch:
 108302, Fluor Hanford Inc Waste Management Federal Servi, SA , 27045

JCN1K1AA-SAMP Constituent List:

Se-79	RDL:10	pCi/g	LCL:	UCL:	RPD:
JCN291AA-BLK:					
Se-79	RDL:10	pCi/g	LCL:	UCL:	RPD:
JCN291AC-IBLK:					
Se-79	RDL:10	pCi/g	LCL:	UCL:	RPD:

JCN1K1AA-SAMP Calc Info:

Uncert Level (#s):	Decay to SaDt:	Blk Subt.:	Sci.Not.:	ODRs:
2	Y	N	Y	B
JCN291AA-BLK:				
2	Y	N	Y	B
JCN291AC-IBLK:				
2	Y	N	Y	B

Approved By _____ Date: _____

22

8/31/2006 1:16:45 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/31/2005, 8/5/2006, Batch: '6230466', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6230466				
AC	CalcC	HansenM	8/23/2006 1:46:11 PM	
SC		wagarr	IsBatched 8/18/2006 1:10:08 PM	ICOC_RADCALC v4.8.24
SC		HansenM	InPrep 8/23/2006 1:46:11 PM	RICH-RC-5013 REVISION 5
SC		HansenM	Prep2C 8/26/2006 1:28:05 PM	RICH-RC-5013 REVISION 5
SC		ManisD	Sep1C 8/30/2006 5:12:59 PM	RICH-RC-5043 REV 2
SC		DAWKINSO	InCnt1 8/30/2006 7:49:20 PM	RICH-RD-0001 REVISION 3
SC		StringerR	CalcC 8/31/2006 12:22:41 PM	RICH-RD-0001 REVISION 3
AC		HansenM	8/26/2006 1:28:05 PM	
AC		ManisD	8/30/2006 5:12:59 PM	
AC		DAWKINSO	8/30/2006 7:49:20 PM	
AC		StringerR	8/31/2006 12:22:41	

AC: Accepting Entry, SC: Status Change

STL Richland

Richland Wa.