Analytical Data Package Prepared For

Pacific Northwest National Lab

Radiochemical Analysis By

STL Richland STLRL

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

Data Package Contains _____ Pages

Report Nbr: 29545

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04674	A05-007	B1D2M3	J5F020321-1	HCR5T1AA	9HCR5T10	5160124
		B1D2N0	J5F020321-2	HCR5V1AA	9HCR5V10	5160124
		B1D2L8	J5F020321-3	HCR5X1AA	9HCR5X10	5160124
		B1D2N1	J5F020321-4	HCR511AA	9HCR5110	5160124
	W05-006	B1D1K2	J5F020324-1	HCR581AA	9HCR5810	5160117
		B1D1K2	J5F020324-1	HCR581AC	9HCR5810	5160127
		B1D1K2	J5F020324-1	HCR581AD	9HCR5810	5160130
		B1D1K2	J5F020324-1	HCR581AE	9HCR5810	5160120
		B1D1M3	J5F020324-2	HCR6D1AA	9HCR6D10	5160117
		B1D1M3	J5F020324-2	HCR6D1AC	9HCR6D10	5160127
		B1D1M3	J5F020324-2	HCR6D1AD	9HCR6D10	5160130
		B1D1M3	J5F020324-2	HCR6D1AE	9HCR6D10	5160120
		B1D1Y0	J5F020324-3	HCR6H1AA	9HCR6H10	5160117
		B1D1Y0	J5F020324-3	HCR6H1AC	9HCR6H10	5160127
		B1D1Y0	J5F020324-3	HCR6H1AD	9HCR6H10	5160130

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Comments:

1216864

Report Nbr: 29545

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04674	W05-006	B1D1Y0	J5F020324-3	HCR6H1AE	9HCR6H10	5160120
		B1D1R1	J5F020324-4	HCR6L1AA	9HCR6L10	5160117
		B1D1R1	J5F020324-4	HCR6L1AC	9HCR6L10	5160127
		B1D1R1	J5F020324-4	HCR6L1AD	9HCR6L10	5160130
		B1D1R1	J5F020324-4	HCR6L1AE	9HCR6L10	5160120
		B1D1H1	J5F060212-1	HC2EV1AA	9HC2EV10	5160117
		B1D1H1	J5F060212-1	HC2EV1AC	9HC2EV10	5160127
		B1D1H1	J5F060212-1	HC2EV1AD	9HC2EV10	5160130
		B1D1H1	J5F060212-1	HC2EV1AE	9HC2EV10	5160120
		B1D1R8	J5F060212-2	HC2EX1AA	9HC2EX10	5160117
		B1D1R8	J5F060212-2	HC2EX1AC	9HC2EX10	5160127
		B1D1R8	J5F060212-2	HC2EX1AD	9HC2EX10	5160130
		B1D1R8	J5F060212-2	HC2EX1AE	9HC2EX10	5160120
	A05-007	B1D2L9	J5F060214-1	HC2E41AA	9HC2E410	5160124
		B1D2M9	J5F060214-2	HC2E51AA	9HC2E510	5160124
		B1D2M5	J5F060217-1	HC2E71AA	9HC2E710	5160124
	W05-006	B1D1K9	J5F060218-1	HC2E91AA	9HC2E910	5160117
		B1D1K9	J5F060218-1	HC2E91AC	9HC2E910	5160127
		B1D1K9	J5F060218-1	HC2E91AD	9HC2E910	5160130
		B1D1K9	J5F060218-1	HC2E91AE	9HC2E910	5160120
	A05-007	B1D2M1	J5F060219-1	HC2FC1AA	9HC2FC10	5160124
		B1D2M0	J5F060219-2	HC2FD1AA	9HC2FD10	5160124
	W05-006	B1D1H9	J5F060220-1	HC2FG1AA	9HC2FG10	5160117
		B1D1H9	J5F060220-1	HC2FG1AC	9HC2FG10	5160127
		B1D1H9	J5F060220-1	HC2FG1AD	9HC2FG10	5160130
		B1D1H9	J5F060220-1	HC2FG1AE	9HC2FG10	5160120

Comments:

Report Nbr: 29545

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04674	W05-006	B1D1H8	J5F060220-2	HC2FK1AA	9HC2FK10	5160117
		B1D1H8	J5F060220-2	HC2FK1AC	9HC2FK10	5160127
		B1D1H8	J5F060220-2	HC2FK1AD	9HC2FK10	5160130
		B1D1H8	J5F060220-2	HC2FK1AE	9HC2FK10	5160120
	I05-037	B1D110	J5F070300-1	HC4JX1AA	9HC4JX10	5159123
	S05-006	B1D6J8	J5F070382-1	HC4981AA	9HC49810	5161142
		B1D6J8	J5F070382-1	HC4981AC	9HC49810	5161140
		B1D6J8	J5F070382-1	HC4981AD	9HC49810	5161143
		B1D6J8	J5F070382-1	HC4981AE	9HC49810	5160120

Comments:

SEVERN TRENT STL

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2800 George Washington Way
Richland, WA 99354

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Certificate of Analysis

Pacific Northwest National Laboratories
Sigma V Building
Richland, WA 99352

July 29, 2005

Attention: Dot Stewart

SAF Number	:	A05-007, I05-037, S05-006, W05-006
Date SDG Closed	:	June 8, 2005
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W04674
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

Between June 2, 2005 and June 7, 2005, twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

PGW ID#	STLR ID#	MATRIX	DATE OF RECEIPT
B1D2N1	HCR51	WATER	6/2/05
B1D2L8	HCR5X	WATER	6/2/05
B1D2N0	HCR5V	WATER	6/2/05
B1D2M3	HCR5T	WATER	6/2/05
B1D1R1	HCR6L	WATER	6/2/05
B1D1Y0	HCR6H	WATER	6/2/05
B1D1M3	HCR6D	WATER	6/2/05
B1D1K2	HCR58	WATER	6/2/05
B1D1H1	HC2EV	WATER	6/6/05
B1D1R8	HC2EX	WATER	6/6/05
B1D2L9	HC2E4	WATER	6/6/05

B1D2M9	HC2E5	WATER	6/6/05
B1D2M5	HC2E7	WATER	6/6/05
B1D1K9	HC2E9	WATER	6/6/05
B1D2M1	HC2FC	WATER	6/6/05
B1D2M0	HC2FD	WATER	6/6/05
B1D1H9	HC2FG	WATER	6/6/05
B1D1H8	HC2FK	WATER	6/6/05
B1D110	HC4JX	WATER	6/7/05
B1D6J8	HC498	WATER	6/7/05

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:

Alpha Spectroscopy
Plutonium-238, -239/240 by method RICH-RC-5010
Gas Proportional Counting
Gross Alpha by method RICH-RC-5014
Gross Beta by method RICH-RC-5014
Strontium-90 by method RICH-RC-5006
Gamma Spectroscopy
Gamma (LL) by method RICH-RC-5017
Liquid Scintillation Counting
Tritium by method RICH-RC-5007
Technetium-99 by method RICH-RC-5065
Laser Induced Phosphorimetry
Total Uranium by method RICH-RC-5058
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

IV. Quality Control

The analytical results for each analysis performed under SDG W04674 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

Alpha Spectroscopy

Plutonium-238, -239/240 by method RICH-RC-5010:

The LCS, batch blank, samples and sample duplicate (B1D6J8) results are within contractual requirements.

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1D1H9) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1D1K9) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006:

The LCS, batch blank, sample and sample duplicate (B1D6J8) results are within contractual requirements.

Gamma Spectroscopy

Gamma (LL) by method RICH-RC-5017:

The LCS, batch blank, samples and sample duplicate (B1D6J8) results are within contractual requirements.

Liquid Scintillation Counting

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1D1H1) results are within contractual requirements.

Technetium-99 by method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1D2L9) and sample matrix spike (B1D2M3) results are within contractual requirements.

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1D1R8) and sample matrix spike (B1D1R8) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

The LCS, batch blank, sample, sample duplicate (B1D110), and sample matrix spike/matrix spike duplicate (B1D110) 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 = 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/vn), 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) ***u_c - Combined Uncertainty.***	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, ***u_c 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.

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29545 File Name: h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2E410	B1D2L9		MW6-SBB-A1	A05-007	W04674					06/06/2005 10:55

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	1.98E+03	pCi/L	2.4E+01	1.2E+02		9.89E+00	100.0	TC99_ETVDSK_LS	1.337E-01	L	07/22/200 08:22	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2E510	B1D2M9		MW6-SBB-A1	A05-007	W04674					06/06/2005 12:05

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	1.46E+02	pCi/L	7.9E+00	1.5E+01		1.05E+01	100.0	TC99_ETVDSK_LS	1.264E-01	L	07/22/200 10:27	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2E710	B1D2M5		MW6-SBB-A1	A05-007	W04674					06/06/2005 11:23

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	5.09E+01	pCi/L	5.8E+00	8.9E+00		1.04E+01	100.0	TC99_ETVDSK_LS	1.27E-01	L	07/22/200 11:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2E910	B1D1K9		MW6-SBB-A1	W05-006	W04674					06/06/2005 11:23

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	5.11E+03	pCi/L	3.1E+02	3.9E+02		3.03E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 22:56	I
5160127	ALPHA	12587-46-1	1.27E+01	pCi/L	2.2E+00	3.4E+00		1.74E+00	100.0	9310_ALPHABETA	1.207E-01	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	2.38E+01	pCi/L	2.0E+00	4.1E+00		2.13E+00	100.0	9310_ALPHABETA	1.737E-01	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	3.43E+01	ug/L	4.1E+00	4.1E+00		6.99E-02		UTOT_KPA	3.00E-02	ML	07/26/200 13:34	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2EV10	B1D1H1		MW6-SBB-A1	W05-006	W04674					06/06/2005 10:55

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	1.88E+04	pCi/L	5.7E+02	9.7E+02		3.02E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 20:48	I
5160127	ALPHA	12587-46-1	1.46E+01	pCi/L	2.8E+00	4.1E+00		1.92E+00	100.0	9310_ALPHABETA	9.25E-02	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	5.68E+02	pCi/L	1.1E+01	8.6E+01		4.07E+00	100.0	9310_ALPHABETA	9.11E-02	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	3.13E+01	ug/L	3.7E+00	3.7E+00		7.35E-02		UTOT_KPA	2.85E-02	ML	07/26/200 12:43	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2EX10	B1D1R8		MW6-SBB-A1	W05-006	W04674					06/06/2005 12:05

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29545 File Name: h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	1.72E+04	pCi/L	5.4E+02	9.1E+02		3.04E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 22:13	I
5160127	ALPHA	12587-46-1	2.85E+00	pCi/L	1.1E+00	1.3E+00		1.38E+00	100.0	9310_ALPHABETA	1.259E-01	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	4.86E+01	pCi/L	2.5E+00	7.9E+00		2.00E+00	100.0	9310_ALPHABETA	1.926E-01	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	5.11E+00	ug/L	5.3E-01	5.3E-01		8.12E-02		UTOT_KPA	2.58E-02	ML	07/26/200 12:55	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2FC10	B1D2M1		MW6-SBB-A1	A05-007	W04674					06/06/2005 10:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	1.08E+00	pCi/L	4.4E+00	6.0E+00	U	1.04E+01	100.0	TC99_ETVDSK_LS	1.252E-01	L	07/22/200 12:32	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2FD10	B1D2M0		MW6-SBB-A1	A05-007	W04674					06/06/2005 12:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	5.62E+01	pCi/L	6.0E+00	9.3E+00		1.06E+01	100.0	TC99_ETVDSK_LS	1.259E-01	L	07/22/200 13:35	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2FG10	B1D1H9		MW6-SBB-A1	W05-006	W04674					06/06/2005 10:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	-1.84E+00	pCi/L	1.2E+02	1.3E+02	U	3.03E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 23:38	I
5160127	ALPHA	12587-46-1	1.86E-01	pCi/L	2.2E-01	2.2E-01	U	4.05E-01	100.0	9310_ALPHABETA	1.952E-01	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	8.97E-01	pCi/L	9.0E-01	9.1E-01	U	1.74E+00	100.0	9310_ALPHABETA	1.966E-01	L	07/23/200 12:28	I
5160120	Uranium	7440-61-1	3.22E-02	ug/L	3.6E-03	3.6E-03	U	8.48E-02		UTOT_KPA	2.47E-02	ML	07/26/200 13:38	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC2FK10	B1D1H8		MW6-SBB-A1	W05-006	W04674					06/06/2005 12:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	4.47E+03	pCi/L	3.0E+02	3.6E+02		3.03E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/14/200 02:28	I
5160127	ALPHA	12587-46-1	9.55E+00	pCi/L	1.6E+00	2.5E+00		9.97E-01	100.0	9310_ALPHABETA	1.994E-01	L	07/25/200 07:48	I
5160130	BETA	12587-47-2	1.91E+01	pCi/L	1.9E+00	3.7E+00		2.16E+00	100.0	9310_ALPHABETA	1.738E-01	L	07/23/200 12:28	I
5160120	Uranium	7440-61-1	1.86E+01	ug/L	1.9E+00	1.9E+00		8.35E-02		UTOT_KPA	2.51E-02	ML	07/26/200 13:44	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HC49810	B1D6J8		MW6-SBB-A1	S05-006	W04674					06/07/2005 11:12

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29545 File Name: h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5161142	CO-60	10198-40-0	-5.83E-01	pCi/L	2.3E+00	2.3E+00	U	4.36E+00		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	CS-134	13967-70-9	-2.47E-01	pCi/L	2.4E+00	2.4E+00	U	4.40E+00		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	CS-137	10045-97-3	1.16E+00	pCi/L	1.8E+00	1.8E+00	U	3.83E+00		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	EU-152	14683-23-9	7.10E-01	pCi/L	5.3E+00	5.3E+00	U	9.83E+00		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	EU-154	15585-10-1	4.43E+00	pCi/L	7.2E+00	7.2E+00	U	1.55E+01		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	EU-155	14391-16-3	1.32E+00	pCi/L	4.7E+00	4.7E+00	U	8.80E+00		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	K-40	13966-00-2	1.47E+01	pCi/L	5.6E+01	5.6E+01	U	3.17E+01		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161142	SB-125	14234-35-6	-3.18E+00	pCi/L	5.8E+00	5.8E+00	U	9.77E+00		GAMMALL_GS	1.9983E+00	L	07/25/200 06:03	I
5161140	PU-238	13981-16-3	0.00E+00	pCi/L	1.3E-01	1.3E-01	U	1.45E-01	61.7	PUISO_PLATE_AE	1.99E-01	L	07/27/200 12:11	I
5161140	PU-239	PU-239/240	-1.07E-02	pCi/L	2.1E-02	2.1E-02	U	2.56E-01	61.7	PUISO_PLATE_AE	1.99E-01	L	07/27/200 12:11	I
5161143	SR-90	10098-97-2	1.95E-01	pCi/L	4.7E-01	5.1E-01	U	1.05E+00	35.7	SRISO_SEP_PRE	1.0001E+00	L	07/23/200 12:26	I
5160120	Uranium	7440-61-1	2.93E+01	ug/L	3.5E+00	3.5E+00		7.76E-02		UTOT_KPA	2.70E-02	ML	07/26/200 13:49	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR5110	B1D2N1		MW6-SBB-A1	A05-007	W04674					06/02/2005 12:05

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	4.53E+01	pCi/L	5.6E+00	8.5E+00		1.03E+01	100.0	TC99_ETVDSK_LS	1.291E-01	L	07/22/200 07:20	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR5810	B1D1K2		MW6-SBB-A1	W05-006	W04674					06/02/2005 09:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	1.80E+02	pCi/L	1.3E+02	1.4E+02	U	3.04E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 17:58	I
5160127	ALPHA	12587-46-1	3.46E+00	pCi/L	1.4E+00	1.5E+00		1.67E+00	100.0	9310_ALPHABETA	7.83E-02	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	1.76E+01	pCi/L	1.7E+00	3.1E+00		2.15E+00	100.0	9310_ALPHABETA	1.916E-01	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	2.68E+00	ug/L	2.8E-01	2.8E-01		8.48E-02		UTOT_KPA	2.47E-02	ML	07/26/200 12:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR5T10	B1D2M3		MW6-SBB-A1	A05-007	W04674					06/02/2005 09:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	5.08E+01	pCi/L	5.9E+00	9.0E+00		1.06E+01	100.0	TC99_ETVDSK_LS	1.252E-01	L	07/22/200 03:09	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR5V10	B1D2N0		MW6-SBB-A1	A05-007	W04674					06/02/2005 11:11

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29545 File Name: h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	1.06E+02	pCi/L	7.1E+00	1.2E+01		1.03E+01	100.0	TC99_ETVDSK_LS	1.288E-01	L	07/22/200 05:14	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR5X10	B1D2L8		MW6-SBB-A1	A05-007	W04674					06/02/2005 10:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160124	TC-99	14133-76-7	4.56E+01	pCi/L	5.6E+00	8.5E+00		1.03E+01	100.0	TC99_ETVDSK_LS	1.297E-01	L	07/22/200 06:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR6D10	B1D1M3		MW6-SBB-A1	W05-006	W04674					06/02/2005 11:11

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	1.76E+04	pCi/L	5.5E+02	9.2E+02		3.06E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 18:41	I
5160127	ALPHA	12587-46-1	4.38E+00	pCi/L	1.5E+00	1.7E+00		1.51E+00	100.0	9310_ALPHABETA	8.29E-02	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	3.45E+01	pCi/L	2.1E+00	5.7E+00		1.92E+00	100.0	9310_ALPHABETA	1.95E-01	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	5.24E+00	ug/L	5.4E-01	5.4E-01		7.76E-02		UTOT_KPA	2.70E-02	ML	07/26/200 12:19	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR6H10	B1D1Y0		MW6-SBB-A1	W05-006	W04674					06/02/2005 10:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	4.32E+02	pCi/L	1.5E+02	1.6E+02		3.01E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 19:23	I
5160127	ALPHA	12587-46-1	3.59E+00	pCi/L	1.1E+00	1.3E+00		1.05E+00	100.0	9310_ALPHABETA	1.679E-01	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	1.84E+01	pCi/L	1.9E+00	3.6E+00		2.35E+00	100.0	9310_ALPHABETA	1.567E-01	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	6.96E+00	ug/L	7.2E-01	7.2E-01		8.28E-02		UTOT_KPA	2.53E-02	ML	07/26/200 12:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HCR6L10	B1D1R1		MW6-SBB-A1	W05-006	W04674					06/02/2005 12:05

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5160117	H-3	10028-17-8	1.42E+04	pCi/L	5.0E+02	7.8E+02		3.04E+02	100.0	906.0_H3_LSC	1.00E-02	L	07/13/200 20:06	I
5160127	ALPHA	12587-46-1	3.10E+00	pCi/L	1.2E+00	1.4E+00		1.50E+00	100.0	9310_ALPHABETA	1.603E-01	L	07/25/200 07:47	I
5160130	BETA	12587-47-2	1.75E+01	pCi/L	1.6E+00	3.8E+00		1.86E+00	100.0	9310_ALPHABETA	2.006E-01	L	07/23/200 12:27	I
5160120	Uranium	7440-61-1	5.57E+00	ug/L	5.7E-01	5.7E-01		7.35E-02		UTOT_KPA	2.85E-02	ML	07/26/200 12:33	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC8QD1AB	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 10:55
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BC	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160117	H-3	-3.70E+01	pCi/L	1.3E+02	U	3.04E+02	100.0		906.0_H3_LSC	1.00E-02	07/13/2005				D
BLK	10028-17-8			1.2E+02						L	16:33				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QD1DX **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/06/2005 10:55

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BE	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160117	H-3	1.03E+01	pCi/L	1.3E+02	U	3.03E+02	100.0		906.0_H3_LSC	1.00E-02	07/14/2005				D
BLK	10028-17-8			1.2E+02						L	01:03				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC8QF1AB	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 12:05
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BG	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160120	Uranium	1.43E-02	ug/L	2.2E-03	U	7.82E-02			UTOT_KPA	2.68E-02	07/27/2005				D
BLK	7440-61-1			2.2E-03						ML	08:44				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC8QK1AB	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:**	06/06/2005 10:55
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:**	06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BJ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160124	TC-99	3.41E+00	pCi/L	5.9E+00	U	1.01E+01	100.0		TC99_ETVDSK	1.312E-01	07/22/2005				D
BLK	14133-76-7			4.3E+00						L	15:40				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC8QM1AB	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 10:00
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BL	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160127	ALPHA	-4.11E-02	pCi/L	2.0E-01	U	4.54E-01	100.0		9310_ALPHAB	2.045E-01	07/25/2005				D
BLK	12587-46-1			2.0E-01						L	07:48				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC8QQ1AB	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 11:23
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BN	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160130	BETA	3.26E-01	pCi/L	8.6E-01	U	1.72E+00	100.0		9310_ALPHAB	2.043E-01	07/23/2005				D
BLK	12587-47-2			8.6E-01						L	12:28				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HDCL21AB **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/07/2005 11:12

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BQ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161142	CO-60	3.00E-01	pCi/L	2.4E+00	U	4.88E+00			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	10198-40-0			2.4E+00						L	06:04				
5161142	CS-134	-7.16E-01	pCi/L	2.1E+00	U	3.86E+00			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	13967-70-9			2.1E+00						L	06:04				
5161142	CS-137	-2.68E-01	pCi/L	2.2E+00	U	4.01E+00			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	10045-97-3			2.2E+00						L	06:04				
5161142	EU-152	3.03E+00	pCi/L	4.7E+00	U	9.13E+00			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	14683-23-9			4.7E+00						L	06:04				
5161142	EU-154	-6.05E-01	pCi/L	5.6E+00	U	1.12E+01			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	15585-10-1			5.6E+00						L	06:04				
5161142	EU-155	-1.22E+00	pCi/L	3.5E+00	U	6.00E+00			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	14391-16-3			3.5E+00						L	06:04				
5161142	K-40	9.74E+00	pCi/L	3.2E+01	U	7.23E+01			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	13966-00-2			3.2E+01						L	06:04				
5161142	SB-125	1.37E+00	pCi/L	4.8E+00	U	9.32E+00			GAMMALL_GS	1.9814E+00	07/25/2005				D
BLK	14234-35-6			4.8E+00						L	06:04				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HDCL31AB	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/07/2005 11:12
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BS	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161143	SR-90	2.88E-01	pCi/L	2.5E-01	U	4.82E-01	75.8		SRISO_SEP_P	1.00E+00	07/23/2005				D
BLK	10098-97-2			2.4E-01						L	12:26				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HDCLX1AB **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/07/2005 11:12

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BU	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161140	PU-238	-1.04E-02	pCi/L	2.1E-02	U	2.49E-01	65.9		PUISO_PLATE	1.949E-01	07/27/2005				D
BLK	13981-16-3			2.1E-02						L	12:11				
5161140	PU-239	0.00E+00	pCi/L	1.3E-01	U	1.41E-01	65.9		PUISO_PLATE	1.949E-01	07/27/2005				D
BLK	PU-239/240			1.3E-01						L	12:11				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QD1CS **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/06/2005 10:55

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BD	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160117	H-3	2.51E+03	pCi/L	2.7E+02		3.06E+02	100.0	2.73E+03	906.0_H3_LSC	1.00E-02	07/13/2005			70	D
BS	10028-17-8			2.4E+02				92.1		L	17:16			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QD1EM **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/06/2005 10:55

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BF	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160117	H-3	2.73E+03	pCi/L	2.8E+02		3.03E+02	100.0	2.73E+03	906.0_H3_LSC	1.00E-02	07/14/2005			70	D
BS	10028-17-8			2.4E+02				99.8		L	01:46			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QF1CS **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/06/2005 12:05

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BH	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160120	Uranium	3.17E+01	ug/L	3.8E+00		7.25E-02		3.21E+01	UTOT_KPA	2.89E-02	07/26/2005			70	D
BS	7440-61-1			3.8E+00				98.8		ML	12:06			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QF1DS
Client Id: NA
Moisture/Solids%*:

Sdg/Rept Nbr: W04674 29545
Matrix: WATER WATER
QC Type: BS

Collection Date: 06/06/2005 12:05
Sample On Date:
Received Date: 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BI	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160120	Uranium	3.12E+01	ug/L	3.2E+00		7.25E-02		3.21E+01	UTOT_KPA	2.89E-02	07/26/2005			70	D
BS	7440-61-1			3.2E+00				97.1		ML	12:10			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QK1CS **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/06/2005 10:55

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BK	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160124	TC-99	5.27E+02	pCi/L	3.7E+01		1.03E+01	100.0	5.34E+02	TC99_ETVDSK	1.278E-01	07/22/2005			70	D
BS	14133-76-7			1.3E+01				98.8		L	16:42			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC8QM1CS	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 10:00
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BM	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160127	ALPHA	1.78E+01	pCi/L	4.6E+00		4.09E-01	100.0	2.31E+01	9310_ALPHAB	1.968E-01	07/25/2005			70	D
BS	12587-46-1			1.4E+00				77.2		L	07:48			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC8QQ1CS
Client Id: NA
Moisture/Solids%*:

Sdg/Rept Nbr: W04674 29545
Matrix: WATER WATER
QC Type: BS

Collection Date: 06/06/2005 11:23
Sample On Date:
Received Date: 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BO	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160130	BETA	2.35E+01	pCi/L	4.1E+00		1.78E+00	100.0	2.38E+01	9310_ALPHAB	1.931E-01	07/23/2005			70	D
BS	12587-47-2			1.8E+00				98.8		L	12:28			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HDCL21CS	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/07/2005 11:12
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BR	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161142	CO-60	4.05E+01	pCi/L	8.2E+00		2.93E+00		3.85E+01	GAMMALL_GS	1.9606E+00	07/25/2005			70	D
BS	10198-40-0			8.2E+00				105.2		L	06:04			130	
5161142	CS-137	2.13E+01	pCi/L	5.6E+00		3.42E+00		2.54E+01	GAMMALL_GS	1.9606E+00	07/25/2005			70	D
BS	10045-97-3			5.6E+00				83.8		L	06:04			130	
5161142	EU-152	6.62E+01	pCi/L	1.4E+01		7.54E+00		7.83E+01	GAMMALL_GS	1.9606E+00	07/25/2005			70	D
BS	14683-23-9			1.4E+01				84.5		L	06:04			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HDCL31CS **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/07/2005 11:12

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BT	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161143	SR-90	1.42E+01	pCi/L	2.3E+00		4.62E-01	73.5	1.37E+01	SRISO_SEP_P	1.00E+00	07/23/2005			70	D
BS	10098-97-2			8.0E-01				104.0		L	12:26			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HDCLX1CS **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/07/2005 11:12

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161140	PU-239	4.24E+00	pCi/L	1.1E+00		1.17E-01	79.2	4.67E+00	PUISO_PLATE	1.988E-01	07/27/2005			70	D
BS	PU-239/240			8.6E-01				90.7		L	12:11			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC2E41DR	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 10:55
Client Id:	B1D2L9	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A05-007	MW6-SBB-A19981								AT	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160124	TC-99	2.04E+03	pCi/L	1.3E+02		1.00E+01	100.0		TC99_ETVDSK	1.326E-01	07/22/2005	3.2	0.7		D
DUP	14133-76-7	1.98E+03		2.5E+01						L	09:25	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC2E91FR	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 11:23
Client Id:	B1D1K9	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W05-006	MW6-SBB-A19981								AU	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160130	BETA	2.69E+01	pCi/L	4.3E+00		2.00E+00	100.0		9310_ALPHAB	1.738E-01	07/23/2005	12.0	1.		D
DUP	12587-47-2	2.38E+01		2.0E+00						L	12:27	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC2EV1FR	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 10:55
Client Id:	B1D1H1	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W05-006	MW6-SBB-A19981								AV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160117	H-3	1.96E+04	pCi/L	1.0E+03		3.04E+02	100.0		906.0_H3_LSC	1.00E-02	07/13/2005	3.9	1.		D
DUP	10028-17-8	1.88E+04		5.8E+02						L	21:31	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC2EX1GR	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 12:05
Client Id:	B1D1R8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W05-006	MW6-SBB-A19981								AX	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160120	Uranium	4.97E+00	ug/L	5.1E-01		7.57E-02			UTOT_KPA	2.77E-02	07/26/2005	2.8	0.4		D
DUP	7440-61-1	5.11E+00		5.1E-01						ML	13:12	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC2FG1FR	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/06/2005 10:00
Client Id:	B1D1H9	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W05-006	MW6-SBB-A19981								AY	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160127	ALPHA	-9.10E-02	pCi/L	1.2E-01	U	3.61E-01	100.0		9310_ALPHAB	2.049E-01	07/25/2005	582.4	3.2		D
DUP	12587-46-1	1.86E-01		1.2E-01						L	07:47	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HC4981FR	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/07/2005 11:12
Client Id:	B1D6J8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S05-006	MW6-SBB-A19981								AZ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161140	PU-238	0.00E+00	pCi/L	1.8E-01	U	2.04E-01	44.1		PUISO_PLATE	1.962E-01	07/27/2005	0.0	0.		D
DUP	13981-16-3	0.00E+00		1.8E-01						L	12:11	20.0	3		
5161140	PU-239	-1.51E-02	pCi/L	3.0E-02	U	3.61E-01	44.1		PUISO_PLATE	1.962E-01	07/27/2005	0.0	0.2		D
DUP	PU-239/240	-1.07E-02		3.0E-02						L	12:11	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, July 29, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC4981GR **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/07/2005 11:12

Client Id: B1D6J8 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S05-006	MW6-SBB-A19981								BA	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161142	CO-60	-5.58E-01	pCi/L	1.4E+00	U	2.72E+00			GAMMALL_GS	1.9982E+00	07/25/2005	0.0	0.		D
DUP	10198-40-0	-5.83E-01		1.4E+00						L	07:53	20.0	3		
5161142	CS-134	3.37E-01	pCi/L	2.2E+00	U	4.39E+00			GAMMALL_GS	1.9982E+00	07/25/2005	1300.9	0.4		D
DUP	13967-70-9	-2.47E-01		2.2E+00						L	07:53	20.0	3		
5161142	CS-137	1.49E+00	pCi/L	1.9E+00	U	4.04E+00			GAMMALL_GS	1.9982E+00	07/25/2005	24.8	0.2		D
DUP	10045-97-3	1.16E+00		1.9E+00						L	07:53	20.0	3		
5161142	EU-152	-2.67E+00	pCi/L	4.4E+00	U	7.30E+00			GAMMALL_GS	1.9982E+00	07/25/2005	0.0	1.1		D
DUP	14683-23-9	7.10E-01		4.4E+00						L	07:53	20.0	3		
5161142	EU-154	7.05E-01	pCi/L	6.3E+00	U	1.29E+01			GAMMALL_GS	1.9982E+00	07/25/2005	145.1	0.8		D
DUP	15585-10-1	4.43E+00		6.3E+00						L	07:53	20.0	3		
5161142	EU-155	1.81E+00	pCi/L	3.9E+00	U	7.15E+00			GAMMALL_GS	1.9982E+00	07/25/2005	31.8	0.2		D
DUP	14391-16-3	1.32E+00		3.9E+00						L	07:53	20.0	3		
5161142	K-40	-1.66E+01	pCi/L	3.4E+01	U	6.88E+01			GAMMALL_GS	1.9982E+00	07/25/2005	0.0	1.3		D
DUP	13966-00-2	1.47E+01		3.4E+01						L	07:53	20.0	3		
5161142	SB-125	-1.10E+00	pCi/L	5.1E+00	U	9.20E+00			GAMMALL_GS	1.9982E+00	07/25/2005	0.0	0.6		D
DUP	14234-35-6	-3.18E+00		5.1E+00						L	07:53	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC4981HR **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/07/2005 11:12
Client Id: B1D6J8 **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** DUP **Received Date:** 06/07/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S05-006	MW6-SBB-A19981								BB	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5161143	SR-90	4.04E-02	pCi/L	4.8E-01	U	1.02E+00	36.4		SRISO_SEP_P	1.0003E+00	07/23/2005	131.4	0.5		D
DUP	10098-97-2	1.95E-01		2.8E-01						L	12:26	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id: HC2EX1FW **Sdg/Rept Nbr:** W04674 29545 **Collection Date:** 06/06/2005 12:05

Client Id: B1D1R8 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** MS **Received Date:** 06/06/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W05-006	MW6-SBB-A19981								AW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160120	Uranium	3.52E+01	ug/L	4.8E+00		7.65E-02		3.41E+01	UTOT_KPA	2.74E-02	07/26/2005			60	D
MS	7440-61-1			4.8E+00				103.3		ML	13:09			140	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04674.Edd, h:\Reportdb\edd\FeadIV\Rad\29545.Edd

Lab Sample Id:	HCR5T1CW	**Sdg/Rept Nbr:**	W04674	29545	**Collection Date:** 06/02/2005 09:14
Client Id:	B1D2M3	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**MS**		**Received Date:** 06/02/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A05-007	MW6-SBB-A19981								BP	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
5160124	TC-99	2.89E+03	pCi/L	1.8E+02		1.01E+01	100.0	3.48E+03	TC99_ETVDSK	1.31E-01	07/22/2005			60	D
MS	14133-76-7			3.0E+01				82.9		L	04:12			140	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

HexaValent Chromium (Water)

Conc. (mg/L)	Absorption
0	0.000
0.05	0.096
0.2	0.380
0.5	0.921
1	1.782
1.5	2.544

SDG	QC Batch	Analysis Date	Matrix	MDL
W04674	5159123	6/7/2005	Water	0.002

	Slope	Intercept
Coefficents	0.576497	0
Errors	0.007766	#N/A
R^2	0.998198	0.0253439
F	2769.477	5

Sample Data

Sample ID	Client ID	Absorption	Concentration (mg/L)	IDL	Aliquot (L)	Matrix Spike adjusted result (mg/L)	Expected (mg/L)	Recovery
HC5MM-1AA-B	Prep Blank	0.000	<MDL	0.002	0.1	0	0	
HC5MM-1AC-C	LCS	0.938	0.540754247	0.002	0.1	0	0.5	108.15%
			<MDL	0.002	0.1	0	0	
			<MDL	0.002	0.1	0	0	
			<MDL	0.002	0.1	0	0	
			<MDL	0.002	0.1	0	0	
			<MDL	0.002	0.1	0	0	
			<MDL	0.002	0.1	0	0	
			<MDL	0.002	0.1	0	0	
HC4JX-1AA	B1D110	0.056	0.032283836	0.002	0.1	0	0	
HC4JX-1AAD-X	B1D110 DUP	0.056	0.032283836	0.002	0.1	0	0	
HC4JX-1AAE-S	B1D110 MS	1.003	0.578226557	0.002	0.1	0.5459427	0.526	103.79%
HC4JX-1AAD-D	B1D110 MSD	1.007	0.580532545	0.002	0.1	0.5482487	0.526	104.23%

Comments:

Analyst: DManis

Date: 6/9/05

Entered JH 6-10-05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/28/2005 3:41:40 PM

Lot No., Due Date: J5F070382; 07/22/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5161140; RPUISO Pulso by ALP

SDG, Matrix: W04674; WATER

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

6.0 Comments on any No response:

First Level Review [signature] **Date** 7/28/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5161140

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?			✓
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: [signature] Date: 7/28/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/25/2005 3:58:59 PM

Lot No., Due Date: J5F070382; 07/22/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5161142; RGAMMA Gamma by GER

SDG, Matrix: W04674; WATER

1.0 COC

	Yes	No	N/A
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Review [signature] **Date** 7/25/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 561142

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?			✓
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: Jodie [signature] Date: 7/26/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/26/2005 8:33:33 AM

Lot No., Due Date: J5F060218,J5F060212,J5F060220,J5F020324; 07/22/2005,07/21/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5160127; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W04674; WATER

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

6.0 Comments on any No response:

First Level Review Pam Anderson **Date** 7-26-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5760127

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?			✓
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: Jodie Co Date: 7/27/05

STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/25/2005 1:11:18 PM

Lot No., Due Date: J5F060218,J5F060212,J5F060220,J5F020324; 07/22/2005,07/21/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5160130; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W04674; WATER

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

6.0 Comments on any No response:

First Level Review [signature] **Date** 7/25/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5160130

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?			✓
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: [signature] Date: 7/26/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/25/2005 12:57:14 PM

Lot No., Due Date: J5F070382; 07/22/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5161143; RSR85907 Sr-85/90 by GPC-7

SDG, Matrix: W04674; WATER

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 [signature] **Date** 7/25/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5161143

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?			✓
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: Jodie Co Date: 7/26/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/26/2005 7:58:20 AM

Lot No., Due Date: J5F060214,J5F060217,J5F060219,J5F020321; 07/22/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5160124; RTC99 Tc-99 by LSC

SDG, Matrix: W04674; WATER

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 Pam Anderson **Date** 7-26-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5160124

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?			✓
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: Jodie C. Date: 7/27/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/14/2005 10:01:45 AM

Lot No., Due Date: J5F060218,J5F060212,J5F060220,J5F020324; 07/22/2005,07/21/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5160117; RTRITIUM H-3 by LSC

SDG, Matrix: W04674; WATER

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

6.0 Comments on any No response:

First Level Review [signature] **Date** 7/14/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5760117

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?			✓
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: Jodie [signature] Date: 7/20/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/28/2005 1:58:56 PM

Lot No., Due Date: J5F060218,J5F060212,J5F060220,J5F070382,J5F020324; 07/22/2005,07/21/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5160120; RUNAT UNat by KPA

SDG, Matrix: W04674; WATER

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

6.0 Comments on any No response:

First Level Review Pam Anderson **Date** 7-28-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5160120

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?			✓
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: Jodie [signature] Date: 7/28/05

SEVERN TRENT STL

Richland Laboratory
Data Review Check List
METALS

Work Order Number(s): **HC4JX**

Lab Sample Numbers or SDG: **W04674**

Method/Test/Parameter: **Cr+6 in WATER / RICH-WC-5003**

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd 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 (✓)	2nd 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: DMarris Date: 6/9/05

Second-Level Review: [illegible] Date: 6/10/05

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-23

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: A05-007	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: Performance Assessment Monitoring, JUNE 2005	Logbook: DTS- SAWS-H9S	Ice Chest No. SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: Other	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** 57671 J5F020321
W04674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2N1		W	6/2/05	1205	1x20-mL P	Activity Scan	None
B1D2N1		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) > HCR51	HCl to pH <2

Relinquished By	Received By
Print: R.T. SICKLE Sign: Date/Time: 1335 JUN 02 2005	Print: P. Davidson Sign: Date/Time: 1335 JUN 02 2005
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-21

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: A05-007	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: Performance Assessment Monitoring, JUNE 2005	logbook: DTS-SAWS-H95	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: Other	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 57671 JSF020321

WU4674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2N0		W	6/2/05	1111	1x20-mL P	Activity Scan	None
B1D2N0		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) > HCR5V	HCl to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	R.T. SICKLE		1335 JUN 0 2 2005		P. Davidson	<100 DM	1335 JUN 0 2 2005
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-137

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Collector: R.T. SICKLE	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: DTS-SAWS-H95	Ice Chest No: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** **
57671 JSF020324
W04674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1R1		W	6/2/05	1205	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1D1R1		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1R1		W			1x20-mL P	Activity Scan	None
B1D1R1		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

HCR6L

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			1335 JUN 02 2005	P. Davidson			1335 JUN 02 2005
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-3

Page 1 of 1

Collector R.T. SICKLE	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. A05-007	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title Performance Assessment Monitoring, JUNE 2005	Logbook: DTS- SAWS- H95	**Ice Chest No.** SAWS-213 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.**
Protocol Other	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
57671 JSF020321
W04674 Due 7/18/05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2L8		W	6/2/05	1014	1x20-mL P	Activity Scan	None
B1D2L8		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) > HCR5X	HCl to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			JUN 0 2 2005 1335	P. Davidson			JUN 0 2 2005 1335
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-21

Page 1 of 1

Collector R.T. SICKLE	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. A05-007	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title Performance Assessment Monitoring, JUNE 2005	logbook: DTS-SAWS-H95	Ice Chest No. SAWS-213 Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol Other	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 57671 JSF020321

WU4674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2N0		W	6/2/05	1111	1x20-mL P	Activity Scan	None
B1D2N0		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) > HCR5V	HCl to pH <2

Relinquished By	Received By
Print R.T. SICKLE Sign Date/Time 1335 JUN 0 2 2005	Print P. Davidson Sign Date/Time 1335 JUN 0 2 2005
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-9

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: A05-007	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: Performance Assessment Monitoring, JUNE 2005	Logbook: DTS-SAWS-HPS	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: Other	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** 57671 JSF020321
W04674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2M3		W	6/2/05	0914	1x20-mL P	Activity Scan	None
B1D2M3		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) HCR5T	HCl to pH <2

Relinquished By: R.T. SICKLE Print Sign	Date/Time 1335 JUN 0 2 2005	Received By: P. Davidson Print Sign	Date/Time 1335 JUN 0 2 2005
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-93

Collector: R.T. SICKLE	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: DTS-SAWS-H95	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** 57671 JSF020324
WO4674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1Y0		W	6/2/05	1014	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1D1Y0		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1Y0		W			1x20-mL P	Activity Scan	None
B1D1Y0		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

HCR6H

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
R.T. SICKLE	JUN 02 2005 3:35	P. Davidson	JUN 02 2005 3:35

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 6/2/05 @ 1335

Client: PGW SDG #: W04674 NA [ ] SAF #: A05-007 NA [ ]

Work Order Number: J5F020321 Chain of Custody # A05-007-23, 3, 9, 21

Shipping Container ID: DTS-SAWS-H95 Air Bill # N/A

1. Custody Seals on shipping container intact? NA [ ] Yes [Y] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [Y] No [ ]
3. Chain of Custody record present? Yes [Y] No [ ]
4. Cooler temperature: _____ NA [Y] 5. Vermiculite/packing materials is NA [Y] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 24
7. Sample holding times exceeded? NA [Y] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - Y custody seals
   - ____ hazard labels
   - Y appropriate samples labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [Y] pH>2 [Y] pH>9 [ ]
11. Sample Location, Sample Collector Listed? * Yes [ ] No [Y]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [Y]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: 6/2/05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W05-006-137
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Collector: R.T. SICKLE	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: DTS-SAWS-H95	Ice Chest No: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** **
57671 JSF020324
W04674 Due 7/18/05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1R1		W	6/2/05	1205	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1D1R1		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2) HCR6L	HNO3 to pH <2
B1D1R1		W			1x20-mL P	Activity Scan	None
B1D1R1		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	R.T. SICKLE		JUN 02 2005 1335		P. Davidson		JUN 02 2005 1335
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-133

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: DTS-SAWS-195	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 57671 JSF020324

W04674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1M3		W	6/2/05	1111	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1D1M3		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1M3		W			1x20-mL P	Activity Scan	None
B1D1M3		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

HCR6D

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
R.T. SICKLE	JUN 02 2005 1335	P. Davidson	JUN 02 2005 1335

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-109

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: DTS-SAWS-1495	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** 57671 JSF020324
W04674 Due 7/18/05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1K2		W	6/2/05	0914	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1D1K2		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1K2		W			1x20-mL P	Activity Scan	None
B1D1K2		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

HCR58

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
R.T. SICKLE	JUN 0 2 2005 1335	P. Davidson	JUN 0 2 2005 1305

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 6/2/05 @ 1335

Client: PGW SDG #: W04674 NA [ ] SAF #: W05-006 NA [ ]

Work Order Number: J5F020324 Chain of Custody # W05-006-137, 93, 133, 109

Shipping Container ID: DTS-SDWS-495 Air Bill # N/A

1. Custody Seals on shipping container intact? NA [ ] Yes [Y] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [Y] No [ ]
3. Chain of Custody record present? Yes [Y] No [ ]
4. Cooler temperature: _____ NA [Y] 5. Vermiculite/packing materials is NA [Y] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 24
7. Sample holding times exceeded? NA [Y] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - Y custody seals
   - ____ hazard labels
   - Y appropriate samples labels
9. Samples are:
   - Y in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles
   - (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [Y] pH>2 [Y] pH>9 [ ]
11. Sample Location, Sample Collector Listed? * Yes [ ] No [Y]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [Y]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: 6/2/05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-97

Page 1 of 1

Collector: D.R. BREWINGTON	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: OTS-SAWS-H95	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SDG W04674
J5F060212
Due 07 21 05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1H1		W	6/6/05	1055	1x1000-mL P	906.0_H3_LSC: Tritium (1) HC2EV	None
B1D1H1		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1H1		W	↓	↓	1x20-mL P	Activity Scan	None
B1D1H1		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By	Received By
Print: D.R. BREWINGTON Sign: D.R. Brewington Date/Time: JUN 06 2005 1800	Print: Jeff Jensen Sign: Date/Time: JUN 06 2005 1500
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

<100 CPM

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-129

Page 1 of 1

Collector: D.R. BREWINGTON	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	Logbook: DTS-SAWS-H9S	Ice Chest No.: SAWS-213 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674
J5F060212

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1R8		W	6/6/05	1205	1x1000-mL P	906.0_H3_LSC: Tritium (1) HC2EX	None
B1D1R8		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1R8		W			1x20-mL P	Activity Scan	None
B1D1R8		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.R. BREWINGTON	D.R. Brewington		JUN 06 2005 1500	Jeff Jensen			JUN 06 2005 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 06 05 1500

Client: SGW SDG #: W04674 NA [ ] SAF #: W05-006 (W05-007) NA [ ]

Work Order Number: J5F060212 Chain of Custody # A05007-4, 19 W05006 97, 129

Shipping Container ID: SAMS 213 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: _____ NA [✓] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 12
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - ____ custody seals
   - ____ hazard labels
   - X appropriate samples labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [✓] pH>9 [ ]
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: 06 06 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-4

Page 1 of 1

Collector D.R. BREWINGTON	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. A05-007	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title Performance Assessment Monitoring, JUNE 2005	Logbook: DTS-SAWS-H9S	**Ice Chest No.** SAWS-213 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.**
Protocol Other	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674
J5F060214
Due 072105

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2L9		W	6/6/05	1055	1x20-mL P	Activity Scan HC2E4	None
B1D2L9		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2

Relinquished By	Received By
Print: D.R. BREWINGTON Sign: D.R. Brewington Date/Time: JUN 06 2005 1800	Print: Jeff Jensen Sign: Date/Time: JUN 06 2005 1800
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

<100 CPM

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A05-007-19
		Page 1 of 1

Collector D.R. BREWINGTON	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. A05-007	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title Performance Assessment Monitoring, JUNE 2005	Logbook: DTS-SAWS-1195	**Ice Chest No.** SAWS-213 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.**
Protocol Other	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2M9		W	6/6/05	1205	1x20-mL P	Activity Scan HCZE5	None
B1D2M9		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
D.R. BREWINGTON	JUN 06 2005 1500	Jeff Jensen	JUN 06 2005 1500
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 06 05 1500

Client: PGW SDG #: W04674 NA [ ] SAF #: A05-007 W05-006 NA [ ]

Work Order Number: J5F060214 Chain of Custody # A05007-8, 19 W05006 97, 129

Shipping Container ID: SAMS 213 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: _____ NA [✓] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 12
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ___ tape
   - X custody seals
   - ___ hazard labels
   - X appropriate samples labels
9. Samples are:
   - X in good condition
   - ___ broken
   - ___ leaking
   - ___ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [✓] pH>9 [ ]
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: 06 06 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-13

Page 1 of 1

Collector D. P. CONNOLLY	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. A05-007	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title Performance Assessment Monitoring, JUNE 2005	DTS-SAWS-491	Ice Chest No. SMC 124 Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol Other	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674
JSF060217
Due 07 21 05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2M5		W	6-6-05	1123	1x20-mL P	Activity Scan HC2E7	None
B1D2M5		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2

Relinquished By	Received By
Print D. P. CONNOLLY Sign Date/Time 1340 JUN 06 2005	Print Jeff Jung Sign Date/Time 1340 JUN 06 2005
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 06 05

Client: PGW SDG #: L04674 NA [ ] SAF #: L05-006 A05-007 NA [ ]

Work Order Number: JSF060217 Chain of Custody # L05-006-117, A05-007-13

Shipping Container ID: SML 124 Air Bill # _____

1. Custody Seals on shipping container intact? NA [ ] Yes [X] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [X] No [ ]
3. Chain of Custody record present? Yes [X] No [ ]
4. Cooler temperature: _____ NA [X] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [X]
6. Number of samples in shipping container: 6
7. Sample holding times exceeded? NA [X] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - X custody seals
   - ____ hazard labels
   - X appropriate samples labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [X] pH>2 [X] pH>9 [ ]
11. Sample Location, Sample Collector Listed? * Yes [X] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [X]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: 06 06 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W05-006-117
		Page 1 of 1

Collected By: D. P. CONNOLLY	Contact/Requester: DL STEWARET	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-006	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW SAMPLING, JUNE 2005	DTS 5QWS - H91	Ice Chest No.: SMC 12Y Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674
J5F060218
Due 07 21 05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1K9		W	6-6-05	1123	1x1000-mL P	906.0_H3_LSC: Tritium (1) HC2E9	None
B1D1K9		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1K9		W			1x20-mL P	Activity Scan	None
B1D1K9		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
D. P. CONNOLLY	JUN 06 2005 1340		JUN 06 2005 1340
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
		<100 CPM	

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 06 05

Client: PGW SDG #: W04674 NA [ ] SAF #: W05-006 A05-007 NA [ ]

Work Order Number: J5F060218 Chain of Custody # W05-006-117, A05-007-13

Shipping Container ID: SML 124 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: _____ NA [✓] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 6
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - X custody seals
   - ____ hazard labels
   - X appropriate samples labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [✓] pH>9 [ ]
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: 06 06 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A05-007-6

Page 1 of 1

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: A05-007	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: Performance Assessment Monitoring, JUNE 2005	DTS - SAWS - H86	Ice Chest No.: SML-595 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: Other	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W09674
J5F060219
Dm 07 21 05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2M1		W	6/6/5	1000	1x20-mL P	Activity Scan HC 2FC	None
B1D2M1		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			JUN 06 2005 1430		Jeff Jensen		JUN 06 2005 1430
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A05-007-5
		Page 1 of 1

Collector DUPRATEK F. M. HALL	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. A05-007	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title Performance Assessment Monitoring, JUNE 2005	DTS - SAWS - H86	**Ice Chest No.** SMC-595 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.**
Protocol Other	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674

1230

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D2M0		W	6/6/5	~~1000~~ 1	1x20-mL P	Activity Scan ~~HC2FD~~ HC2FD	None
B1D2M0		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JF 060605	HCl to pH <2

Relinquished By	Date/Time	Received By	Date/Time
DUPRATEK F. M. HALL Print Sign JUN 0 6 2005	1430	Print Jeff Jensen Sign JUN 0 6 2005	1430
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 06 05 1430

Client: PGW SDG #: W04674 NA [ ] SAF #: W05006 A05007 NA [ ]

Work Order Number: J5F060219 Chain of Custody # W05-006-101, 102 A05-007-5, 6

Shipping Container ID: SMC 595 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: _____ NA [✓] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 12
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - X custody seals
   - ____ hazard labels
   - X appropriate samples labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [✓] pH>9 [ ]
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: 06 06 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 9/03, Rev. 5

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-102

Page 1 of 1

Collector DUPRATER F. M. HALL	**Contact/Requester** DL STEWARET	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. W05-006	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title RCRA GW SAMPLING, JUNE 2005	DTS - SAWS - 1486	**Ice Chest No.** SML-595 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.**
Protocol RCRA	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04674
JSF060220
Dm 072105

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1H9		W	6/6/5	1000	1x1000-mL P	906.0_H3_LSC: Tritium (1) HC2FG	None
B1D1H9		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1H9		W			1x20-mL P	Activity Scan	None
B1D1H9		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DUPRATER F. M. HALL		JUN 06 2005	1430		Jeff Jensen	JUN 06 2005	1430
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-006-101

Page 1 of 1

Collector DURATEK F.M. HAL	Contact/Requester DL STEWARET	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-006	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW SAMPLING, JUNE 2005	DTS-SAWS-H86	Ice Chest No. SMI-595 Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** W04674

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D1H8		W	6/6/5	1230	1x1000-mL P	906.0_H3_LSC: Tritium (1) HC2FK	None
B1D1H8		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1D1H8		W			1x20-mL P	Activity Scan	None
B1D1H8		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F.M. HAL			JUN 06 2005 1430		Jeff Jenser		JUN 06 2005 1430
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 06 05 1430

Client: PGW SDG #: W04679 NA [ ] SAF #: W05006 A05007 NA [ ]

Work Order Number: J5F060220 Chain of Custody # W05-006 101, 102 A05-007-5, 6

Shipping Container ID: SML 595 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: _____ NA [✓] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 12
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ tape
   - X custody seals
   - ____ hazard labels
   - X appropriate samples labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [✓] pH>9 [ ]
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: 06 06 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 9/03, Rev. 5

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I05-037-26

Page 1 of 1

Collector D. P. CONNOLLY	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. I05-037	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title CERCLA 100HR3 IAM, JUNE 2005	DTS - SAMS H91	Ice Chest No. GWS 106 Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol CERCLA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SDG W04674
J5F070300
Due 072205

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D110 (F)		W	6-7-05	0935	1x500-mL G/P	7196_CR6: Hexavalent Chromium (1) HC4JX	Cool 4C
B1D111		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By Print	Sign	Date/Time	Received By Print	Sign	Date/Time
D. P. CONNOLLY		JUN 07 2005 1315	Jeff Jensen		JUN 07 2005 1315
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 06 07 05 1315

Client: PGW SDG #: W04674 NA [ ] SAF #: I05-037 NA [ ]

Work Order Number: J5F070300 Chain of Custody # I05-037-26

Shipping Container ID: GWS 106 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: 4.5 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
   ✓ custody seals
   ____hazard labels
   ✓ appropriate samples labels

9. Samples are:
   X in good condition
   ____broken
   ____leaking
   ____have air bubbles
   (Only for samples requiring head space)

10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [✓] pH>9 [ ]

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: 06 07 05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on_____ by_____ Person contacted_____

[ ] No action necessary; process as is.

Project Manager_____ Date_____

LS-023, 9/03, Rev. 5

PNNL

5761

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-006-4

Page 1 of 1

Collector DURATEK F. M. HALL	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. S05-006	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title SURV/LTMC JUNE 2005	SALS-148-G	**Ice Chest No.** SML 595 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SDG W04674
J5F070382
Due 07 22 05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
A, G, I, S, and W SAFS may be grouped into one SDG to facilitate analytical batching, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1D6J8		W	6-7-05	1112	1x20-mL P	Activity Scan HC498	None
B1D6J8		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	None
B1D6J8		W			1x1000-mL G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	HNO3 to pH <2
B1D6J8		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
B1D6J8		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			JUN 0 7 2005 14:30	DAVID HARBINSON			JUN 0 7 2005 14:30
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

<100 CPM

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 6/7/05 14:30

Client: PNNL SDG #: W04674 NA [ ] SAF #: ~~S05-006~~ A05-007 W05-006 NA [ ]

Work Order Number: J5F070382 Chain of Custody # S05-006-4 W05-006-248 W05-006-105, A05-007-7 W05-006-145, A05-007-27

Shipping Container ID: SML 595 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: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 24
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? yes NA [ ] pH<2 [✓] pH>2 [✓] H3 pH>9 [ ]
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: 6/7/05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 9/03, Rev. 5

7/21/2005 9:56:00 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

6D Pu PrpRC5016, SepRC5010(5039)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/22/2005 W04674

Sep1 DT/Tm Tech:

Batch: 5161140 WATER pCi/L PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

Work Order, Lot, Sample DateTime	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 HC498-1-AC J5F070382-1-SAMP 06/07/2005 11:12		199.00g,in AmtRec: VIAL20,500P,4XLP,4LP #Containers: 7	PUTC9496 06/24/05,pd 05/02/05,r	200			Scr Rst: Alpha: 1.51E+02 pCi/L Beta: 7.18E+01 pCi/L	
2 HC498-1-AF-X J5F070382-1-DUP 06/07/2005 11:12		196.20g,in AmtRec: VIAL20,500P,4XLP,4LP #Containers: 7	PUTC9497 06/24/05,pd 05/02/05,r				Scr Rst: Alpha: 1.51E+02 pCi/L Beta: 7.18E+01 pCi/L	
3 HDCLX-1-AA-B J5F100000-140-BLK 06/07/2005 11:12		194.90g,in AmtRec: #Containers: 1	PUTC9498 06/24/05,pd 05/02/05,r				Scr Rst: Alpha: Beta:	
4 HDCLX-1-AC-C J5F100000-140-LCS 06/07/2005 11:12		198.80g,in AmtRec: #Containers: 1	PUSG0757 06/24/05,pd 05/02/05,r				Scr Rst: Alpha: Beta:	

Comments:
pH verified @ ≤2 in prep. [illegible]

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HC4981AC-SAMP Constituent List:

PU-238	RDL:1	pCi/L	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/L	LCL:70	UCL:130	RPD:20
Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20						

HDCLX1AA-BLK:

PU-238	RDL:1	pCi/L	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/L	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20						

HDCLX1AC-LCS:

PU-239	RDL:1	pCi/L	LCL:70	UCL:130	RPD:20	Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20

7/21/2005 9:56:02 AM

Sample Preparation/Analysis

Balance Id:1120482733

6D Pu PrpRC5016, SepRC5010(5039)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/22/2005

Sep1 DT/Tm Tech:

Batch: 5161140 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

Work Order, Lot, Sample DateTime	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:

```
HC4981AC-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
HDCLX1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
HDCLX1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

7/28/2005 3:40:50 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/28/2004, 8/2/2005, Batch: '5161140', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5161140						
AC		CalcC	GiroirB	7/20/2005 11:10:41		
SC			heidelbergt	IsBatched	6/10/2005 7:37:24 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	InPrep	7/20/2005 11:10:41 AM	RICH-RC-5016 REVISION 5
SC			GiroirB	Prep1C	7/21/2005 10:28:15 AM	RICH-RC-5016 REVISION 5
SC			FinchA	InSep1	7/25/2005 9:27:27 AM	RICH-RC-5010 REVISION 4
SC			FinchA	Sep1C	7/26/2005 11:03:55 AM	RICH-RC-5010 REVISION 4
SC			BarbosaH	InSep2	7/27/2005 7:46:07 AM	RICHRC5039 REV4
SC			BarbosaH	Sep2C	7/27/2005 10:05:07 AM	RICHRC5039 REV4
SC			StringerR	InCnt1	7/27/2005 10:09:29 AM	RICH-RD-0008 REVISION 4
SC			BlackCL	CalcC	7/27/2005 2:23:19 PM	RICH-RD-0008 REVISION 4
AC			GiroirB	7/21/2005 10:28:15		
AC			FinchA	7/25/2005 9:27:27		
AC			FinchA	7/26/2005 11:03:55		
AC			BarbosaH	7/27/2005 7:46:07		
AC			BarbosaH	7/27/2005 10:05:07		
AC			StringerR	7/27/2005 10:09:29		
AC			BlackCL	7/27/2005 2:23:19 PM		

AC: Accepting Entry; SC: Status Change

7/22/2005 4:43:06 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

AW Gamma PrpRC5017
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #:

Report Due: 07/22/2005 U104674

Sep1 DT/Tm Tech: U/A

Sep2 DT/Tm Tech:

Batch: 5161142 **WATER** **pCi/L** **PM, Quote: SS , 57671**

SEQ Batch, Test: None

Prep Tech: GiroirB Scott

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HC498-1-AA J5F070382-1-SAMP 06/07/2005 11:12		1998.30g,in AmtRec: VIAL20,500P,4XLP,4LP #Containers: 7				100	64	0744	7/25/05 S Scr Rst: Alpha: 1.51E+02 pCi/L Beta: 7.18E+01 pCi/L	
2 HC498-1-AG-X J5F070382-1-DUP 06/07/2005 11:12		1998.20g,in AmtRec: VIAL20,500P,4XLP,4LP #Containers: 7					68	0930	Scr Rst: Alpha: 1.51E+02 pCi/L Beta: 7.18E+01 pCi/L	
3 HDCL2-1-AA-B J5F100000-142-BLK 06/07/2005 11:12		1981.40g,in AmtRec: #Containers: 1					68	0744	7/25/05 S Scr Rst: Alpha: Beta:	
4 HDCL2-1-AC-C J5F100000-142-LCS 06/07/2005 11:12		1960.60g,in AmtRec: #Containers: 1	QCAG1091 06/09/05,pd 08/09/04,r				611		Scr Rst: Alpha: Beta:	

Comments: HC498-SAMP "Comments: CT GAMMA DUP ON DIFF DET. Bg"

pH adjusted to ≤2 in prep Bg

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HC4981AA-SAMP Constituent List:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

HDCL21AA-BLK:

7/22/2005 4:43:10 AM

Sample Preparation/Analysis

Balance Id:1120482733

AW Gamma PrpRC5017
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/22/2005

Sep1 DT/Tm Tech:

Batch: 5161142 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

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

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

HDCL21AC-LCS:

Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20						

HC4981AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HDCL21AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HDCL21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

7/25/2005 3:58:00 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2004, 7/30/2005, Batch: '5161142', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5161142						
AC		**CalcC**	**GiroirB**	7/20/2005 11:10:47		
SC			heidelbergt	IsBatched	6/10/2005 7:37:24 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	InPrep	7/20/2005 11:10:47 AM	RICH-RC-5017 REVISION 4
SC			GiroirB	Prep1C	7/22/2005 5:29:05 AM	RICH-RC-5017 REVISION 4
SC			ScottM	Prep1C	7/23/2005 12:45:18 PM	RICH-RC-5016 REVISION 5
SC			StringerR	InCnt1	7/23/2005 12:55:10 PM	RICH-RD-0007 REVISION 5
SC			BlackCL	CalcC	7/25/2005 9:57:48 AM	RICH-RD-0007 REVISION 5
AC			**GiroirB**	7/22/2005 5:29:05		
AC			**ScottM**	7/23/2005 12:45:18		
AC			**StringerR**	7/23/2005 12:55:10		
AC			**BlackCL**	7/25/2005 9:57:48		

AC: Accepting Entry; SC: Status Change

7/21/2005 12:14:26 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories
Pacific Northwest National Lab W04674

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: 229

Report Due: 07/21/2005

Sep1 DT/Tm Tech: N/A

Sep2 DT/Tm Tech:

Batch: 5160127 WATER pCi/L PM, Quote: SS , 57671

SEQ Batch, Test: None

Prep Tech: GiroirB

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HCR58-1-AC J5F020324-1-SAMP 06/02/2005 09:14	78.30g,in	AmtRec: 20ML,500P,2LP	#Containers: 4	1.5	17.1	200	10A	0928	7/25/05	Scr Rst: Alpha: 6.08E+01 pCi/L Beta: 3.24E+01 pCi/L
2 HCR6D-1-AC J5F020324-2-SAMP 06/02/2005 11:11	82.90g,in	AmtRec: 20ML,500P,2LP	#Containers: 4		22.2		10B			Scr Rst: Alpha: 1.11E+02 pCi/L Beta: 7.14E+01 pCi/L
3 HCR6H-1-AC J5F020324-3-SAMP 06/02/2005 10:14	167.90g,in	AmtRec: 20ML,500P,2LP	#Containers: 4		41.9		10C			Scr Rst: Alpha: 9.56E+01 pCi/L Beta: 5.44E+01 pCi/L
4 HCR6L-1-AC J5F020324-4-SAMP 06/02/2005 12:05	160.30g,in	AmtRec: 20ML,500P,2LP	#Containers: 4		45.4		10D			Scr Rst: Alpha: 1.07E+02 pCi/L Beta: 5.66E+01 pCi/L
5 HC2EV-1-AC J5F060212-1-SAMP 06/06/2005 10:55	92.50g,in	AmtRec: VIAL20,500P,2XLP	#Containers: 4		34.1		10C			Scr Rst: Alpha: 1.80E+03 pCi/L Beta: 1.02E+03 pCi/L
6 HC2EX-1-AC J5F060212-2-SAMP 06/06/2005 12:05	125.90g,in	AmtRec: VIAL20,500P,2XLP	#Containers: 4		34.1		11A			Scr Rst: Alpha: 2.35E+02 pCi/L Beta: 8.94E+01 pCi/L
7 HC2E9-1-AC J5F060218-1-SAMP 06/06/2005 11:23	120.70g,in	AmtRec: VIAL20,500P,2XLP	#Containers: 4		32.8		11B			Scr Rst: Alpha: 1.68E+02 pCi/L Beta: 6.55E+01 pCi/L

7/21/2005 12:14:28 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: 229

Sep1 DT/Tm Tech: N/A

Report Due: 07/21/2005

Sep2 DT/Tm Tech:

Batch: 5160127 WATER pCi/L PM, Quote: SS , 57671

SEQ Batch, Test: None

Prep Tech: ,GiroirB

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 HC2FG-1-AC J5F060220-1-SAMP 06/06/2005 10:00		195.20g,in AmtRec: VIAL20,500P,2XLP #Containers: 4		1.5	0.1	200	11C	0928	7/25/05	Scr Rst: Alpha: 1.78E-01 pCi/L Beta: 9.04E-01 pCi/L
9 HC2FG-1-AF-X J5F060220-1-DUP 06/06/2005 10:00		204.90g,in AmtRec: VIAL20,500P,2XLP #Containers: 4			0.1		11D			Scr Rst: Alpha: 1.78E-01 pCi/L Beta: 9.04E-01 pCi/L
10 HC2FK-1-AC J5F060220-2-SAMP 06/06/2005 12:30		199.40g,in AmtRec: VIAL20,500P,2XLP #Containers: 4			51.5		12A			Scr Rst: Alpha: 2.01E+02 pCi/L Beta: 8.05E+01 pCi/L
11 HC8QM-1-AA-B J5F090000-127-BLK 06/06/2005 10:00		204.50g,in AmtRec: #Containers: 1			0.2		12C			Scr Rst: Alpha: Beta:
12 HC8QM-1-AC-C J5F090000-127-LCS 06/06/2005 10:00		196.80g,in AmtRec: #Containers: 1	ASD3563 06/20/05,pd 03/25/05,r	✓	0.6	✓	12D			Scr Rst: Alpha: Beta:

Comments:
HCR58-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6D-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6H-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6L-SAMP "Comments: alpha alig reduced as determined by weight screen. Bg"

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

7/21/2005 12:14:29 PM

Sample Preparation/Analysis

Balance Id:1120482733

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/21/2005

Sep1 DT/Tm Tech:

Batch: 5160127 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

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

HC2EV-SAMP "Comments: alpha and Beta aliquot reduced as determined by activity screen. Bg"
HC2EX-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HC2E9-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HC2FK-SAMP "Comments: Beta alaig reduced as determined by weight screen. Bg"

pH verified @ ≤ 2 w/ prep

HCR581AC-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
HC8QM1AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
HC8QM1AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

HCR581AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QM1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QM1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

7/25/2005 5:24:40 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2004, 7/30/2005, Batch: '5160127', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5160127						
AC		**CalcC**	**GiroirB**	7/20/2005 11:10:15		
SC			heidelbergt	IsBatched	6/10/2005 7:34:34 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	InPrep	7/20/2005 11:10:15 AM	RICH-RC-5014 REVISION 6
SC			GiroirB	Prep1C	7/21/2005 12:17:52 PM	RICH-RC-5014 REVISION 6
SC			ScottM	InPrep	7/22/2005 9:06:22 AM	RICH-RC-5014 REVISION 6
SC			ScottM	Prep1C	7/23/2005 10:00:15 AM	RICH-RC-5014 REVISION 6
SC			StringerR	InCnt1	7/23/2005 10:05:52 AM	RICH-RD-0003 REVISION 4
SC			BlackCL	CalcC	7/25/2005 9:59:45 AM	RICH-RD-0003 REVISION 4
AC			**GiroirB**	7/21/2005 12:17:52		
AC			**ScottM**	7/22/2005 9:06:22		
AC			**ScottM**	7/23/2005 10:00:15		
AC			**StringerR**	7/23/2005 10:05:52		
AC			**BlackCL**	7/25/2005 9:59:45		

AC: Accepting Entry; SC: Status Change

7/21/2005 12:14:29 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: 229

Report Due: 07/21/2005 W04674

Sep1 DT/Tm Tech: N/A

Batch: 5160130 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: GiroirB Scott

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HCR58-1-AD J5F020324-1-SAMP 06/02/2005 09:14		191.60g,in AmtRec: 20ML,500P,2LP	#Containers: 4		1.5	90.6	200	26a	1406	7/23/05 R Scr Rst: Alpha: 6.08E+01 pCi/L Beta: 3.24E+01 pCi/L
2 HCR6D-1-AD J5F020324-2-SAMP 06/02/2005 11:11		195.00g,in AmtRec: 20ML,500P,2LP	#Containers: 4			105.4		26b		Scr Rst: Alpha: 1.11E+02 pCi/L Beta: 7.14E+01 pCi/L
3 HCR6H-1-AD J5F020324-3-SAMP 06/02/2005 10:14		156.70g,in AmtRec: 20ML,500P,2LP	#Containers: 4			82.1		26c		Scr Rst: Alpha: 9.56E+01 pCi/L Beta: 5.44E+01 pCi/L
4 HCR6L-1-AD J5F020324-4-SAMP 06/02/2005 12:05		200.60g,in AmtRec: 20ML,500P,2LP	#Containers: 4			98.4		26d		Scr Rst: Alpha: 1.07E+02 pCi/L Beta: 5.66E+01 pCi/L
5 HC2EV-1-AD J5F060212-1-SAMP 06/06/2005 10:55		91.10g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4			73.1		27a		Scr Rst: Alpha: 1.80E+03 pCi/L Beta: 1.02E+03 pCi/L
6 HC2EX-1-AD J5F060212-2-SAMP 06/06/2005 12:05		192.60g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4			102.2		27b		Scr Rst: Alpha: 2.35E+02 pCi/L Beta: 8.94E+01 pCi/L
7 HC2E9-1-AD J5F060218-1-SAMP 06/06/2005 11:23		173.70g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4			85.0		27c		Scr Rst: Alpha: 1.68E+02 pCi/L Beta: 6.55E+01 pCi/L

7/21/2005 12:14:30 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: 227

Report Due: 07/21/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5160130 **WATER** **pCi/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None

Prep Tech: GiroirB

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 HC2E9-1-AF-X J5F060218-1-DUP 06/06/2005 11:23		173.80g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4	1.5	83.9	200	27d		1406 7/23/05 R	Scr Rst: Alpha: 1.68E+02 pCi/L Beta: 6.55E+01 pCi/L
9 HC2FG-1-AD J5F060220-1-SAMP 06/06/2005 10:00		196.60g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4		0.5			~~28~~ RS 7/23/05 31a		Scr Rst: Alpha: 1.78E-01 pCi/L Beta: 9.04E-01 pCi/L
10 HC2FK-1-AD J5F060220-2-SAMP 06/06/2005 12:30		173.80g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4		82.6			~~28b~~ RS 7/23/05 31b		Scr Rst: Alpha: 2.01E+02 pCi/L Beta: 8.05E+01 pCi/L
11 HC8QQ-1-AA-B J5F090000-130-BLK 06/06/2005 11:23		204.30g,in AmtRec:	#Containers: 1		0.2			~~28c~~ RS 7/23/05 31c		Scr Rst: Alpha: Beta:
12 HC8QQ-1-AC-C J5F090000-130-LCS 06/06/2005 11:23		193.10g,in AmtRec:	BESB2463 06/24/05,pd 09/21/04,r #Containers: 1		0.5			~~28d~~ RS 7/23/05 31d		Scr Rst: Alpha: Beta:

Comments:
HCR58-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6D-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6H-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6L-SAMP "Comments: alpha alig reduced as determined by weight screen. Bg"

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

7/21/2005 12:14:31 PM

Sample Preparation/Analysis

Balance Id:1120482733

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/21/2005

Sep1 DT/Tm Tech:

Batch: 5160130 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

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

HC2EV-SAMP "Comments: alpha and Beta aliquot reduced as determined by activity screen. Bg"
HC2EX-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HC2E9-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HC2FK-SAMP "Comments: Beta alaiq reduced as determined by weight screen. Bg"

pH verified @ ≤2 in prep Bg

```
HCR581AD-SAMP Constituent List:
  BETA        RDL:4          pCi/L    LCL:       UCL:       RPD:
HC8QQ1AA-BLK:
  BETA        RDL:4          pCi/L    LCL:       UCL:       RPD:
HC8QQ1AC-LCS:
  Sr-90       RDL:           pCi/L    LCL:70     UCL:130    RPD:20

HCR581AD-SAMP Calc Info:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HC8QQ1AA-BLK:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HC8QQ1AC-LCS:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

7/25/2005 1:10:46 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2004, 7/30/2005, Batch: '5160130', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5160130						
AC		**CalcC**	**GiroirB**	7/20/2005 11:10:20		
SC			heidelbergt	IsBatched	6/10/2005 7:35:30 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	InPrep	7/20/2005 11:10:20 AM	RICH-RC-5014 REVISION 6
SC			GiroirB	Prep1C	7/21/2005 12:18:00 PM	RICH-RC-5014 REVISION 6
SC			ScottM	InPrep	7/22/2005 9:06:10 AM	RICH-RC-5014 REVISION 6
SC			ScottM	Prep1C	7/23/2005 10:00:51 AM	RICH-RC-5014 REVISION 6
SC			StringerR	CalcC	7/24/2005 9:10:01 AM	RICH-RD-0003 REVISION 4
AC			**GiroirB**	7/21/2005 12:18:00		
AC			**ScottM**	7/22/2005 9:06:10		
AC			**ScottM**	7/23/2005 10:00:51		
AC			**StringerR**	7/24/2005 9:10:01		

AC: Accepting Entry; SC: Status Change

7/13/2005 3:50:41 PM

Sample Preparation/Analysis

Balance Id:PM4600 ,01

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

CL Sr-90 Prp/SepRC5006(5071)
TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth
5I CLIENT: HANFORD

Pipet #: NA

Report Due: 07/22/2005

Sep1 DT/Tm Tech: 7-14-05 8:00 PM

Sep2 DT/Tm Tech: 7-21-05 3:14 PM

Batch: 5161143 WATER pCi/L PM, Quote: SS , 57671

SEQ Batch, Test: None All Tests: 5160120 DHSS, 5161140 6DSO, 5161142 AWTA, 5161143 CLTL,

Prep Tech: ,FABREM 7-13-05

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HC498-1-AD J5F070382-1-SAMP		1000.10g,in	SRTB11925 05/24/05,pd 04/25/05,r YTA13838 Ex:3/8/2006	.916 2.0821 .4399		20.6	30 100	31	0954 29 0959 7a 1316	7/16/05 K 7/22/05 K 7/23/05 K	
06/07/2005 11:12		AmtRec: VIAL20,500P,4XLP,4LP							Scr Rst:	Alpha: 1.51E+02 pCi/L	Beta: 7.18E+01 pCi/L
2 HC498-1-AH-X J5F070382-1-DUP		1000.30g,in	SRTB11926 05/24/05,pd 04/25/05,r YTA13839 Ex:3/8/2006	.994 2.0893 .4767		19.4		9 11	1032 2b 0959 7b 1316	7/16/05 K 7/22/05 K 7/23/05 K	
06/07/2005 11:12		AmtRec: VIAL20,500P,4XLP,4LP							Scr Rst:	Alpha: 1.51E+02 pCi/L	Beta: 7.18E+01 pCi/L
3 HDCL3-1-AA-B J5F100000-143-BLK		1000.00g,in	SRTB11927 05/24/05,pd 04/25/05,r YTA13840 Ex:3/8/2006	1.920 2.0835 .9215		20.9		31	1032 2C 0959 7c 1316	7/16/05 K 7/22/05 K 7/23/05 K	
06/07/2005 11:12		AmtRec:							Scr Rst:	Alpha:	Beta:
4 HDCL3-1-AC-C J5F100000-143-LCS		1000.00g,in	SRSG1090 05/17/05,pd 04/25/05,r YTA13841 Ex:3/8/2006	1.780 2.0784 .8564		21.8		31	1109 2d 0959 1A 1316	7/16/05 K 7/22/05 K 7/23/05 K	
06/07/2005 11:12		AmtRec:							Scr Rst:	Alpha:	Beta:

6/13/2005 7:23:12 AM

Sample Preparation/Analysis

CL Sr-90 Prp/SepRC5006(5071)
TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth
5I CLIENT: HANFORD

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Report Due: 07/22/2005

Batch: 5161143 pCi/L
SEQ Batch, Test: None

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

Comments:

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HC4981AD-SAMP Constituent List:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

HDCL31AA-BLK:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:

HDCL31AC-LCS:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

HC4981AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HDCL31AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HDCL31AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

7/25/2005 12:55:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2004, 7/30/2005, Batch: '5161143', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5161143						
AC		**CalcC**	**FABREM**	6/13/2005 3:27:24 PM		
SC			heidelbergt	IsBatched	6/10/2005 7:38:17 AM	ICOC_RADCALC v4.8.08
SC			FABREM	InSep1	6/13/2005 3:27:24 PM	RICH-RC-5006 REVISION 5
SC			FABREM	InPrep	7/13/2005 3:44:58 PM	RICH-RC-5006 Revision 5
SC			FABREM	Sep1C	7/15/2005 3:45:39 PM	RICH-RC-5006 REVISION 5
SC			DAWKINSO	InCnt1	7/15/2005 7:07:59 PM	RICH-RD-0007 REVISION 5
SC			StringerR	Cnt1C	7/16/2005 11:10:52 AM	RICH-RD-0007 REVISION 5
SC			FABREM	InSep2	7/19/2005 9:04:47 AM	RICH-RC-5071 REVISION 3
SC			FABREM	Sep2C	7/21/2005 5:55:06 PM	RICH-RC-5071 REVISION 3
SC			StringerR	InCnt2	7/21/2005 6:41:35 PM	RICH-RD-0003 REVISION 4
SC			StringerR	CalcC	7/23/2005 1:30:08 PM	RICH-RD-0003 REVISION 4
AC			**FABREM**	7/13/2005 3:44:58 PM		
AC			**FABREM**	7/15/2005 3:45:39 PM		
AC			**DAWKINSO**	7/15/2005 7:07:59 PM		
AC			**StringerR**	7/16/2005 11:10:52		
AC			**FABREM**	7/19/2005 9:04:47		
AC			**FABREM**	7/21/2005 5:55:06 PM		
AC			**StringerR**	7/21/2005 6:41:35 PM		
AC			**StringerR**	7/23/2005 1:30:08 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 9

ICOCFractions v4.8.09

7/21/2005 10:23:09 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

FP Tc-99 Prp/SepRC5065
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/22/2005

Sep1 DT/Tm Tech:

Batch: 5160124 **WATER** **pCi/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 HC2E5-1-AA J5F060214-2-SAMP 06/06/2005 12:05			126.40g,in	126.40g						
			AmtRec: VIAL20,500P	#Containers: 2				Scr Rst:	Alpha: 3.23E+02 pCi/L	Beta: 1.50E+02 pCi/L
9 HC2E7-1-AA J5F060217-1-SAMP 06/06/2005 11:23			127.00g,in	127.00g						
			AmtRec: VIAL20,500P	#Containers: 2				Scr Rst:	Alpha: 2.29E+02 pCi/L	Beta: 9.30E+01 pCi/L
10 HC2FC-1-AA J5F060219-1-SAMP 06/06/2005 10:00			125.20g,in	125.20g						
			AmtRec: VIAL20,500P	#Containers: 2				Scr Rst:	Alpha: 1.07E+02 pCi/L	Beta: 3.53E+01 pCi/L
11 HC2FD-1-AA J5F060219-2-SAMP 06/06/2005 12:30			125.90g,in	125.90g						
			AmtRec: VIAL20,500P	#Containers: 2				Scr Rst:	Alpha: 2.30E+02 pCi/L	Beta: 1.08E+02 pCi/L
12 HC8QK-1-AA-B J5F090000-124-BLK 06/06/2005 10:55			131.20g,in	131.20g						
			AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:
13 HC8QK-1-AC-C J5F090000-124-LCS 06/06/2005 10:55			127.80g,in	127.80g	TCSE1717 04/19/05,pd 03/10/05,r					
			AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:
14 HC8QK-1-AD-BN J5F090000-124-IBLK 06/06/2005 10:55										
			AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:

7/21/2005 10:23:07 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

FP Tc-99 Prp/SepRC5065
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/22/2005 W04674

Sep1 DT/Tm Tech:

Batch: 5160124 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GiroirB

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HCR5T-1-AA J5F020321-1-SAMP 06/02/2005 09:14			125.20g,in AmtRec: 20ML,500P	125.20g #Containers: 2					Scr Rst: Alpha: 4.99E+01 pCi/L	Beta: 1.14E+01 pCi/L
2 HCR5T-1-AC-S J5F020321-1-MS 06/02/2005 09:14			131.00g,in AmtRec: 20ML,500P	131.00g #Containers: 2	TCSG1171 07/11/05,pd 02/15/05,r				Scr Rst: Alpha: 4.99E+01 pCi/L	Beta: 1.14E+01 pCi/L
3 HCR5V-1-AA J5F020321-2-SAMP 06/02/2005 11:11			128.80g,in AmtRec: 20ML,500P	128.80g #Containers: 2					Scr Rst: Alpha: 5.52E+01 pCi/L	Beta: 3.81E+01 pCi/L
4 HCR5X-1-AA J5F020321-3-SAMP 06/02/2005 10:14			129.70g,in AmtRec: 20ML,500P	129.70g #Containers: 2					Scr Rst: Alpha: 1.00E+02 pCi/L	Beta: 4.50E+01 pCi/L
5 HCR51-1-AA J5F020321-4-SAMP 06/02/2005 12:05			129.10g,in AmtRec: 20ML,500P	129.10g #Containers: 2					Scr Rst: Alpha: 9.81E+01 pCi/L	Beta: 3.65E+01 pCi/L
6 HC2E4-1-AA J5F060214-1-SAMP 06/06/2005 10:55			133.70g,in AmtRec: VIAL20,500P	133.70g #Containers: 2					Scr Rst: Alpha: 1.88E+03 pCi/L	Beta: 1.07E+03 pCi/L
7 HC2E4-1-AD-X J5F060214-1-DUP 06/06/2005 10:55			132.60g,in AmtRec: VIAL20,500P	132.60g #Containers: 2					Scr Rst: Alpha: 1.88E+03 pCi/L	Beta: 1.07E+03 pCi/L

7/21/2005 10:23:10 AM

Sample Preparation/Analysis

FP Tc-99 Prp/SepRC5065
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Report Due: 07/22/2005

Batch: 5160124 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15HC8QK-1-AE-BN										
J5F090000-124-IBLK										
06/06/2005 10:55	AmtRec:	#Containers: 1						Scr Rst:	Alpha:	Beta:

Comments:
pH verified @ ≤ 2 in prep. By

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HCR5T1AA-SAMP Constituent List:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
HCR5T1AC-MS Constituent List:

HC8QK1AA-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
HC8QK1AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
HC8QK1AD-IBLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
HC8QK1AE-IBLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

HCR5T1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HCR5T1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QK1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QK1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QK1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QK1AE-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

7/25/2005 5:14:25 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2004, 7/30/2005, Batch: '5160124', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5160124						
AC		**CalcC**	**GiroirB**	7/20/2005 11:10:55		
SC			heidelbergt	IsBatched	6/10/2005 7:34:34 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	InPrep	7/20/2005 11:10:55 AM	RICH-RC-5016 REVISION 5
SC			FinchA	Sep1C	7/21/2005 9:13:34 AM	RICH-RC-5065 REVISION 5
SC			GiroirB	Prep1C	7/21/2005 10:28:06 AM	RICH-RC-5016 REVISION 5
SC			StringerR	InCnt1	7/21/2005 8:58:41 PM	RICH-RD-0001 REVISION 3
SC			BlackCL	CalcC	7/25/2005 8:31:06 AM	RICH-RD-0001 REVISION 3
AC			**FinchA**	7/21/2005 9:13:34		
AC			**GiroirB**	7/21/2005 10:28:06		
AC			**StringerR**	7/21/2005 8:58:41 PM		
AC			**BlackCL**	7/25/2005 8:31:06		
AC			**BlackCL**	7/25/2005 8:32:15		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.09

6/13/2005 7:21:53 AM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

Report Due: 07/21/2005 WO 4674

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Batch: 5160117 **WATER** **pCi/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None

Balance Id: PJ4000 12413
Pipet #:
Sep1 DT/Tm Tech: 7-13-05 pm
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	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 HCR58-1-AA J5F020324-1-SAMP 06/02/2005 09:14		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst: Alpha: 6.08E+01 pCi/L	Beta: 3.24E+01 pCi/L
2 HCR6D-1-AA J5F020324-2-SAMP 06/02/2005 11:11		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst: Alpha: 1.11E+02 pCi/L	Beta: 7.14E+01 pCi/L
3 HCR6H-1-AA J5F020324-3-SAMP 06/02/2005 10:14		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst: Alpha: 9.56E+01 pCi/L	Beta: 5.44E+01 pCi/L
4 HCR6L-1-AA J5F020324-4-SAMP 06/02/2005 12:05		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst: Alpha: 1.07E+02 pCi/L	Beta: 5.66E+01 pCi/L
5 HC2EV-1-AA J5F060212-1-SAMP 06/06/2005 10:55		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst: Alpha: 1.80E+03 pCi/L	Beta: 1.02E+03 pCi/L
6 HC2EV-1-AF-X J5F060212-1-DUP 06/06/2005 10:55		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst: Alpha: 1.80E+03 pCi/L	Beta: 1.02E+03 pCi/L
7 HC2EX-1-AA J5F060212-2-SAMP 06/06/2005 12:05		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst: Alpha: 2.35E+02 pCi/L	Beta: 8.94E+01 pCi/L

6/13/2005 7:21:54 AM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

Report Due: 07/21/2005

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Batch: 5160117 **WATER** **pCi/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None

Balance Id: PJ4000 12413
Pipet #:
Sep1 DT/Tm Tech: 7-13-05 pm
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	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:
8 HC2E9-1-AA J5F060218-1-SAMP 06/06/2005 11:23		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst: Alpha: 1.68E+02 pCi/L	Beta: 6.55E+01 pCi/L
9 HC2FG-1-AA J5F060220-1-SAMP 06/06/2005 10:00		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst: Alpha: 1.78E-01 pCi/L	Beta: 9.04E-01 pCi/L
10 HC2FK-1-AA J5F060220-2-SAMP 06/06/2005 12:30		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst: Alpha: 2.01E+02 pCi/L	Beta: 8.05E+01 pCi/L
11 HC8QD-1-AA-B J5F090000-117-BLK 06/06/2005 10:55		AmtRec:	#Containers: 1				Scr Rst: Alpha:	Beta:
12 HC8QD-1-AC-C J5F090000-117-LCS 06/06/2005 10:55		AmtRec:	#Containers: 1				Scr Rst: Alpha:	Beta:
13 HC8QD-1-AD-BX J5F090000-117-MBLK 06/06/2005 10:55		AmtRec:	#Containers: 1				Scr Rst: Alpha:	Beta:
14 HC8QD-1-AE-CM J5F090000-117-MLCS 06/06/2005 10:55		AmtRec:	#Containers: 1				Scr Rst: Alpha:	Beta:

6/13/2005 7:21:55 AM

Sample Preparation/Analysis

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id: PJ4000 12413
Pipet #:
Sep1 DT/Tm Tech: 7-13-05 pm
Sep2 DT/Tm Tech:
Prep Tech:

Report Due: 07/21/2005

Batch: 5160117 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:
15HC8QD-1-AF-BN								
J5F090000-117-IBLK								
06/06/2005 10:55	AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:
16HC8QD-1-AG-BN								
J5F090000-117-IBLK								
06/06/2005 10:55	AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:

Comments:

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HCR581AA-SAMP Constituent List:

H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
HC8QD1AA-BLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HC8QD1AC-LCS:					
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
HC8QD1AD-MBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HC8QD1AE-MLCS:					
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
HC8QD1AF-IBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HC8QD1AG-IBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:

HCR581AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QD1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QD1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

6/13/2005 7:21:56 AM

Sample Preparation/Analysis

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id: PJ4000 12213

Pipet #:

Sep1 DT/Tm Tech: 7-13-05

Sep2 DT/Tm Tech:

Prep Tech:

Report Due: 07/21/2005

Batch: 5160117 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

```
HC8QD1AD-MBLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HC8QD1AE-MLCS:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HC8QD1AF-IBLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HC8QD1AG-IBLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

7/14/2005 10:01:08 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/14/2004, 7/19/2005, Batch: '5160117', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5160117						
AC		**CalcC**	**McDowellD**	7/11/2005 2:03:14 PM		
SC			heidelbergt	IsBatched	6/10/2005 7:34:34 AM	ICOC_RADCALC v4.8.08
SC			McDowellD	InSep1	7/11/2005 2:03:14 PM	RICHRC5007 REVISION 3
SC			McDowellD	Sep1C	7/13/2005 10:22:21 AM	RICHRC5007 REVISION 3
SC			StringerR	InCnt1	7/13/2005 10:23:38 AM	RICH-RD-0001 REVISION 3
SC			BlackCL	CalcC	7/14/2005 7:17:55 AM	RICH-RD-0001 REVISION 3
AC			**McDowellD**	7/13/2005 10:22:21		
AC			**StringerR**	7/13/2005 10:23:38		
AC			**BlackCL**	7/14/2005 7:17:55		

AC: Accepting Entry; SC: Status Change

7/22/2005 4:31:17 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/21/2005 6104674

Sep1 DT/Tm Tech:

Batch: 5160120 **WATER** **ug/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 5160117 ARS6, 5160120 DHSS, 5160127 AZS7, 5160130 BCS8,

Prep Tech: GiroirB

Work Order, Lot, Sample DateTime	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 HCR58-1-AE J5F020324-1-SAMP 06/02/2005 09:14		24.70g,in						
		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst:	Alpha: 6.08E+01 pCi/L Beta: 3.24E+01 pCi/L
2 HCR6D-1-AE J5F020324-2-SAMP 06/02/2005 11:11		27.00g,in						
		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst:	Alpha: 1.11E+02 pCi/L Beta: 7.14E+01 pCi/L
3 HCR6H-1-AE J5F020324-3-SAMP 06/02/2005 10:14		25.30g,in						
		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst:	Alpha: 9.56E+01 pCi/L Beta: 5.44E+01 pCi/L
4 HCR6L-1-AE J5F020324-4-SAMP 06/02/2005 12:05		28.50g,in						
		AmtRec: 20ML,500P,2LP	#Containers: 4				Scr Rst:	Alpha: 1.07E+02 pCi/L Beta: 5.66E+01 pCi/L
5 HC2EV-1-AE J5F060212-1-SAMP 06/06/2005 10:55		28.50g,in						
		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 1.80E+03 pCi/L Beta: 1.02E+03 pCi/L
6 HC2EX-1-AE J5F060212-2-SAMP 06/06/2005 12:05		25.80g,in						
		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 2.35E+02 pCi/L Beta: 8.94E+01 pCi/L
7 HC2EX-1-AF-S J5F060212-2-MS 06/06/2005 12:05		27.40g,in	UNSF2495 06/23/05,pd 09/16/04,r					
		AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 2.35E+02 pCi/L Beta: 8.94E+01 pCi/L

7/22/2005 4:31:21 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 07/21/2005

Sep1 DT/Tm Tech:

Batch: 5160120 **WATER** **ug/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: GiroirB

Work Order, Lot, Sample DateTime	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:
8 HC2EX-1-AG-X J5F060212-2-DUP 06/06/2005 12:05		27.70g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 2.35E+02 pCi/L Beta: 8.94E+01 pCi/L
9 HC2E9-1-AE J5F060218-1-SAMP 06/06/2005 11:23		30.00g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 1.68E+02 pCi/L Beta: 6.55E+01 pCi/L
10 HC2FG-1-AE J5F060220-1-SAMP 06/06/2005 10:00		24.70g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 1.78E-01 pCi/L Beta: 9.04E-01 pCi/L
11 HC2FK-1-AE J5F060220-2-SAMP 06/06/2005 12:30		25.10g,in AmtRec: VIAL20,500P,2XLP	#Containers: 4				Scr Rst:	Alpha: 2.01E+02 pCi/L Beta: 8.05E+01 pCi/L
12 HC498-1-AE J5F070382-1-SAMP 06/07/2005 11:12		27.00g,in AmtRec: VIAL20,500P,4XLP,4LP	#Containers: 7				Scr Rst:	Alpha: 1.51E+02 pCi/L Beta: 7.18E+01 pCi/L
13 HC8QF-1-AA-B J5F090000-120-BLK 06/06/2005 12:05		26.80g,in AmtRec:	#Containers: 1				Scr Rst:	Alpha: Beta:
14 HC8QF-1-AC-C J5F090000-120-LCS 06/06/2005 12:05		28.90g,in AmtRec:	UNSF2496 06/23/05,pd 09/16/04,r #Containers: 1				Scr Rst:	Alpha: Beta:

7/22/2005 4:31:22 AM

Sample Preparation/Analysis

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Report Due: 07/21/2005

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 5160120 ug/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:
15HC8QF-1-AD-C								
J5F090000-120-LCS								
06/06/2005 12:05	AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:

Comments:
HCR58-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6D-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6H-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HCR6L-SAMP "Comments: alpha alig reduced as determined by weight screen. Bg"
HC2EV-SAMP "Comments: alpha and Beta aliquot reduced as determined by activity screen. Bg"
HC2EX-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HC2E9-SAMP "Comments: alpha and beta alig reduced as determined by weight screen. Bg"
HC2FK-SAMP "Comments: Beta alaiq reduced as determined by weight screen. Bg"

All Clients fc
384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, SS , 57671

pH verified @ ≤2 in prep. Bg

HCR581AE-SAMP Constituent List:

Uranium	RDL:1.44E-01	ug/L	LCL:	UCL:	RPD:

HC2EX1AF-MS:

HC8QF1AA-BLK:

Uranium	RDL:1.44E-01	ug/L	LCL:	UCL:	RPD:

HC8QF1AC-LCS:

Uranium	RDL:0.144343	ug/L	LCL:70	UCL:130	RPD:20

HC8QF1AD-LCS:

Uranium	RDL:0.144343	ug/L	LCL:70	UCL:130	RPD:20

HCR581AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC2EX1AF-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QF1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC8QF1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

7/28/2005 1:50:36 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/28/2004, 8/2/2005, Batch: '5160120', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5160120						
AC		**Cnt1C**	**GiroirB**	7/20/2005 11:10:26		
SC			heidelbergt	IsBatched	6/10/2005 7:34:34 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	InPrep	7/20/2005 11:10:26 AM	RICH-RC-5015 REVISION 4
SC			GiroirB	Prep1C	7/22/2005 5:28:59 AM	RICH-RC-5015 REVISION 4
SC			ScottM	InPrep	7/22/2005 8:13:16 AM	RICH-RC-5015 REVISION 4
SC			ScottM	Prep1C	7/23/2005 11:47:15 AM	RICH-RC-5015 REVISION 4
SC			ManisD	InCnt1	7/26/2005 8:26:44 AM	RICH-RC-5058 REVISION 6
SC			ManisD	InCnt1	7/26/2005 4:27:05 PM	RICH-RC-5058 REVISION 6
SC			ManisD	Cnt1C	7/26/2005 4:27:32 PM	RICH-RC-5058 REVISION 6
AC			**GiroirB**	7/22/2005 5:28:59		
AC			**ScottM**	7/22/2005 8:13:16		
AC			**ScottM**	7/23/2005 11:47:15		
AC			**ManisD**	7/26/2005 8:26:44		
AC			**ManisD**	7/26/2005 4:27:05 PM		
AC			**ManisD**	7/26/2005 4:27:32 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 7

ICOCFractions v4.8.09

6/8/2005 7:01:37 AM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

Report Due: 07/22/2005 W04674

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

Batch: 5159123 **WATER** **mg/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None All Tests: 88EA, 5159123 88EA,

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	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 HC4JX-1-AA J5F070300-1-SAMP 06/07/2005 09:35		AmtRec: 500P	#Containers: 1			Scr Rst:	Alpha:	Beta:
2 HC4JX-1-AC-S J5F070300-1-MS 06/07/2005 09:35		AmtRec: 500P	#Containers: 1			Scr Rst:	Alpha:	Beta:
3 HC4JX-1-AD-X J5F070300-1-DUP 06/07/2005 09:35		AmtRec: 500P	#Containers: 1			Scr Rst:	Alpha:	Beta:
4 HC4JX-1-AE-S J5F070300-1-MS 06/07/2005 09:35		AmtRec: 500P	#Containers: 1			Scr Rst:	Alpha:	Beta:
5 HC5MM-1-AA-B J5F080000-123-BLK 06/07/2005 09:35		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:
6 HC5MM-1-AC-C J5F080000-123-LCS 06/07/2005 09:35		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:

6/8/2005 7:01:39 AM

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Balance Id:
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Prep Tech:

Report Due: 07/22/2005

Batch: 5159123 mg/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

Comments:

All Clients for Batch:
384868, Pacific Northwest National Labortories Pacific Northwest National Lab, SS , 57671

HC4JX1AA-SAMP Constituent List:
HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20
HC4JX1AC-MS Constituent List:
HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20
HC4JX1AE-MS:
HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20
HC5MM1AA-BLK:
HEXCHROME RDL:0.002 mg/L LCL: UCL: RPD:
HC5MM1AC-LCS:
HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

HC4JX1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC4JX1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC4JX1AE-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC5MM1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HC5MM1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

6/9/2005 9:21:33 AM

ICOC Fraction Transfer/Status Report

ByDate: 5/10/2005, 6/10/2005, Batch: '5159123', User: *All Order by BatchNbr,WorkOrderNbr,DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5159123						
AC		**Prep1C**	**ManisD**	6/7/2005 2:15:23 PM		
SC			ManisD	InPrep	6/7/2005 2:15:23 PM	RICH-RC-5003 REV 7
SC			ManisD	Prep1C	6/7/2005 3:30:38 PM	RICH-WC-5003 REV 7
AC			**ManisD**	6/7/2005 3:30:38 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 2

ICOCFractions v4.8.08