Analytical Data Package Prepared For

Pacific Northwest National Lab

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Radiochemical Analysis By

STL Richland STLRL

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

Data Package Contains _____ Pages

Report Nbr: 30861

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04805	S06-010	B1F1D2	J5J270426-1	HNTFM1AA	9HNTFM10	5318600
		B1F1D2	J5J270426-1	HNTFM1AC	9HNTFM10	5318606
		B1F1D2	J5J270426-1	HNTFM1AD	9HNTFM10	5318599
		B1F1D2	J5J270426-1	HNTFM1AE	9HNTFM10	5318595
	W06-010	B1F214	J5J270429-1	HNTF21AA	9HNTF210	5318599
		B1F214	J5J270429-1	HNTF21AC	9HNTF210	5318595
	A06-010	B1DYT2	J5J270430-1	HNTF41AA	9HNTF410	5318600
		B1DYT2	J5J270430-1	HNTF41AC	9HNTF410	5318599
		B1DYT2	J5J270430-1	HNTF41AD	9HNTF410	5318595
		B1DYT2	J5J270430-1	HNTF41AE	9HNTF410	5318609
		B1DYT2	J5J270430-1	HNTF41AF	9HNTF410	5318602
		B1DYT2	J5J270430-1	HNTF41AG	9HNTF410	5318607
	I06-001	B1F396	J5J270431-1	HNTF61AA	9HNTF610	5318600
		B1F396	J5J270431-1	HNTF61AC	9HNTF610	5318599
		B1F396	J5J270431-1	HNTF61AD	9HNTF610	5318595

Comments:

12170005

Report Nbr: 30861

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04805	I06-001	B1F396	J5J270431-1	HNTF61AE	9HNTF610	5318610
	S06-010	B1F124	J5J310213-1	HN2CF1AA	9HN2CF10	5318600
		B1F120	J5J310213-2	HN2CJ1AA	9HN2CJ10	5318600
		B1F115	J5J310213-3	HN2C41AA	9HN2C410	5318600
		B1F0W5	J5J310215-1	HN2C71AA	9HN2C710	5318600
		B1F0W5	J5J310215-1	HN2C71AC	9HN2C710	5318599
		B1F0W5	J5J310215-1	HN2C71AD	9HN2C710	5318595
		B1F0W5	J5J310215-1	HN2C71AE	9HN2C710	5318603
	G06-011	B1F8H9	J5K010344-1	HN45X1AA	9HN45X10	5318595
		B1F8J1	J5K010344-2	HN4511AA	9HN45110	5318595
		B1F8H3	J5K010344-3	HN4561AA	9HN45610	5318595
		B1F8H1	J5K010344-4	HN4571AA	9HN45710	5318595
		B1F8F9	J5K010344-5	HN4591AA	9HN45910	5318595
	S06-011	B1FF10	J5K010349-1	HN46L1AA	9HN46L10	5318600
		B1FF10	J5K010349-1	HN46L1AC	9HN46L10	5318599
		B1FF10	J5K010349-1	HN46L1AD	9HN46L10	5318595
	G06-011	B1F8J5	J5K030293-1	HPAJE1AA	9HPAJE10	5318595
		B1F8J7	J5K030293-2	HPAJQ1AA	9HPAJQ10	5318595
		B1F8J3	J5K030293-3	HPAJX1AA	9HPAJX10	5318595
		B1F8J9	J5K030293-4	HPAJ31AA	9HPAJ310	5318595
		B1F8K3	J5K030293-5	HPAJ91AA	9HPAJ910	5318595
		B1F8K1	J5K030293-6	HPAKD1AA	9HPAKD10	5318595

Comments:

Certificate of Analysis

Pacific Northwest National Laboratories
Sigma V Building
Richland, WA 99352

December 22, 2005

Attention: Dot Stewart

SAF Number	:	A06-010, G06-011, I06-001, S06-010, S06-011, W06-010
Date SDG Closed	:	November 3, 2005
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W04805
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

Between October 27, 2005 and November 2, 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
B1F1D2	HNTFM	WATER	10/27/05
B1F214	HNTF2	WATER	10/27/05
B1DYT2	HNTF4	WATER	10/27/05
B1F396	HNTF6	WATER	10/27/05
B1F124	HN2CF	WATER	10/31/05
B1F120	HN2CJ	WATER	10/31/05
B1F115	HN2C4	WATER	10/31/05
B1F0W5	HN2C7	WATER	10/31/05
B1F8H9	HN45X	WATER	11/1/05
B1F8J1	HN451	WATER	11/1/05
B1F8H3	HN456	WATER	11/1/05
B1F8H1	HN457	WATER	11/1/05
B1F8F9	HN459	WATER	11/1/05

B1FF10	HN46L	WATER	11/1/05
B1F8J5	HPAJE	WATER	11/2/05
B1F8J7	HPAJQ	WATER	11/2/05
B1F8J3	HPAJX	WATER	11/2/05
B1F8J9	HPAJ3	WATER	11/2/05
B1F8K3	HPAJ9	WATER	11/2/05
B1F8K1	HPAKP	WATER	11/2/05

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:

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 Spec by method RICH-RC-5017
Iodine-129 (LL) by method RICH-RC-5025
Liquid Scintillation Counting
Technetium-99 by TEVA method RICH-RC-5065
Tritium by method RICH-RC-5007
Laser Induced Phosphorimetry
Total Uranium by method RICH-RC-5058
Chemical Analysis
Total Coliform by method 9223

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:
The LCS, batch blank, samples and sample duplicate (B1FF10) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:
The achieved MDAs for samples B1F8J1, B1F1D2, B1F8K3 and B1F8K1 are greater than the CRDL due to sample matrix effects; reduced volume was analyzed based on an elevated screen results. The detected activities exceed the achieved MDAs. The LCS, batch blank, samples and sample duplicate (B1F8H9) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006
The LCS, batch blank, samples and sample duplicate (B1F0W5) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec by method RICH-RC-5017:
The LCS was recounted to verify activity. The recount is accepted. The LCS, batch blank, samples and sample duplicate (B1F396) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025
The LCS, batch blank, samples and sample duplicate (B1DYT2) results are within contractual requirements.

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065:
The LCS, batch blank, samples, sample duplicate (B1DYT2), and sample matrix spike (B1DYT2) results are within contractual requirements.

Tritium by method RICH-RC-5007:
The LCS, batch blank, samples and sample duplicate (B1F124) results are within contractual requirements.

Total Uranium

Total Uranium by method RICH-RC-5058:
The LCS, batch blank, samples, sample duplicate (B1DYT2), and sample matrix spike (B1DYT2) results are within contractual requirements.

Chemical Analysis

Total Coliform by method 9223
The LCS, batch blank, samples and sample duplicate (B1F1D2) results are within contractual requirements.

Pacific Northwest National Laboratories
December 22, 2005

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:

Sandra Seger

Hans Carman
for 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: 30861 File Name: h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.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:
9HN2C410	B1F115		MW6-SBB-A1	S06-010	W04805					10/31/2005 11:16

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	5.85E+01	pCi/L	1.4E+02	1.5E+02	U	3.33E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 19:20	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:
9HN2C710	B1F0W5		MW6-SBB-A1	S06-010	W04805					10/31/2005 09:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	3.90E+02	pCi/L	1.5E+02	1.7E+02		3.37E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 20:41	I
5318599	ALPHA	12587-46-1	3.34E+00	pCi/L	1.5E+00	1.7E+00		2.14E+00	100.0	9310_ALPHABETA	1.971E-01	L	12/13/200 19:00	I
5318595	BETA	12587-47-2	9.91E+01	pCi/L	3.4E+00	1.3E+01		1.88E+00	100.0	9310_ALPHABETA	2.085E-01	L	12/13/200 18:42	I
5318603	SR-90	10098-97-2	4.86E+01	pCi/L	1.5E+00	7.5E+00		4.41E-01	74.9	SRISO_SEP_PRE	1.0031E+00	L	12/02/200 06:33	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:
9HN2CF10	B1F124		MW6-SBB-A1	S06-010	W04805					10/31/2005 12:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	4.76E+03	pCi/L	2.7E+02	3.6E+02		3.31E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 15:15	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:
9HN2CJ10	B1F120		MW6-SBB-A1	S06-010	W04805					10/31/2005 11:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	4.28E+03	pCi/L	2.6E+02	3.4E+02		3.32E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 17:58	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:
9HN45110	B1F8J1		MW6-SBB-A1	G06-011	W04805					11/01/2005 10:26

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	2.35E+03	pCi/L	3.5E+01	3.0E+02		6.48E+00	100.0	9310_ALPHABETA	8.29E-02	L	12/13/200 20:28	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:
9HN45610	B1F8H3		MW6-SBB-A1	G06-011	W04805					11/01/2005 11:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	1.06E+02	pCi/L	3.5E+00	1.4E+01		1.94E+00	100.0	9310_ALPHABETA	1.978E-01	L	12/13/200 18:42	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:

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: 30861 File Name: h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.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:
9HN45710	B1F8H1		MW6-SBB-A1	G06-011	W04805					11/01/2005 12:08

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	4.86E+01	pCi/L	2.3E+00	8.2E+00		1.69E+00	100.0	9310_ALPHABETA	2.043E-01	L	12/13/200 18:42	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:
9HN45910	B1F8F9		MW6-SBB-A1	G06-011	W04805					11/01/2005 12:35

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	5.31E+02	pCi/L	1.1E+01	6.8E+01		2.78E+00	100.0	9310_ALPHABETA	2.007E-01	L	12/13/200 20:28	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:
9HN45X10	B1F8H9		MW6-SBB-A1	G06-011	W04805					11/01/2005 09:07

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	1.15E+01	pCi/L	1.8E+00	2.9E+00		2.55E+00	100.0	9310_ALPHABETA	1.437E-01	L	12/13/200 18:42	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:
9HN46L10	B1FF10		MW6-SBB-A1	S06-011	W04805					11/01/2005 11:21

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	1.34E+04	pCi/L	4.1E+02	7.1E+02		3.32E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/17/200 02:08	I
5318599	ALPHA	12587-46-1	2.73E+00	pCi/L	1.1E+00	1.2E+00		1.23E+00	100.0	9310_ALPHABETA	1.715E-01	L	12/13/200 19:00	I
5318595	BETA	12587-47-2	7.73E+00	pCi/L	1.8E+00	2.0E+00		2.77E+00	100.0	9310_ALPHABETA	1.328E-01	L	12/13/200 18:42	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:
9HNTF210	B1F214		MW6-SBB-A1	W06-010	W04805					10/27/2005 10:16

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318599	ALPHA	12587-46-1	2.01E+00	pCi/L	1.2E+00	1.2E+00		1.74E+00	100.0	9310_ALPHABETA	1.982E-01	L	12/13/200 17:05	I
5318595	BETA	12587-47-2	7.91E+00	pCi/L	1.3E+00	1.7E+00		1.99E+00	100.0	9310_ALPHABETA	1.987E-01	L	12/13/200 18:42	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:
9HNTF410	B1DYT2		MW6-SBB-A1	A06-010	W04805					10/27/2005 11:18

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	1.08E+03	pCi/L	1.8E+02	2.0E+02		3.41E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 12:32	I
5318599	ALPHA	12587-46-1	1.56E+00	pCi/L	1.1E+00	1.1E+00	U	1.78E+00	100.0	9310_ALPHABETA	1.965E-01	L	12/13/200 17:05	I
5318595	BETA	12587-47-2	8.30E+00	pCi/L	1.4E+00	1.7E+00		2.01E+00	100.0	9310_ALPHABETA	2.009E-01	L	12/13/200 18:42	I
5318609	I-129L	15046-84-1	7.52E-01	pCi/L	2.1E-01	2.1E-01	U	4.38E-01	97.6	I129LL_SEP_LEPS	3.9139E+00	L	12/12/200 15:32	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.

5318602	TC-99	14133-76-7	-4.52E+00	pCi/L	3.2E+00	4.6E+00	U	8.01E+00	100.0	TC99_ETVDSK_LS	1.289E-01	L	12/18/200	20:16	I
5318607	Uranium	7440-61-1	2.80E+00	ug/L	2.9E-01	2.9E-01		8.32E-02		UTOT_KPA	2.52E-02	ML	12/15/200	16:16	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:
9HNTF610	B1F396		MW6-SBB-A1	I06-001	W04805					10/27/2005 09:18

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	9.42E+01	pCi/L	1.4E+02	1.6E+02	U	3.43E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 13:53	I
5318599	ALPHA	12587-46-1	3.42E-01	pCi/L	4.1E-01	4.2E-01	U	7.30E-01	100.0	9310_ALPHABETA	1.99E-01	L	12/13/200 17:05	I
5318595	BETA	12587-47-2	7.26E+00	pCi/L	1.3E+00	1.6E+00		1.88E+00	100.0	9310_ALPHABETA	1.973E-01	L	12/13/200 18:42	I
5318610	BE-7	13966-02-4	-1.68E+01	pCi/L	2.1E+01	2.1E+01	U	3.34E+01		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	CO-60	10198-40-0	-7.76E-01	pCi/L	1.7E+00	1.7E+00	U	3.06E+00		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	CS-134	13967-70-9	-3.21E-01	pCi/L	1.9E+00	1.9E+00	U	3.31E+00		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	CS-137	10045-97-3	-4.11E-01	pCi/L	1.8E+00	1.8E+00	U	3.09E+00		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	EU-152	14683-23-9	-4.28E-01	pCi/L	4.3E+00	4.3E+00	U	7.45E+00		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	EU-154	15585-10-1	-8.36E-01	pCi/L	5.7E+00	5.7E+00	U	1.03E+01		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	EU-155	14391-16-3	-6.15E-01	pCi/L	4.2E+00	4.2E+00	U	7.20E+00		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	K-40	13966-00-2	1.33E+01	pCi/L	5.7E+01	5.7E+01	U	3.21E+01		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	RU-106	13967-48-1	-4.36E+00	pCi/L	1.4E+01	1.4E+01	U	2.50E+01		GAMMA_GS	2.501E+00	L	12/02/200 08:31	I
5318610	SB-125	14234-35-6	-1.90E+00	pCi/L	4.2E+00	4.2E+00	U	7.12E+00		GAMMA_GS	2.501E+00	L	12/02/200 08:31	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:
9HNTFM10	B1F1D2		MW6-SBB-A1	S06-010	W04805					10/27/2005 11:54

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318600	H-3	10028-17-8	1.42E+04	pCi/L	4.2E+02	7.5E+02		3.31E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/200 11:10	I
5318599	ALPHA	12587-46-1	5.54E+00	pCi/L	2.1E+00	2.4E+00		2.28E+00	100.0	9310_ALPHABETA	1.095E-01	L	12/13/200 17:05	I
5318595	BETA	12587-47-2	1.80E+01	pCi/L	3.6E+00	4.4E+00		5.80E+00	100.0	9310_ALPHABETA	7.20E-02	L	12/13/200 18:42	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:
9HPAJ310	B1F8J9		MW6-SBB-A1	G06-011	W04805					11/01/2005 13:40

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	1.12E+03	pCi/L	1.6E+01	1.5E+02		3.13E+00	100.0	9310_ALPHABETA	1.961E-01	L	12/13/200 17:41	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:

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.

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9HPAJ910	B1F8K3		MW6-SBB-A1	G06-011	W04805					11/01/2005 13:43

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	5.94E+03	pCi/L	5.9E+01	1.0E+03		7.44E+00	100.0	9310_ALPHABETA	6.97E-02	L	12/13/200 20:28	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:
9HPAJE10	B1F8J5		MW6-SBB-A1	G06-011	W04805					11/01/2005 14:05

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	1.31E+03	pCi/L	2.0E+01	1.7E+02		4.07E+00	100.0	9310_ALPHABETA	1.323E-01	L	12/13/200 17:41	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:
9HPAJQ10	B1F8J7		MW6-SBB-A1	G06-011	W04805					11/01/2005 14:15

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	2.55E+03	pCi/L	2.8E+01	3.2E+02		3.99E+00	100.0	9310_ALPHABETA	1.393E-01	L	12/13/200 17:41	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:
9HPAJX10	B1F8J3		MW6-SBB-A1	G06-011	W04805					11/01/2005 14:20

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	6.15E+02	pCi/L	1.1E+01	1.1E+02		2.60E+00	100.0	9310_ALPHABETA	1.996E-01	L	12/13/200 17:41	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:
9HPAKD10	B1F8K1		MW6-SBB-A1	G06-011	W04805					11/01/2005 13:50

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
5318595	BETA	12587-47-2	1.17E+03	pCi/L	1.8E+01	1.6E+02		4.10E+00	100.0	9310_ALPHABETA	1.496E-01	L	12/13/200 20:28	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.

Thursday, December 22, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5801AB **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 11/01/2005 11:21

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

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 11/01/2005

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
5318599	ALPHA	3.49E-01	pCi/L	3.3E-01	U	5.04E-01	100.0		9310_ALPHAB	2.029E-01	12/13/2005				D
BLK	12587-46-1			3.3E-01						L	19:00				

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 Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HP5811AB	**Sdg/Rept Nbr:**	W04805 30861	**Collection Date:**	10/31/2005 12:14
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BLK	**Received Date:**	10/31/2005

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
5318600	H-3	1.15E+01	pCi/L	1.5E+02	U	3.40E+02	100.0		906.0_H3_LSC	5.00E-03	12/16/2005				D
BLK	10028-17-8			1.4E+02						L	08:26				

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.

Thursday, December 22, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HP5811DX	**Sdg/Rept Nbr:**	W04805 30861	**Collection Date:**	10/31/2005 12:14
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BLK	**Received Date:**	10/31/2005

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
5318600	H-3	-1.43E+02	pCi/L	1.5E+02	U	3.36E+02	100.0		906.0_H3_LSC	5.00E-03	12/16/2005				D
BLK	10028-17-8			1.3E+02						L	23:25				

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.

Thursday, December 22, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5861AB **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

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

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 10/27/2005

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
5318602	TC-99	5.28E+00	pCi/L	5.6E+00	U	9.65E+00	100.0		TC99_ETVDSK	1.249E-01	12/18/2005				D
BLK	14133-76-7			4.0E+00						L	23:24				

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 Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5871AB **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/31/2005 09:30

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

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 10/31/2005

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
5318603	SR-90	-1.01E-01	pCi/L	1.8E-01	U	4.40E-01	74.5		SRISO_SEP_P	9.694E-01	12/02/2005				D
BLK	10098-97-2			1.8E-01						L	06:33				

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.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP58N1AB **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 11/01/2005 09:07

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

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 11/01/2005

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
5318595	BETA	1.22E+00	pCi/L	1.0E+00	U	1.94E+00	100.0		9310_ALPHAB	1.882E-01	12/13/2005				D
BLK	12587-47-2			1.0E+00						L	18:42				

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 Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HP59F1AB	**Sdg/Rept Nbr:**	W04805 30861	**Collection Date:**	10/27/2005 11:18
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BLK	**Received Date:**	10/27/2005

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
5318607	Uranium	-7.41E-03	ug/L	1.2E-03	U	8.38E-02			UTOT_KPA	2.50E-02	12/15/2005				D
BLK	7440-61-1			1.2E-03						ML	16:04				

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.

Thursday, December 22, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP59J1AB **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

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

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 10/27/2005

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
5318609	I-129L	-1.27E-01	pCi/L	1.6E-01	U	2.61E-01	97.3		I129LL_SEP_L	3.8679E+00	12/12/2005				D
BLK	15046-84-1			1.6E-01						L	17:21				

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 Blank Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP59K1AB **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 09:18

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

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 10/27/2005

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
5318610	BE-7	7.83E+00	pCi/L	2.0E+01	U	3.59E+01			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	13966-02-4			2.0E+01						L	10:20				
5318610	CO-60	1.49E+00	pCi/L	1.6E+00	U	3.46E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	10198-40-0			1.6E+00						L	10:20				
5318610	CS-134	4.58E-01	pCi/L	1.7E+00	U	3.20E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	13967-70-9			1.7E+00						L	10:20				
5318610	CS-137	7.45E-01	pCi/L	1.6E+00	U	2.97E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	10045-97-3			1.6E+00						L	10:20				
5318610	EU-152	1.06E+00	pCi/L	4.4E+00	U	7.74E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	14683-23-9			4.4E+00						L	10:20				
5318610	EU-154	1.02E-01	pCi/L	5.3E+00	U	9.91E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	15585-10-1			5.3E+00						L	10:20				
5318610	EU-155	4.01E+00	pCi/L	4.3E+00	U	7.97E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	14391-16-3			4.3E+00						L	10:20				
5318610	K-40	-1.59E+01	pCi/L	5.3E+01	U	1.17E+02			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	13966-00-2			5.3E+01						L	10:20				
5318610	RU-106	-5.51E-01	pCi/L	1.5E+01	U	2.76E+01			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	13967-48-1			1.5E+01						L	10:20				
5318610	SB-125	1.96E+00	pCi/L	4.1E+00	U	7.63E+00			GAMMA_GS	2.5096E+00	12/02/2005				D
BLK	14234-35-6			4.1E+00						L	10:20				

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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5801CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 11/01/2005 11:21

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 11/01/2005

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
5318599	ALPHA	2.40E+01	pCi/L	8.3E+00		6.97E-01	100.0	2.21E+01	9310_ALPHAB	2.058E-01	12/13/2005			70	D
BS	12587-46-1			2.5E+00				108.7		L	20:18			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HP5811CS	**Sdg/Rept Nbr:**	W04805	30861	**Collection Date:** 10/31/2005 12:14
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 10/31/2005

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
5318600	H-3	2.99E+03	pCi/L	2.8E+02		3.41E+02	100.0	2.81E+03	906.0_H3_LSC	5.00E-03	12/16/2005			70	D
BS	10028-17-8			2.3E+02				106.5		L	09:48			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5811EM **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/31/2005 12:14

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 10/31/2005

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
5318600	H-3	2.87E+03	pCi/L	2.8E+02		3.36E+02	100.0	2.81E+03	906.0_H3_LSC	5.00E-03	12/17/2005			70	D
BS	10028-17-8			2.3E+02				102.1		L	00:47			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5861CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 10/27/2005

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
5318602	TC-99	4.46E+02	pCi/L	3.1E+01		9.01E+00	100.0	5.35E+02	TC99_ETVDSK	1.261E-01	12/19/2005			70	D
BS	14133-76-7			1.1E+01				83.4		L	00:26			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.

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP5871CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/31/2005 09:30
Client Id: NA **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** BS **Received Date:** 10/31/2005

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
5318603	SR-90	1.47E+01	pCi/L	2.4E+00		4.35E-01	72.9	1.34E+01	SRISO_SEP_P	1.0239E+00	12/02/2005			70	D
BS	10098-97-2			8.4E-01				110.1		L	06:33			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP58N1CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 11/01/2005 09:07

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 11/01/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	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
5318595	BETA	2.36E+01	pCi/L	3.5E+00		1.98E+00	100.0	2.39E+01	9310_ALPHAB	1.925E-01	12/13/2005			70	D
BS	12587-47-2			1.9E+00				98.7		L	18:42			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.

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP59F1CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 10/27/2005

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
5318607	Uranium	3.01E+01	ug/L	3.6E+00		7.23E-02		3.12E+01	UTOT_KPA	2.90E-02	12/15/2005			70	D
BS	7440-61-1			3.6E+00				96.4		ML	16:09			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HP59F1DS	**Sdg/Rept Nbr:**	W04805 30861	**Collection Date:**	10/27/2005 11:18
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BS	**Received Date:**	10/27/2005

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
5318607	Uranium	3.87E+00	ug/L	4.0E-01		8.70E-02		3.80E+00	UTOT_KPA	2.41E-02	12/15/2005			70	D
BS	7440-61-1			4.0E-01				101.8		ML	16:13			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP59J1CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 10/27/2005

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
5318609	I-129L	8.14E+00	pCi/L	1.0E+00		3.99E-01	100.4	9.69E+00	I129LL_SEP_L	3.9321E+00	12/12/2005			70	D
BS	15046-84-1			1.0E+00				84.0		L	17:21			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HP59K2CS **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 09:18

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BW	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
5318610	CO-60	3.30E+01	pCi/L	7.1E+00		3.71E+00		3.01E+01	GAMMA_GS	2.4578E+00	12/07/2005			70	D
BS	10198-40-0			7.1E+00				109.7		L	12:05			130	
5318610	CS-137	2.21E+01	pCi/L	4.7E+00		3.75E+00		2.03E+01	GAMMA_GS	2.4578E+00	12/07/2005			70	D
BS	10045-97-3			4.7E+00				108.9		L	12:05			130	
5318610	EU-152	4.41E+01	pCi/L	1.5E+01	U	1.87E+01		6.15E+01	GAMMA_GS	2.4578E+00	12/07/2005			70	D
BS	14683-23-9			1.5E+01				71.8		L	12:05			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.

Thursday, December 22, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HN2C71FR	**Sdg/Rept Nbr:**	W04805 30861	**Collection Date:**	10/31/2005 09:30
Client Id:	B1F0W5	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	DUP	**Received Date:**	10/31/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S06-010	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
5318603	SR-90	5.30E+01	pCi/L	8.2E+00		4.61E-01	70.3		SRISO_SEP_P	9.857E-01	12/02/2005	8.5	0.7		D
DUP	10098-97-2	4.86E+01		1.6E+00						L	06:33	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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HN2CF1CR **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/31/2005 12:14

Client Id: B1F124 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/31/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S06-010	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
5318600	H-3	4.77E+03	pCi/L	3.6E+02		3.33E+02	100.0		906.0_H3_LSC	5.00E-03	12/16/2005	.2	0.		D
DUP	10028-17-8	4.76E+03		2.7E+02						L	16:36	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.

Thursday, December 22, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id:	HN45X1CR	**Sdg/Rept Nbr:**	W04805 30861	**Collection Date:**	11/01/2005 09:07
Client Id:	B1F8H9	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	DUP	**Received Date:**	11/01/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
G06-011	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
5318595	BETA	1.32E+01	pCi/L	2.5E+00		2.58E+00	100.0		9310_ALPHAB	1.477E-01	12/13/2005	13.1	0.9		D
DUP	12587-47-2	1.15E+01		1.9E+00						L	18:42	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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HN46L1ER **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 11/01/2005 11:21

Client Id: B1FF10 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 11/01/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S06-011	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
5318599	ALPHA	2.26E+00	pCi/L	1.2E+00		1.53E+00	100.0		9310_ALPHAB	1.709E-01	12/13/2005	18.6	0.5		D
DUP	12587-46-1	2.73E+00		1.1E+00						L	19:00	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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HNTF41JR **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

Client Id: B1DYT2 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A06-010	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
5318602	TC-99	5.82E+00	pCi/L	5.4E+00	U	9.28E+00	100.0		TC99_ETVDSK	1.278E-01	12/18/2005	1596.0	2.7		D
DUP	14133-76-7	-4.52E+00		3.9E+00						L	22:21	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.

Thursday, December 22, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HNTF41LR **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

Client Id: B1DYT2 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A06-010	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
5318607	Uranium	2.79E+00	ug/L	2.9E-01		7.79E-02			UTOT_KPA	2.69E-02	12/15/2005	.0	0.		D
DUP	7440-61-1	2.80E+00		2.9E-01						ML	16:22	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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HNTF41MR **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

Client Id: B1DYT2 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A06-010	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
5318609	I-129L	5.39E-01	pCi/L	1.9E-01	U	4.86E-01	97.3		I129LL_SEP_L	3.9191E+00	12/12/2005	32.9	1.6		D
DUP	15046-84-1	7.52E-01		1.9E-01						L	15:32	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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HNTF61FR **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 09:18
Client Id: B1F396 **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I06-001	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
5318610	BE-7	-4.82E+00	pCi/L	1.9E+01	U	3.40E+01			GAMMA_GS	2.501E+00	12/02/2005	0.0	0.9		D
DUP	13966-02-4	-1.68E+01		1.9E+01						L	11:32	20.0	3		
5318610	CO-60	1.32E+00	pCi/L	1.7E+00	U	3.94E+00			GAMMA_GS	2.501E+00	12/02/2005	769.2	1.8		D
DUP	10198-40-0	-7.76E-01		1.7E+00						L	11:32	20.0	3		
5318610	CS-134	4.31E-01	pCi/L	2.0E+00	U	3.85E+00			GAMMA_GS	2.501E+00	12/02/2005	1365.8	0.5		D
DUP	13967-70-9	-3.21E-01		2.0E+00						L	11:32	20.0	3		
5318610	CS-137	1.17E-01	pCi/L	1.9E+00	U	3.58E+00			GAMMA_GS	2.501E+00	12/02/2005	0.0	0.4		D
DUP	10045-97-3	-4.11E-01		1.9E+00						L	11:32	20.0	3		
5318610	EU-152	-1.13E+00	pCi/L	4.4E+00	U	7.68E+00			GAMMA_GS	2.501E+00	12/02/2005	0.0	0.2		D
DUP	14683-23-9	-4.28E-01		4.4E+00						L	11:32	20.0	3		
5318610	EU-154	5.82E+00	pCi/L	6.8E+00	U	1.44E+01			GAMMA_GS	2.501E+00	12/02/2005	267.2	1.4		D
DUP	15585-10-1	-8.36E-01		6.8E+00						L	11:32	20.0	3		
5318610	EU-155	-1.59E+00	pCi/L	3.6E+00	U	6.11E+00			GAMMA_GS	2.501E+00	12/02/2005	0.0	0.4		D
DUP	14391-16-3	-6.15E-01		3.6E+00						L	11:32	20.0	3		
5318610	K-40	6.84E+01	pCi/L	4.9E+01		3.19E+01			GAMMA_GS	2.501E+00	12/02/2005	134.8	1.6		D
DUP	13966-00-2	1.33E+01		4.9E+01						L	11:32	20.0	3		
5318610	RU-106	3.38E+00	pCi/L	1.8E+01	U	3.34E+01			GAMMA_GS	2.501E+00	12/02/2005	0.0	0.6		D
DUP	13967-48-1	-4.36E+00		1.8E+01						L	11:32	20.0	3		
5318610	SB-125	3.14E-01	pCi/L	4.5E+00	U	8.25E+00			GAMMA_GS	2.501E+00	12/02/2005	0.0	0.7		D
DUP	14234-35-6	-1.90E+00		4.5E+00						L	11:32	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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HNTF41HW **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18
Client Id: B1DYT2 **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** MS **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A06-010	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
5318602	TC-99	2.95E+03	pCi/L	1.8E+02		8.91E+00	100.0	3.58E+03	TC99_ETVDSK	1.274E-01	12/18/2005			60	D
MS	14133-76-7			2.8E+01				82.3		L	21:18			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\W04805.Edd, h:\Reportdb\edd\FeadIV\Rad\30861.Edd

Lab Sample Id: HNTF41KW **Sdg/Rept Nbr:** W04805 30861 **Collection Date:** 10/27/2005 11:18

Client Id: B1DYT2 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** MS **Received Date:** 10/27/2005

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A06-010	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
5318607	Uranium	3.25E+01	ug/L	4.2E+00		7.82E-02		3.37E+01	UTOT_KPA	2.68E-02	12/15/2005			60	D
MS	7440-61-1			4.2E+00				96.5		ML	16:19			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.

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/14/2005 8:53:45 AM

Lot No., Due Date: J5J270430; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318609; RGAMLEPS Gamma by LEPS

SDG, Matrix: W04805; 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** 12-14-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5318609

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: 12/22/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/9/2005 10:36:23 AM

Lot No., Due Date: J5J270431; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318610; RGAMMA Gamma by GER

SDG, Matrix: W04805; 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:
See NCM.

12-07-05

First Level Review Paul Anderson **Date** 12-9-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 53186 10

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: 12/22/05

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-07120**
NCM Initiated By: Pam Anderson
Date Opened: 12/09/2005
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Gamma by GER
Lot #'s (Sample #'s): J5J270431 (1), J5K140000 (610),
QC Batches: 5318610

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Pam Anderson	12/09/2005	On the first count the LCS had a low rcovery of 67% for the Cs 137 only. The LCS was recounted and the LCS was acceptable. The difference is considered counting statistics.

Corrective Action

Name	Date	Corrective Action
Pam Anderson	12/09/2005	The LCS was recounted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/15/2005 2:38:16 PM

Lot No., Due Date: J5J310215,J5K010349,J5J270429,J5J270430,J5J270431,J5J270426; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318599; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W04805; 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** 12-15-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5318599

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: 12/22/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/15/2005 2:37:36 PM

Lot No., Due Date: J5J310215,J5K010344,J5K010349,J5J270429,J5J270430,J5J270431,J5J270426,J5K030293;

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318595; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W04805; 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:
See NCM. 10-07145

First Level Review Pam Anderson **Date** 12-15-05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/5/2005 10:54:30 AM

Lot No., Due Date: J5J310215; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318603; RSR85907 Sr-85/90 by GPC-7

SDG, Matrix: W04805; 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** 12-5-05

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-07165**
NCM Initiated By: Pam Anderson
Date Opened: 12/15/2005
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J5J270426 (1), J5K010344 (2), J5K030293 (5,6),
QC Batches: 5318595

Nonconformance: MDA not met
Subcategory: Matrix effect

Problem Description / Root Cause

Name	Date	Description
Pam Anderson	12/15/2005	Samples listed do not meet CRDL due to high rad screening but have results>MDA>CRDL. HNTFM1AE HNT451AA HPAJ91AA HPAKD1AA Data accepted.

Corrective Action

Name	Date	Corrective Action
Pam Anderson	12/15/2005	Note in case n arrative.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/5/2005 10:54:30 AM

Lot No., Due Date: J5J310215; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318603; RSR85907 Sr-85/90 by GPC-7

SDG, Matrix: W04805; 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** 12-5-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5318603

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: 12/22/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/21/2005 9:07:45 AM

Lot No., Due Date: J5J270430; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318602; RTC99 Tc-99 by LSC

SDG, Matrix: W04805; 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** 12-21-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5318602

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 Ce Date: 12/22/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/20/2005 8:25:06 AM

Lot No., Due Date: J5J310213,J5J310215,J5K010349,J5J270430,J5J270431,J5J270426; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318600; RTRITIUM H-3 by LSC

SDG, Matrix: W04805; 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 Andrews **Date** 12-20-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5318600

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 G Date: 12/22/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/16/2005 9:24:50 AM

Lot No., Due Date: J5J270430; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318607; RUNAT UNat by KPA

SDG, Matrix: W04805; 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 Paul Quackenbush **Date** 12-16-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: S318607

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 Ca Date: 12/22/05

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/22/2005 10:38:03 AM

Lot No., Due Date: J5J270426; 12/16/2005

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 5318606;

SDG, Matrix: W04805; 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 Pam Anderson **Date** 11-22-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5318604

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 [illegible] Date: 12/22/05

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S06-010-174
		Page 1 of 1

Collector: J MYERS	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S06-010	Sampling Origin: Hanford	Purchase Order/Charge Code
Project Title: LTMC/SURV, OCTOBER 2005	DTS-SAWS-H98	Ice Chest No.: SMC550 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Truck	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
W04805
J55270426
Due 12 12 05

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F1D2		W	10-27-05	1154	1x1000-mL P	906.0_H3_LSC: Tritium (1) HNTFM	None
B1F1D2		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1F1D2		W	↓	↓	1x20-mL P	Activity Scan	None
B1F1D2		W	↓	↓	1x500-mL P	9223_COLIFORM: Coliform (1) 4.0°	Na2S2O3 Cool 4C
~~B1F1H4~~		~~W~~			~~1x1000-mL P~~	~~906.0_H3_LSC: Tritium (1)~~ 9-22-05 DF	None
~~B1F1H4~~		~~W~~			~~1x20-mL P~~	~~Activity Scan~~	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J MYERS	1445 OCT 27 2005	DAVID HARBINSON	1445 OCT 27 2005

<100 CPM

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: 10 27 05 1445

Client: PLW SDG #: W04805 NA [ ] SAF #: S06-010 NA [ ]

Work Order Number: JSJ270426 Chain of Custody # S06-010-174

Shipping Container ID: SMC 550 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: 4.0 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 4
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   - ____ tape
   - 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: 10 27 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. # W06-010-138
		Page 1 of 1

Collector: K. B. HULSE	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W06-010	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: RCRA, OCTOBER 2005	Logbook: DTS-SAWS-1495	Ice Chest No.: SAWS-102 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Truck	Bill of Lading/Air Bill No.: N/A
Protocol: RCRA	Priority: 45 Days	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
W04805
J5J270429
Dec 12 12 05

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F214		W	10/27/05	1016	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2) HNTF2	HNO3 to pH <2
B1F214		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
K. B. HULSE			OCT 27 2005 1500		Jeff Jensen		OCT 27 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

<100CPM

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

I06-001
A06-010
W06-010
W05-009

Date/Time Received: 10 27 05 1506

Client: PWW SDG #: W04805 NA [ ] SAF #: I05-054 NA [ ]

Work Order Number: JSJ270429

Chain of Custody # I06-001-178, A06-010-10, W06-010-138, W05-009-166

Shipping Container ID: ~~SAWS~~ GWS 106 102

Air Bill # I05-054-8

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: 25
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? 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: 10 27 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. # A06-010-10
		Page 1 of 1

Collector K. B. HULSE	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. A06-010	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title PA OCTOBER, 2005	Logbook: DTS-SAWS-H95	**Ice Chest No.** SAWS-102 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Gov't Truck	**Bill of Lading/Air Bill No.** N/A
Protocol Other	**Priority:** 45 Days	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
LO 48 05
JSJ 270 430
Due 12 12 05

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1DYT2		W	10/27/05	1118	1x1000-mL P	906.0_H3_LSC: Tritium (1) HNTF4	None
B1DYT2		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1DYT2		W	↓	↓	1x20-mL P	Activity Scan	None
B1DYT2		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1DYT2		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1DYT2		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
K. B. HULSE	K. B. Hulse	OCT 27 2005	1506	Jeff Jensen		OCT 27 2005	1506
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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

SEVERN TRENT STL

Sample Check-in List

I06-001
A06-010
W06-010
W05-009

Date/Time Received: 10 27 05 1506

Client: PGW SDG #: W04805 NA [ ] SAF #: I05-054 NA [ ]

Work Order Number: J5J270430 Chain of Custody # I06-001-178, A06-010-10, W06-010-138, W05-009-166

Shipping Container ID: ~~GWS~~ GWS 106 ~~GWS~~ GWS 102 Air Bill # I05-054-8

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: 25
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? 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: 10 27 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. # I06-001-178
		Page 1 of 1

Collector DURATEK D.R. BREWINGTON	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. I06-001	**Sampling Origin**	**Purchase Order/Charge Code**
Project Title CERCLA 100KR4IAM(1)/(2) 100 NR2IAM ISRM	Logbook DTS-SAWS-1493	**Ice Chest No.** GWS 106 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Truck	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
W09805
J5J270431
Due 12 12 05

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F396		W	10-27-05	0918	1x1000-mL P	906.0_H3_LSC: Tritium (1) HNTF6	None
B1F396		W			1x20-mL P	Activity Scan	None
B1F396		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1F396		W			3x1000-mL G/P	GAMMA_GS: List-1 (10)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D.R. BREWINGTON	D.R. Brewington		OCT 27 2005 1506		Jeff Jensen		OCT 27 2005 1506
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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

I06-001
A06-010
W06-010
W05-009

Date/Time Received: 10 27 05 1506

Client: PWW SDG #: W09805 NA [ ] SAF #: I05-054 NA [ ]

Work Order Number: JJJ270431 Chain of Custody # I06-001-178, A06-010-10, W06-010-138, W05-009-166

Shipping Container ID: GWS 106, SAWS 102 Air Bill # I05-054-8

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: 25
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? 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: 10 27 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. # S06-010-190

Page 1 of 1

Collector: DURATEK R. T. SICKLE	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S06-010	Sampling Origin	Purchase Order/Charge Code: SMI 550
Project Title: LTMC/SURV, OCTOBER 2005	SALWS 498	Ice Chest No.: ~~SALWS 102~~ Temp.: 10.31.05
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Truck	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
W04805
J5J310213
Due 12 1505

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F124		W	10.31.05	1214	1x1000-mL P	906.0_H3_LSC: Tritium (1) HN2CF	None
B1F124		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Received By
Print: DURATEK R. T. SICKLE; Sign: [signature]; Date/Time: OCT 3 1 2005 1300	Print: DURATEK D. R. BREWINGTON; Sign: D.R. Brewington; Date/Time: OCT 3 1 2005 1300
Print: DURATEK D. R. BREWINGTON; Sign: D.R. Brewington; Date/Time: OCT 3 1 2005 1452	Received By: Jeff Jensen; Date/Time: OCT 3 1 2005 1452
Relinquished By; Date/Time	Received By; Date/Time
Relinquished By; Date/Time	Received By; Date/Time

<100 CPM

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. # S06-010-196

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Collector DURATEK R. T. SICKLE	Contact/Requester Dot Stewart	Telephone No. 509-376-5056 MSIN FAX
SAF No. S06-010	Sampling Origin	Purchase Order/Charge Code SMS-550
Project Title LTMC/SURV, OCTOBER 2005	SAWS-H98	Ice Chest No SAWS-102 Temp. RTS 10-31-05
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Truck	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
W04905

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F120		W	10-31-05	1114	1x1000-mL P	906.0_H3_LSC: Tritium (1) HN2CJ	None
B1F120		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK R. T. SICKLE			OCT 31 2005 1300	DURATEK D. R. BREWINGTON			OCT 31 2005 1300
DURATEK D. R. BREWINGTON			OCT 31 2005 1430	Jeff Jensen			OCT 31 2005 1530
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *
<100 CPM

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. # **S06-010-204**

Page 1 of 1

Collector DURATEK D. R. BREWINGTON	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. S06-010	**Sampling Origin**	**Purchase Order/Charge Code**
Project Title LTMC/SURV, OCTOBER 2005	DTS- 5a~~5 H95	**Ice Chest No.** SHL 550 **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Truck	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
W048 05

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F115		W	10-31-05	11/B	1x1000-mL P	906.0_H3_LSC: Tritium (1) HN2C4	None
B1F115		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. R. BREWINGTON	D.R. Brewington		OCT 3 1 2005 1432		Jeff Jensen		OCT 3 1 2005 1432
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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: 10 31 05 1432

Client: PLW SDG #: W04805 NA [ ] SAF #: S06-010 S05-009 NA [ ]

Work Order Number: J5J310 213 Chain of Custody # S06-010 – 204, 196, 190 S05-009-52

Shipping Container ID: SMC 550 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: 8
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: 10 31 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. # S06-010-5

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Collector: DURATEK D. P. CONNOLLY	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S06-010	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC/SURV, OCTOBER 2005	Logbook: DTS-SAWS-H96	Ice Chest No.: SAWS-209 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Truck	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

W04805
J5J310215
Due 12 15 05

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1F0W5		W	10/31/05	0930	1x1000-mL P	906.0_H3_LSC: Tritium (1) HN2C7	None
B1F0W5		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1F0W5		W	↓	↓	1x20-mL P	Activity Scan	None
B1F0W5		W	↓	↓	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. P. CONNOLLY			OCT 31 2005 1450		Jeff Jensen		OCT 31 2005 1450
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 10 31 05 1450

Client: PLW SDG #: W04805 NA [ ] SAF #: I05-049 NA [ ]

I05-053
S06-010

Work Order Number: JSJ310215 Chain of Custody # I05-053-33, S06-010-5
I05-049-135

Shipping Container ID: SAWS 209 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: 13

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: 10 31 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. # G06-011-12

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Collector: DURATEK D. P. CONNOLLY	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound	Logbook: DTS-SAWS-HF16	Ice Chest No.: SAWS-~~209~~ 102 Temp.: 11/1/05
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
** **
W O 4805
J5K010344
Due 12 16 05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8H9		W	11/1/05	0907	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN45X	HNO3 to pH <2
B1F8H9		W	11/1/05		1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. P. CONNOLLY			NOV 01 2005 1400	Jeff Jensen			NOV 01 2005 1400
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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. # G06-011-14

Page 1 of 1

Collector: DURATEK D. P. CONNOLLY	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound	DTS-SAWS - H916	Ice Chest No.: SAWS-102 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
** ** W09805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J1		W	11/1/05	1026	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN451	HNO3 to pH <2
B1F8J1		W	↓	↓	1x20-mL P/G 11/1/05	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. P. CONNOLLY			NOV 01 2005 1400	Jeff Jensen			NOV 01 2005 1400
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 *
<100 CPM

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. # G06-011-6
		Page 1 of 1

Collector DURATEK D.P. CONNOLLY	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound	DTS-SAWS-H96 Logbook:	**Ice Chest No.** SAWS-102 **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
** ** WO 9805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8H3		W	~~11/1/05~~ 10/11/1/05	1145	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN 456	HNO3 to pH <2
B1F8H3		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D.P. CONNOLLY			NOV 0 1 2005 1400	Jeff Jensen			NOV 0 1 2005 1400
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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. # G06-011-4

Page 1 of 1

Collector: DURATEK D. P. CONNOLLY	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound	Logbook: DTS-SAWS-1496	Ice Chest No.: SAWS-102 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
** ** W04805

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8H1		W	11/1/05	1208	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN 457	HNO3 to pH <2
B1F8H1		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. P. CONNOLLY			NOV 01 2005 1400	Jeff Jensen			NOV 01 2005 1400
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 *
<100 CPM

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. # **G06-011-2**

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Collector DURATEK D. P. CONNOLLY	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound	Logbook: DTS- SAWS- H96	**Ice Chest No.** SAWS-102 **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
** **

W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8F9		W	11/1/05	1235	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN459	HNO3 to pH <2
B1F8F9		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By DURATEK D. P. CONNOLLY Print Sign Date/Time NOV 01 2005 1400	Received By Jeff Jensen Print Sign Date/Time NOV 01 2005 1400	<100 CPM Matrix *
Relinquished By Date/Time	Received By Date/Time	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solid, DL = Drum Liqui, T = Tissue, WI = Wine, L = Liquid, V = Vegetation, X = Other
Relinquished By Date/Time	Received By Date/Time	
Relinquished By Date/Time	Received By Date/Time	

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: 11 01 05 1400

Client: PAW SDG #: W04805 NA [ ] SAF #: 606-011 NA [ ]

Work Order Number: J5K010344 Chain of Custody # 606-011 -2, 4, 6, 14, 12

Shipping Container ID: SAWS 102 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: 10
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? 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: 11 01 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. # S06-011-345
		Page 1 of 1

Collector DURATEK D. R. BREWINGTON	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. S06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV NOVEMBER 2005	DTS - SALUS H93	**Ice Chest No.** SIML 550 **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
** **

W04805
J5K010349
Due 12 16 05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1FF10		W	11-1-05	1121	1x20-mL P	Activity Scan HN46L	None
B1FF10		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1FF10		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. R. BREWINGTON			NOV 01 2005 1517	DAVID HARBINSON			NOV 01 2005 1517
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 11 01 05 1517

Client: PLW SDG #: W04805 NA [ ] SAF #: 506-011 NA [ ]

Work Order Number: J5K010349 Chain of Custody # 506-011-395

Shipping Container ID: SML 550 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: 3
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? 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: 11 01 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. # G06-011-18

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Collector Radford/Deters	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound		**Ice Chest No.** **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
** **

WO 4805
J5K030 293
Due 12 16 05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J5		W	11/1/05	14:05	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJE	HNO3 to pH <2
B1F8J5		W	11/1/05	14:05	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

Matrix *
<100 CPM

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. # G06-011-20

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Collector Radford/Deters	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound		**Ice Chest No.** **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
** **

W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, 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
B1F8J7		W	11/1/05	14:15	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJQ	HNO3 to pH <2
B1F8J7		W	11/1/05	14:15	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	110205 1115

<100 CPM

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. # G06-011-16

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Collector: Radford/Deters	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound		Ice Chest No. 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
** ** W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J3		W	11/1/05	14:20	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJX	HNO3 to pH <2
B1F8J3		W	11/1/05	14:20	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters / Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters / Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters / Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM

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. # G06-011-22
		Page 1 of 1

Collector	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound		**Ice Chest No.** **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
** ** W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J9		W	11/1/05	13:40	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPA J3	HNO3 to pH <2
B1F8J9		W	11/1/05	13:40	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Peters Katherine Ann Peters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Peters Katherine Ann Peters	11/2/05 10:00
Katherine Ann Peters Katherine Ann Peters	11/2/05 11:00	Jeff Jensen	11 02 05 1115

<100 CPM

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. # G06-011-26

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Collector	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound		**Ice Chest No.** **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
** **

W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8K3		W	11/1/05	13:43	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPA J 9	HNO3 to pH <2
B1F8K3		W	11/1/05	13:43	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Amdeters Katherine Amdeters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Amdeters Katherine Amdeters	11/2/05 10:00
Katherine Amdeters Katherine Amdeters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM

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. # G06-011-24
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Collector Radford/Deters	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound		**Ice Chest No.** **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
** ** W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8K1		W	11/1/05	13:50	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPA KP	HNO3 to pH <2
B1F8K1		W	11/1/05	13:50	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM

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: 11 02 05 1115

Client: PLW SDG #: W09805 NA [ ] SAF #: G05-011 G06-011 NA [ ]

Work Order Number: J5K030293 Chain of Custody # G05-011-64, 65, 66

Shipping Container ID: _____ Air Bill # G06-011-18, 20, 16, 22, 26, 24, 30, 28

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: 37
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: 11 02 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. # G06-011-2

Page 1 of 1

Collector: DURATEK D. P. CONNOLLY	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound	Logbook: DTS- SAWS- H496	Ice Chest No.: SAWS-102 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
** ** W04805

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8F9		W	11/1/05	1235	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN459	HNO3 to pH <2
B1F8F9		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By: DURATEK D. P. CONNOLLY Print Sign Date/Time NOV 01 2005 1400	Received By: Jeff Jensen Print Sign Date/Time NOV 01 2005 1400	<100 CPM Max *	
Relinquished By Date/Time	Received By Date/Time	S = Soil; SE = Sediment; SO = Solid; SL = Sludge; W = Water; O = Oil; A = Air	DS = Drum Solid; DL = Drum Liqui; T = Tissue; WI = Wine; L = Liquid; V = Vegetation; X = Other
Relinquished By Date/Time	Received By Date/Time		
Relinquished By Date/Time	Received By Date/Time		

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: 11 01 05 1900

Client: PLW SDG #: W04805 NA [ ] SAF #: 606-011 NA [ ]

Work Order Number: J5K010344 Chain of Custody # 606-011 -2, 4, 6, 14, 12

Shipping Container ID: SAWS 102 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: 10
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? 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: 11 01 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. # S06-011-345

Page 1 of 1

Collector DURATEK D. R. BREWINGTON	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. S06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV NOVEMBER 2005	DTS - SALVS H93	**Ice Chest No.** SINL 550 **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
** **

W04805
J5K010349
Due 12 16 05

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, 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
B1FF10		W	11-1-05	1121	1x20-mL P	Activity Scan HN46L	None
B1FF10		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1FF10		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. R. BREWINGTON		D R Brewington	NOV 01 2005 1517	DAVID HARBINSON			NOV 01 2005 1517
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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: 11 01 05 1517

Client: PLW SDG #: W04805 NA [ ] SAF #: 506-011 NA [ ]

Work Order Number: J5K010349 Chain of Custody # 506-011-345

Shipping Container ID: SML 550 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: 3
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? 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: 11 01 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. # G06-011-18

Page 1 of 1

Collector: Radford/Deters	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound		Ice Chest No. 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
** **

WO 4805
J5K030 293
Due 12 16 05

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J5		W	11/1/05	14:05	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJE	HNO3 to pH <2
B1F8J5		W	11/1/05	14:05	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM

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. # G06-011-20

Page 1 of 1

Collector Radford/Deters	Contact/Requester Dot Stewart	Telephone No. 509-376-5056 MSIN FAX
SAF No. G06-011	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title LTMC / 1NR2-Rebound		Ice Chest No. 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
** **
W04805

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J7		W	11/1/05	14:15	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJQ	HNO3 to pH <2
B1F8J7		W	11/1/05	14:15	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters / Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters / Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters / Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM

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. # G06-011-16

Page 1 of 1

Collector: Radford/Deters	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound		Ice Chest No. 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
** ** W04805

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J3		W	11/1/05	14:20	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJX	HNO3 to pH <2
B1F8J3		W	11/1/05	14:20	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters / Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters / Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters / Katherine Ann Deters	11/3/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM/*

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. # G06-011-22

Page 1 of 1

Collector	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound		**Ice Chest No.** **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
** ** W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J9		W	11/1/05	13:40	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPAJ3	HNO3 to pH <2
B1F8J9		W	11/1/05	13:40	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Peters Katherine Ann Peters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Peters Katherine Ann Peters	11/2/05 10:00
Katherine Ann Peters Katherine Ann Peters	11/2/05 11:00	Jeff Jensen	11 02 05 1115

<100 CPM

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. # G06-011-24

Page 1 of 1

Collector: Radford/Deters	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound		Ice Chest No. 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
** ** W04805

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8K1		W	11/1/05	13:50	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HPA KP	HNO3 to pH <2
B1F8K1		W	11/1/05	13:50	1x20-mL P	Activity Scan	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Katherine Ann Deters Katherine Ann Deters	11/1/05 15:30	Sigma 5 Locked Storage	11/1/05 15:30
Sigma 5 Locked Storage	11/2/05 10:00	Katherine Ann Deters Katherine Ann Deters	11/2/05 10:00
Katherine Ann Deters Katherine Ann Deters	11/2/05 11:00	Jeff Jensen	11/02/05 1115

<100 CPM

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: 11 02 05 1115

Client: PLW SDG #: W09805 NA [ ] SAF #: G05-011 G06-011 NA [ ]

Work Order Number: J5K030293 Chain of Custody # G05-011-64, 65, 66 G06-011-18, 20, 16, 22, 26, 24, 30, 28

Shipping Container ID: _____ 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: 37
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: 11 02 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

11/30/2005 7:52:50 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 12/16/2005 1U04805

Sep1 DT/Tm Tech:

Batch: 5318609 **WATER** **pCi/L**

PM, Quote: HC , 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	Dish Size	~~Ppt~~ mg or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HNTF4-1-AE J5J270430-1-SAMP 10/27/2005 11:18		3913.90g,in AmtRec: 20ML,2X500P,2XLP,2X4LP	ITA4858 11/29/05 #Containers: 7	IFA	36.1	100	L4	1712 Scr: Alpha: 2.47E-03 uCi/Sa	12/12/0500 Beta: 3.49E-04 uCi/Sa	
2 HNTF4-1-AM-X J5J270430-1-DUP 10/27/2005 11:18		3819.10g,in AmtRec: 20ML,2X500P,2XLP,2X4LP	ITA4859 11/29/05 #Containers: 7		36.0		L5	Scr: Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa	
3 HP59J-1-AA-B J5K140000-609-BLK 10/27/2005 11:18		3867.90g,in AmtRec:	ITA4860 11/29/05 #Containers:		36.0		L4	1401 Scr: Alpha:	Beta:	
4 HP59J-1-AC-C J5K140000-609-LCS 10/27/2005 11:18		3932.10g,in AmtRec:	ISD0586 09/24/05,pd #Containers:		40.0		L5	Scr: Alpha:	Beta:	

Comments: HNMV4-SAMP "Comments: Solids in sample"

pH Neutral

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

HNTF41AE-SAMP Constituent List:

I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
HP59J1AA-BLK:					
I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
HP59J1AC-LCS:					
I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

11/30/2005 7:52:51 AM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318609 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:

```
HNTF41AE-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
HP59J1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
HP59J1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

12/14/2005 7:54:04 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/14/2004, 12/19/2005, Batch: '5318609', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
5318609							
AC			CalcC	GiroirB	11/22/2005 7:37:31		
SC				wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC				GiroirB	InPrep	11/22/2005 7:37:31 AM	RICH-RC-5016 REVISION 5
SC				GiroirB	Prep1C	11/30/2005 8:14:27 AM	RICH-RC-5016 REVISION 5
SC				NortonJ	InSep1	12/1/2005 1:39:26 PM	RICHRCD5025 REV3
SC				NortonJ	Sep1C	12/12/2005 3:26:13 PM	RICH-RC-5025 REVISION3
SC				DAWKINSO	InCnt1	12/12/2005 3:32:15 PM	RICH-RD-0007 REVISION 5
SC				DAWKINSO	CalcC	12/12/2005 9:15:23 PM	RICH-RD-0007 REVISION 5
AC				GiroirB	11/30/2005 8:14:27		
AC				NortonJ	12/1/2005 1:39:26 PM		
AC				NortonJ	12/12/2005 3:26:13		
AC				DAWKINSO	12/12/2005 3:32:15		
AC				DAWKINSO	12/12/2005 9:15:23		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.15

11/30/2005 10:21:37 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

W04805

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

Pipet #: N/A

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318610 **WATER** **pCi/L** **PM, Quote: HC , 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	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HNTF6-1-AE J5J270431-1-SAMP *		2501.00g,in			100	100	613	1011	12/02/05	
10/27/2005 09:18		AmtRec: 20ML,5XLP	#Containers: 6				Scr:	Alpha: -1.61E-06 uCi/Sa		Beta: 1.65E-06 uCi/Sa
2 HNTF6-1-AF-X J5J270431-1-DUP *		2501.00g,in					66	1312	12/2/05 R	
10/27/2005 09:18		AmtRec: 20ML,5XLP	#Containers: 6				Scr:	Alpha: -1.61E-06 uCi/Sa		Beta: 1.65E-06 uCi/Sa
3 HP59K-1-AA-B J5K140000-610-BLK		2509.60g,in					613	1201	12/2/05 R	
10/27/2005 09:18		AmtRec:	#Containers: 1				Scr:	Alpha:		Beta:
4 HP59K-1-AC-C J5K140000-610-LCS		2457.80g,in	QCAG1151 08/22/05,pd				67	1313	12/2/05 R	
10/27/2005 09:18		AmtRec:	#Containers: 1				Scr:	Alpha:		Beta:

Comments: HMN4Q-SAMP "Comments: gamma count dup on dif det. Bg"
HN2DE-SAMP "Comments: count dup on dif det. Bg"
HNTF6-SAMP "Comments: count dup on dif det. Bg"

* pH adj

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

HNTF61AE-SAMP Constituent List:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

11/14/2005 4:26:25 PM

Sample Preparation/Analysis

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

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Report Due: 12/16/2005

Batch: 5318610 pCi/L
SEQ Batch, Test: None

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:
Cs-137	RDL:1.50E+01 pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:1.50E+01 pCi/L	LCL:	UCL:	RPD:	
Eu-152	RDL:5.00E+01 pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01 pCi/L	LCL:	UCL:	RPD:	
Eu-155	RDL:5.00E+01 pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00 pCi/L	LCL:	UCL:	RPD:	
Sb-125	RDL:5.00E+01 pCi/L	LCL:	UCL:	RPD:						
HP59K1AC-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						

HNTF61AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HP59K1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HP59K1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

SEVERN TRENT STL

*** RE-COUNT REQUEST ***

DUE DATE 12-16-05

CUSTOMER PGW

ANALYSIS gamma

MATRIX water

LOT NUMBER J5J270431

SAMPLE DELIVERY GROUP W04805

OLD BATCH NUMBER 5318610

LAB SAMPLE ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) HP59K14C	Cs recovery low 67%
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	
11)	
12)	
13)	
14)	
15)	
16)	
17)	
18)	
19)	
20)	

12/7/2005 11:48:25 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: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318610 WATER pCi/L PM, Quote: HC , 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	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HNTF6-1-AE J5J270431-1-SAMP 10/27/2005 09:18		2501.00g,in AmtRec: 20ML,5XLP	#Containers: 6					Scr:	Alpha: -1.61E-06 uCi/Sa	Beta: 1.65E-06 uCi/Sa
2 HNTF6-1-AF-X J5J270431-1-DUP 10/27/2005 09:18		2501.00g,in AmtRec: 20ML,5XLP	#Containers: 6					Scr:	Alpha: -1.61E-06 uCi/Sa	Beta: 1.65E-06 uCi/Sa
3 HP59K-1-AA-B J5K140000-610-BLK 10/27/2005 09:18		2509.60g,in AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
4 HP59K-1-AC-C J5K140000-610-LCS 10/27/2005 09:18		2457.80g,in AmtRec:	QCAG1151 08/22/05,pd 06/08/05,r #Containers: 1					Scr:	Alpha:	Beta:
5 HP59K-2-AC-C J5K140000-610-LCS 10/27/2005 09:18		2457.8 AmtRec:	QCAG 1151 #Containers: 1	100ml		100min		68 Scr:	134K Alpha:	10/7/05 Beta:

Comments: HNTF6-SAMP "Comments: count dup on dif det. Bg"

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

12/7/2005 11:48:27 AM

Sample Preparation/Analysis

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

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Report Due: 12/16/2005

Batch: 5318610 pCi/L
SEQ Batch, Test: None

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:

```
HNTF61AE-SAMP Constituent List:
  Co-60      RDL:2.50E+01  pCi/L  LCL:      UCL:      RPD:      Cs-134     RDL:1.50E+01  pCi/L  LCL:      UCL:      RPD:
  Cs-137     RDL:1.50E+01  pCi/L  LCL:70    UCL:130   RPD:20    Cs-137DA   RDL:1.50E+01  pCi/L  LCL:70    UCL:130   RPD:20
  Eu-152     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:      Eu-154     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:
  Eu-155     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:      K-40       RDL:0.00E+00  pCi/L  LCL:      UCL:      RPD:
  Sb-125     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:
HP59K1AA-BLK:
  Co-60      RDL:2.50E+01  pCi/L  LCL:      UCL:      RPD:      Cs-134     RDL:1.50E+01  pCi/L  LCL:      UCL:      RPD:
  Cs-137     RDL:1.50E+01  pCi/L  LCL:      UCL:      RPD:      Cs-137DA   RDL:1.50E+01  pCi/L  LCL:      UCL:      RPD:
  Eu-152     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:      Eu-154     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:
  Eu-155     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:      K-40       RDL:0.00E+00  pCi/L  LCL:      UCL:      RPD:
  Sb-125     RDL:5.00E+01  pCi/L  LCL:      UCL:      RPD:
HP59K1AC-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
HP59K2AC-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

HNTF61AE-SAMP Calc Info:
    Uncert Level (#s).: 2   Decay to SaDt: Y   Blk Subt.: N   Sci.Not.: Y   ODRs: B
HP59K1AA-BLK:
    Uncert Level (#s).: 2   Decay to SaDt: Y   Blk Subt.: N   Sci.Not.: Y   ODRs: B
HP59K1AC-LCS:
    Uncert Level (#s).: 2   Decay to SaDt: Y   Blk Subt.: N   Sci.Not.: Y   ODRs: B
HP59K2AC-LCS:
    Uncert Level (#s).: 2   Decay to SaDt: Y   Blk Subt.: N   Sci.Not.: Y   ODRs: B
```

Approved By _____ Date: _____

12/9/2005 10:21:16 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/9/2004, 12/14/2005, Batch: '5318610', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318610						
AC		CalcC	GiroirB	11/22/2005 7:37:27		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:27 AM	RICH-RC-5017 REVISION 4
SC			GiroirB	Prep1C	11/30/2005 10:21:10 AM	RICH-RC-5017 REVISION 4
SC			ScottM	InPrep2	12/2/2005 7:26:41 AM	RICH-RC-5017 REVISION 4
SC			ScottM	Prep2C	12/2/2005 8:05:31 AM	RICH-RC-5017 REVISION 4
SC			BlackCL	InCnt1	12/2/2005 8:27:28 AM	RICH-RD-0007 REVISION 5
SC			StringerR	CalcC	12/2/2005 2:22:19 PM	RICH-RD-0007 REVISION 5
SC			BlackCL	InCnt1	12/7/2005 12:05:27 PM	RICH-RD-0007 REVISION 5
SC			StringerR	CalcC	12/7/2005 1:48:32 PM	RICH-RD-0007 REVISION 5
AC			**GiroirB**	11/30/2005 10:21:10		
AC			**ScottM**	12/2/2005 7:26:41		
AC			**ScottM**	12/2/2005 8:05:31		
AC			**BlackCL**	12/2/2005 8:27:28		
AC			**StringerR**	12/2/2005 2:22:19 PM		
AC			**BlackCL**	12/7/2005 12:05:27		
AC			**StringerR**	12/7/2005 1:48:32 PM		

AC: Accepting Entry; SC: Status Change

12/1/2005 7:28:07 AM

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

Report Due: 12/16/2005 W04805

Sep1 DT/Tm Tech:

Batch: 5318599 WATER pCi/L PM, Quote: HC , 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 HNTFM-1-AD J5J270426-1-SAMP 10/27/2005 11:54		109.50g,in AmtRec: 20ML,500,2XLP #Containers: 4		1.5	40.1	100	11A	1756	12/13/05 SA Scr: Alpha: 6.60E-05 uCi/Sa	Beta: 1.12E-03 uCi/Sa
2 HNTF2-1-AA J5J270429-1-SAMP 10/27/2005 10:16		198.20g,in AmtRec: 20ML,LP #Containers: 2			44.0		11B		Scr: Alpha: -1.02E-04 uCi/Sa	Beta: 1.63E-04 uCi/Sa
3 HNTF4-1-AC J5J270430-1-SAMP 10/27/2005 11:18		196.50g,in AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7			42.8		11C		Scr: Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
4 HNTF6-1-AC J5J270431-1-SAMP 10/27/2005 09:18		199.00g,in AmtRec: 20ML,5XLP #Containers: 6			31.7		11D		Scr: Alpha: -1.61E-06 uCi/Sa	Beta: 1.65E-06 uCi/Sa
5 HN2C7-1-AC J5J310215-1-SAMP 10/31/2005 09:30		197.10g,in AmtRec: 20ML,5XLP #Containers: 6			51.9		11C	1951	Scr: Alpha: 1.33E-06 uCi/Sa	Beta: 1.08E-06 uCi/Sa
6 HN46L-1-AC J5K010349-1-SAMP 11/01/2005 11:21		171.50g,in AmtRec: 20ML,2XLP #Containers: 3			30.1		11A		Scr: Alpha: 2.99E-04 uCi/Sa	Beta: 3.33E-04 uCi/Sa
7 HN46L-1-AE-X J5K010349-1-DUP 11/01/2005 11:21		170.90g,in AmtRec: 20ML,2XLP #Containers: 3			31.0		11B		Scr: Alpha: 2.99E-04 uCi/Sa	Beta: 3.33E-04 uCi/Sa

12/1/2005 7:28:08 AM

Sample Preparation/Analysis

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

Balance Id:1120482733
Pipet #: 229

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318599 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

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 HP580-1-AA-B J5K140000-599-BLK 11/01/2005 11:21		202.90g,in AmtRec:	#Containers: 1	1.5	0.2	100	11D	1951	12/13/05 RD Scr: Alpha: Beta:	
9 HP580-1-AC-C J5K140000-599-LCS 11/01/2005 11:21		205.80g,in AmtRec:	ASD3716 11/08/05,pd #Containers: 1	↓	0.5	↓	12A	2109	D Scr: Alpha: Beta:	

Comments: HNTFM-SAMP "Comments: Alpha and beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HNTF6-SAMP "Comments: count dup on dif det. Bg"
HN45X-SAMP "Comments: Beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HN451-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HN46L-SAMP "Comments: Alpha and beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HPAJE-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAJQ-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAJ9-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAKD-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"

pH verified

All Clients fc
384868, Pa

HNTFM1AD-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
HP5801AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
HP5801AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

HNTFM1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5801AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5801AC-LCS:

12/1/2005 7:28:08 AM

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: 12/16/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5318599 pCi/L
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:

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

Approved By _____ Date: _____

12/15/2005 1:31:01 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/15/2004, 12/20/2005, Batch: '5318599', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318599						
AC		**CalcC**	**GiroirB**	11/22/2005 7:37:20		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:20 AM	RICH-RC-5014 REVISION 6
SC			GiroirB	Prep1C	12/1/2005 7:32:18 AM	RICH-RC-5014 REVISION 6
SC			ScottM	Prep2C	12/13/2005 3:11:17 PM	RICH-RC-5014 REVISION 6
SC			DAWKINSO	InCnt1	12/13/2005 4:06:46 PM	RICH-RD-0003 REVISION 4
SC			DAWKINSO	CalcC	12/13/2005 10:10:49 PM	RICH-RD-0003 REVISION 4
AC			**GiroirB**	12/1/2005 7:32:18		
AC			**ScottM**	12/13/2005 3:11:17		
AC			**DAWKINSO**	12/13/2005 4:06:46		
AC			**DAWKINSO**	12/13/2005 10:10:49		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.15

12/1/2005 7:28:04 AM

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: 12/16/2005 W048Q5

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5318595 **WATER** **pCi/L**

PM, Quote: HC , 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 HNTFM-1-AE J5J270426-1-SAMP 10/27/2005 11:54	72.00g,in	AmtRec: 20ML,500,2XLP #Containers: 4		1.5	243	200	26A	2022	12/13/05 AP	Scr: Alpha: 6.60E-05 uCi/Sa Beta: 1.12E-03 uCi/Sa
2 HNTF2-1-AC J5J270429-1-SAMP 10/27/2005 10:16	198.70g,in	AmtRec: 20ML,LP #Containers: 2			48.6		26B			Scr: Alpha: -1.02E-04 uCi/Sa Beta: 1.63E-04 uCi/Sa
3 HNTF4-1-AD J5J270430-1-SAMP 10/27/2005 11:18	200.90g,in	AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7			52.4		26C			Scr: Alpha: 2.47E-03 uCi/Sa Beta: 3.49E-04 uCi/Sa
4 HNTF6-1-AD J5J270431-1-SAMP 10/27/2005 09:18	197.30g,in	AmtRec: 20ML,5XLP #Containers: 6			36.8		26D			Scr: Alpha: -1.61E-06 uCi/Sa Beta: 1.65E-06 uCi/Sa
5 HN2C7-1-AD J5J310215-1-SAMP 10/31/2005 09:30	208.50g,in	AmtRec: 20ML,5XLP #Containers: 6			55.7		27A			Scr: Alpha: 1.33E-06 uCi/Sa Beta: 1.08E-06 uCi/Sa
6 HN45X-1-AA J5K010344-1-SAMP 11/01/2005 09:07	143.70g,in	AmtRec: 20ML,LP #Containers: 2			45.6		27B			Scr: Alpha: -1.00E-04 uCi/Sa Beta: 2.85E-04 uCi/Sa
7 HN45X-1-AC-X J5K010344-1-DUP 11/01/2005 09:07	147.70g,in	AmtRec: 20ML,LP #Containers: 2			46.5		27C			Scr: Alpha: -1.00E-04 uCi/Sa Beta: 2.85E-04 uCi/Sa

12/1/2005 7:28:05 AM

Sample Preparation/Analysis

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

Report Due: 12/16/2005

Batch: 5318595 **WATER** **pCi/L** **PM, Quote: HC , 57671**
SEQ Batch, Test: None

Balance Id:1120482733
Pipet #: 229
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
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 HN451-1-AA * J5K010344-2-SAMP 11/01/2005 10:26		82.90g,in AmtRec: 20ML,LP	#Containers: 2	1.5	6.2	100 ~~200~~ 12/13/5	12/13/05 ~~27D~~	32A	2118 12/13/05	Scr: Alpha: 1.01E-04 uCi/Sa Beta: 1.06E-03 uCi/Sa 8.5E-02L
9 HN456-1-AA J5K010344-3-SAMP 11/01/2005 11:45		197.80g,in AmtRec: 20ML,LP	#Containers: 2		26.8	200	31A		2022	Scr: Alpha: -1.01E-06 uCi/Sa Beta: 4.30E-04 uCi/Sa
10 HN457-1-AA J5K010344-4-SAMP 11/01/2005 12:08		204.30g,in AmtRec: 20ML,LP	#Containers: 2		14.1	200	31B			Scr: Alpha: 6.17E-05 uCi/Sa Beta: 2.03E-04 uCi/Sa
11 HN459-1-AA J5K010344-5-SAMP 11/01/2005 12:35		200.70g,in AmtRec: 20ML,LP	#Containers: 2		12.5	100	12/13/05 ~~31C~~	32B	2118	Scr: Alpha: 2.53E-05 uCi/Sa Beta: 4.41E-04 uCi/Sa
12 HN46L-1-AD J5K010349-1-SAMP 11/01/2005 11:21		132.80g,in AmtRec: 20ML,2XLP	#Containers: 3		23.5	100	31D		2022	Scr: Alpha: 2.99E-04 uCi/Sa Beta: 3.33E-04 uCi/Sa
13 HPAJE-1-AA * J5K030293-1-SAMP 11/01/2005 14:05		132.30g,in AmtRec: 20ML,LP	#Containers: 2		8.8	100	32A		1831	Scr: Alpha: -1.30E-04 uCi/Sa Beta: 6.78E-04 uCi/Sa 1.3E-01L
14 HPAJQ-1-AA * J5K030293-2-SAMP 11/01/2005 14:15		139.30g,in AmtRec: 20ML,LP	#Containers: 2	V	10.1	100	32B			Scr: Alpha: 2.00E-04 uCi/Sa Beta: 7.24E-04 uCi/Sa 1.2E-01L

12/1/2005 7:28:06 AM

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: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318595 **WATER** **pCi/L** **PM, Quote: HC , 57671**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

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:
15HPAJX-1-AA J5K030293-3-SAMP 11/01/2005 14:20		199.60g,in AmtRec: 20ML,LP	#Containers: 2	1.5	19.1	12/12/100 ~~200~~ MJ	32C	1831	12/13 Olson	Scr: Alpha: 1.34E-05 uCi/Sa Beta: 4.41E-04 uCi/Sa
16HPAJ3-1-AA J5K030293-4-SAMP 11/01/2005 13:40		196.10g,in AmtRec: 20ML,LP	#Containers: 2		11.3		32D			Scr: Alpha: 1.66E-04 uCi/Sa Beta: 3.70E-04 uCi/Sa
17HPAJ9-1-AA J5K030293-5-SAMP 11/01/2005 13:43		69.70g,in AmtRec: 20ML,LP	#Containers: 2	MJ	7.5 ~~11.3~~ 12/13		32C	2118		Scr: Alpha: 4.08E-04 uCi/Sa Beta: 1.23E-03 uCi/Sa 7.3E-02L
18HPAKD-1-AA J5K030293-6-SAMP 11/01/2005 13:50		149.60g,in AmtRec: 20ML,LP	#Containers: 2	MJ	4.9 ~~7.5~~		32D			Scr: Alpha: 6.78E-05 uCi/Sa Beta: 5.96E-04 uCi/Sa 1.5E-01L
19HP58N-1-AA-B J5K140000-595-BLK 11/01/2005 09:07		188.20g,in AmtRec:	#Containers: 1	MJ	0.1 ~~4.4~~	200	27D	2022		Scr: Alpha: Beta:
20HP58N-1-AC-C J5K140000-595-LCS 11/01/2005 09:07		192.50g,in AmtRec:	BESB2616 11/10/05,pd #Containers: 1		0.3	200	31C			Scr: Alpha: Beta:

12/15/2005 1:30:41 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/15/2004, 12/20/2005, Batch: '5318595', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318595						
AC		**CalcC**	**GiroirB**	11/22/2005 7:37:24		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:24 AM	RICH-RC-5014 REVISION 6
SC			GiroirB	Prep1C	12/1/2005 7:32:06 AM	RICH-RC-5014 REVISION 6
SC			ScottM	Prep2C	12/13/2005 3:11:40 PM	RICH-RC-5014 REVISION 6
SC			DAWKINSO	InCnt1	12/13/2005 4:10:48 PM	RICH-RD-0003 REVISION 4
SC			DAWKINSO	CalcC	12/13/2005 10:10:45 PM	RICH-RD-0003 REVISION 4
AC			**GiroirB**	12/1/2005 7:32:06		
AC			**ScottM**	12/13/2005 3:11:40		
AC			**DAWKINSO**	12/13/2005 4:10:48		
AC			**DAWKINSO**	12/13/2005 10:10:45		

AC: Accepting Entry; SC: Status Change

11/17/2005 8:38:46 AM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

Report Due: 12/16/2005 W04805

Batch: 5318603 **WATER** **pCi/L**
SEQ Batch, Test: None

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

PM, Quote: HC , 57671

Balance Id:1120482733

Pipet #: NA

Sep1 DT/Tm Tech: 11-23-05 5:39 PM

Sep2 DT/Tm Tech: 11-30-05 11:44 AM

Prep Tech: ,GiroirB

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 HN2C7-1-AE		1003.10g,in	SRTB12884	1.443							
J5J310215-1-SAMP			11/11/05,pd	2.0394			30	3	0608	11/24/05	
			YTA14808	.8056		23.4	100	2A	0656	12/1/05	
			Ex:11/28/2006					2A	0717	12/2/05	
10/31/2005 09:30		AmtRec: 20ML,5XLP		#Containers: 6				Scr:	Alpha: 1.33E-06 uCi/Sa		Beta: 1.08E-06 uCi/Sa
2 HN2C7-1-AF-X		985.70g,in	SRTB12885	1.572							
J5J310215-1-DUP			11/11/05,pd	2.0515				9	0641	11/24/05	
			YTA14809	.7663				2B	0656	12/1/05	
			Ex:11/28/2006			23.3		2B	0717	12/2/05	
10/31/2005 09:30		AmtRec: 20ML,5XLP		#Containers: 6				Scr:	Alpha: 1.33E-06 uCi/Sa		Beta: 1.08E-06 uCi/Sa
3 HP587-1-AA-B		969.40g,in	SRTB12886	1.673							
J5K140000-603-BLK			11/11/05,pd	2.0343				3	0641	11/24/05	
			YTA14810	.8224				2C	0656	12/1/05	
			Ex:11/28/2006			23.0		2C	0717	12/2/05	
10/31/2005 09:30		AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:
4 HP587-1-AC-C		1023.90g,in	SRSG1145	1.564							
J5K140000-603-LCS			10/25/05,pd	2.0200				9	0713	11/24/05	
			YTA14811	.7743				2D	0656	12/1/05	
			Ex:11/28/2006			23.9		2D	0717	12/2/05	
10/31/2005 09:30		AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:

11/17/2005 8:38:48 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: _____

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5318603 pCi/L
SEQ Batch, Test: None

Prep Tech: ,GiroirB

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:
Hverified

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

HN2C71AE-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

HP5871AA-BLK:
Sr-85 RDL: pCi/L LCL:20 UCL:105 RPD:20 Sr-90 RDL:2 pCi/L LCL: UCL: RPD:

HP5871AC-LCS:
Sr-85 RDL: pCi/L LCL:20 UCL:105 RPD:20 Sr-90 RDL:2 pCi/L LCL:70 UCL:130 RPD:20

HN2C71AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5871AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5871AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/5/2005 10:05:48 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/5/2004, 12/10/2005, Batch: '5318603', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318603						
AC		**CalcC**	**GiroirB**	11/17/2005 8:54:44		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	Prep1C	11/17/2005 8:54:44 AM	RICH-RC-5016 REVISION 5
SC			FABREM	InSep1	11/17/2005 9:05:22 AM	RICH-RC-5006 REVISION 6
SC			FABREM	Sep1C	11/23/2005 9:04:23 PM	RICH-RC-5006 REVISION 6
SC			DAWKINSO	InCnt1	11/23/2005 9:20:52 PM	RICH-RD-0007 REVISION 5
SC			BlackCL	Cnt1C	11/24/2005 8:18:43 AM	RICH-RD-0007 REVISION 5
SC			FABREM	InSep2	11/27/2005 9:43:02 AM	RICH-RC-5071 REVISION 4
SC			FABREM	Sep2C	11/30/2005 5:11:08 PM	RICH-RC-5071 REVISION 4
SC			StringerR	InCnt1	11/30/2005 5:16:20 PM	RICH-RD-0003 REVISION 4
SC			StringerR	CalcC	12/2/2005 8:51:08 AM	RICH-RD-0003 REVISION 4
AC			**FABREM**	11/17/2005 9:05:22		
AC			**FABREM**	11/23/2005 9:04:23		
AC			**DAWKINSO**	11/23/2005 9:20:52		
AC			**BlackCL**	11/24/2005 8:18:43		
AC			**FABREM**	11/27/2005 9:43:02		
AC			**FABREM**	11/30/2005 5:11:08		
AC			**StringerR**	11/30/2005 5:16:20		
AC			**StringerR**	12/2/2005 8:51:08		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 9

ICOCFractions v4.8.15

12/1/2005 7:28:07 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: 229

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5318595 pCi/L
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:

Comments:
HNTFM-SAMP "Comments: Alpha and beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HNTF6-SAMP "Comments: count dup on dif det. Bg"
HN45X-SAMP "Comments: Beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HN451-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HN46L-SAMP "Comments: Alpha and beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HPAJE-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAJQ-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAJ9-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAKD-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"

pH verified

All Clients fc
384868, Pa

HNTFM1AE-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
HP58N1AA-BLK:					
BETA	RDL:4.00E+00	pCi/L	LCL:	UCL:	RPD:
HP58N1AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

HNTFM1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP58N1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP58N1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

11/30/2005 7:52:50 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 12/16/2005 1U04805

Sep1 DT/Tm Tech:

Batch: 5318609 **WATER** **pCi/L**

PM, Quote: HC , 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	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HNTF4-1-AE J5J270430-1-SAMP 10/27/2005 11:18	AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7	3913.90g,in	ITA4858 11/29/05	IFA	36.1	100	L4	1712	12/12/05 DR	Scr: Alpha: 2.47E-03 uCi/Sa Beta: 3.49E-04 uCi/Sa
2 HNTF4-1-AM-X J5J270430-1-DUP 10/27/2005 11:18	AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7	3819.10g,in	ITA4859 11/29/05		36.0		L5			Scr: Alpha: 2.47E-03 uCi/Sa Beta: 3.49E-04 uCi/Sa
3 HP59J-1-AA-B J5K140000-609-BLK 10/27/2005 11:18	AmtRec: #Containers: 1	3867.90g,in	ITA4860 11/29/05		36.0		L4	1401		Scr: Alpha: Beta:
4 HP59J-1-AC-C J5K140000-609-LCS 10/27/2005 11:18	AmtRec: #Containers:	3932.10g,in	ISD0586 09/24/05,pd		40.0		L5			Scr: Alpha: Beta:

Comments: HNMV4-SAMP "Comments: Solids in sample"

pH neutral

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

HNTF41AE-SAMP Constituent List:

I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:

HP59J1AA-BLK:

I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:

HP59J1AC-LCS:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

11/30/2005 7:52:51 AM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318609 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:

```
HNTF41AE-SAMP Calc Info:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HP59J1AA-BLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HP59J1AC-LCS:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

12/14/2005 7:54:04 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/14/2004, 12/19/2005, Batch: '5318609', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318609						
AC		**CalcC**	**GiroirB**	11/22/2005 7:37:31		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:31 AM	RICH-RC-5016 REVISION 5
SC			GiroirB	Prep1C	11/30/2005 8:14:27 AM	RICH-RC-5016 REVISION 5
SC			NortonJ	InSep1	12/1/2005 1:39:26 PM	RICHRCD5025 REV3
SC			NortonJ	Sep1C	12/12/2005 3:26:13 PM	RICH-RC-5025 REVISION3
SC			DAWKINSO	InCnt1	12/12/2005 3:32:15 PM	RICH-RD-0007 REVISION 5
SC			DAWKINSO	CalcC	12/12/2005 9:15:23 PM	RICH-RD-0007 REVISION 5
AC			**GiroirB**	11/30/2005 8:14:27		
AC			**NortonJ**	12/1/2005 1:39:26 PM		
AC			**NortonJ**	12/12/2005 3:26:13		
AC			**DAWKINSO**	12/12/2005 3:32:15		
AC			**DAWKINSO**	12/12/2005 9:15:23		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.15

11/30/2005 10:21:37 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

W04805

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

Pipet #: N/A

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5318610 **WATER** **pCi/L** **PM, Quote: HC , 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 HNTF6-1-AE J5J270431-1-SAMP 10/27/2005 09:18		2501.00g,in AmtRec: 20ML,5XLP	#Containers: 6		100	100	613	1011	12/2/05	Scr: Alpha: -1.61E-06 uCi/Sa Beta: 1.65E-06 uCi/Sa
2 HNTF6-1-AF-X J5J270431-1-DUP 10/27/2005 09:18		2501.00g,in AmtRec: 20ML,5XLP	#Containers: 6				614	1312	12/2/05 R	Scr: Alpha: -1.61E-06 uCi/Sa Beta: 1.65E-06 uCi/Sa
3 HP59K-1-AA-B J5K140000-610-BLK 10/27/2005 09:18		2509.60g,in AmtRec:	#Containers: 1				613	1201	12/2/05 R	Scr: Alpha: Beta:
4 HP59K-1-AC-C J5K140000-610-LCS 10/27/2005 09:18		2457.80g,in AmtRec:	QCAG1151 08/22/05,pd #Containers: 1				67	1313	12/2/05 R	Scr: Alpha: Beta:

Comments: HMN4Q-SAMP "Comments: gamma count dup on dif det. Bg"
HN2DE-SAMP "Comments: count dup on dif det. Bg"
HNTF6-SAMP "Comments: count dup on dif det. Bg"

pH adj

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

HNTF61AE-SAMP Constituent List:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # G06-011-14

Page 1 of 1

Collector: DURATEK D. P. CONNOLLY	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: G06-011	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: LTMC / 1NR2-Rebound	DTS-SAWS - H916	Ice Chest No.: SAWS-102 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
** ** WO 9805

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8J1		W	11/1/05	1026	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN451	HNO3 to pH <2
B1F8J1		W	↓	↓	1x20-mL P/G SW 11/1/05	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. P. CONNOLLY			NOV 01 2005 1400	Jeff Jensen			NOV 01 2005 1400
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM*

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. # G06-011-6

Page 1 of 1

Collector DURATEK D.P. CONNOLLY	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound	DTS-SAWS-H96 Logbook:	**Ice Chest No.** SAWS-102 **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
** ** WO 4805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8H3		W	11/1/05	1145	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN 456	HNO3 to pH <2
B1F8H3		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D.P. CONNOLLY			NOV 01 2005 1400		Jeff Jensen		NOV 01 2005 1400
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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. # G06-011-4

Page 1 of 1

Collector DURATEK D. P. CONNOLLY	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. G06-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title LTMC / 1NR2-Rebound	Logbook: DTS-SAWS-1496	**Ice Chest No.** SAWS-102 **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
** ** W04805

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, 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
B1F8H1		W	11/1/05	1208	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1) HN 457	HNO3 to pH <2
B1F8H1		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK D. P. CONNOLLY			NOV 01 2005 1400	Jeff Jensen			NOV 01 2005 1400
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

<100 CPM

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

12/1/2005 7:28:05 AM

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: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318595 **WATER** **pCi/L** **PM, Quote: HC , 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	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 HN451-1-AA * J5K010344-2-SAMP 11/01/2005 10:26	AmtRec: 20ML,LP	82.90g,in	#Containers: 2	1.5	6.2	~~200~~ 100 AS 12/13/05	~~27D~~ 12/13/05	32A	2118 12/13/05	Scr: Alpha: 1.01E-04 uCi/Sa Beta: 1.06E-03 uCi/Sa 8.5E-02L
9 HN456-1-AA J5K010344-3-SAMP 11/01/2005 11:45	AmtRec: 20ML,LP	197.80g,in	#Containers: 2		26.8	200	31A		2022	Scr: Alpha: -1.01E-06 uCi/Sa Beta: 4.30E-04 uCi/Sa
10 HN457-1-AA J5K010344-4-SAMP 11/01/2005 12:08	AmtRec: 20ML,LP	204.30g,in	#Containers: 2		14.1	200	31B			Scr: Alpha: 6.17E-05 uCi/Sa Beta: 2.03E-04 uCi/Sa
11 HN459-1-AA J5K010344-5-SAMP 11/01/2005 12:35	AmtRec: 20ML,LP	200.70g,in	#Containers: 2		12.5	100	~~31C~~ 12/13/05	32B	2118	Scr: Alpha: 2.53E-05 uCi/Sa Beta: 4.41E-04 uCi/Sa
12 HN46L-1-AD J5K010349-1-SAMP 11/01/2005 11:21	AmtRec: 20ML,2XLP	132.80g,in	#Containers: 3		23.5	200	31D		2022	Scr: Alpha: 2.99E-04 uCi/Sa Beta: 3.33E-04 uCi/Sa
13 HPAJE-1-AA * J5K030293-1-SAMP 11/01/2005 14:05	AmtRec: 20ML,LP	132.30g,in	#Containers: 2		8.8	100	32A		1831	Scr: Alpha: -1.30E-04 uCi/Sa Beta: 6.78E-04 uCi/Sa 1.3E-01L
14 HPAJQ-1-AA * J5K030293-2-SAMP 11/01/2005 14:15	AmtRec: 20ML,LP	139.30g,in	#Containers: 2		10.1	100	32B			Scr: Alpha: 2.00E-04 uCi/Sa Beta: 7.24E-04 uCi/Sa 1.2E-01L

11/14/2005 4:26:25 PM

Sample Preparation/Analysis

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

Report Due: 12/16/2005

Batch: 5318610 **pCi/L**
SEQ Batch, Test: None

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	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

```
 Cs-137      RDL:1.50E+01   pCi/L   LCL:      UCL:      RPD:        Cs-137DA   RDL:1.50E+01   pCi/L   LCL:      UCL:      RPD:
 Eu-152      RDL:5.00E+01   pCi/L   LCL:      UCL:      RPD:        Eu-154     RDL:5.00E+01   pCi/L   LCL:      UCL:      RPD:
 Eu-155      RDL:5.00E+01   pCi/L   LCL:      UCL:      RPD:        K-40       RDL:0.00E+00   pCi/L   LCL:      UCL:      RPD:
 Sb-125      RDL:5.00E+01   pCi/L   LCL:      UCL:      RPD:
HP59K1AC-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
HNTF61AE-SAMP Calc Info:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HP59K1AA-BLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
HP59K1AC-LCS:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

SEVERN TRENT STL

*** RE-COUNT REQUEST ***

DUE DATE 12-16-05

CUSTOMER PGW

ANALYSIS gamma

MATRIX water

LOT NUMBER J5J270431

SAMPLE DELIVERY GROUP W04805

OLD BATCH NUMBER 5318610

LAB SAMPLE ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) HP59K14C	Cs recovery low 67%
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	
11)	
12)	
13)	
14)	
15)	
16)	
17)	
18)	
19)	
20)	

12/7/2005 11:48:25 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: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318610 **WATER** **pCi/L** **PM, Quote: HC , 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	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HNTF6-1-AE J5J270431-1-SAMP 10/27/2005 09:18		2501.00g,in AmtRec: 20ML,5XLP	#Containers: 6					Scr:	Alpha: -1.61E-06 uCi/Sa	Beta: 1.65E-06 uCi/Sa
2 HNTF6-1-AF-X J5J270431-1-DUP 10/27/2005 09:18		2501.00g,in AmtRec: 20ML,5XLP	#Containers: 6					Scr:	Alpha: -1.61E-06 uCi/Sa	Beta: 1.65E-06 uCi/Sa
3 HP59K-1-AA-B J5K140000-610-BLK 10/27/2005 09:18		2509.60g,in AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
4 HP59K-1-AC-C J5K140000-610-LCS 10/27/2005 09:18		2457.80g,in AmtRec:	QCAG1151 08/22/05,pd 06/08/05,r #Containers: 1					Scr:	Alpha:	Beta:
5 HP59K-2-AC-C J5K140000-610-LCS 10/27/2005 09:18		2457.8 AmtRec:	QCAG 1151 #Containers: 1	200ml		100min		68 Scr:	134K Alpha:	Beta:

Comments: HNTF6-SAMP "Comments: count dup on dif det. Bg"

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

12/7/2005 11:48:27 AM

Sample Preparation/Analysis

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

Balance Id:

Pipet #:

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318610 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

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:

HNTF61AE-SAMP Constituent List:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Sb-125	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:						

HP59K1AA-BLK:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Sb-125	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:						

HP59K1AC-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						

HP59K2AC-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						

HNTF61AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HP59K1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HP59K1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

HP59K2AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/9/2005 10:21:16 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/9/2004, 12/14/2005, Batch: '5318610', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318610						
AC		**CalcC**	**GiroirB**	11/22/2005 7:37:27		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:27 AM	RICH-RC-5017 REVISION 4
SC			GiroirB	Prep1C	11/30/2005 10:21:10 AM	RICH-RC-5017 REVISION 4
SC			ScottM	InPrep2	12/2/2005 7:26:41 AM	RICH-RC-5017 REVISION 4
SC			ScottM	Prep2C	12/2/2005 8:05:31 AM	RICH-RC-5017 REVISION 4
SC			BlackCL	InCnt1	12/2/2005 8:27:28 AM	RICH-RD-0007 REVISION 5
SC			StringerR	CalcC	12/2/2005 2:22:19 PM	RICH-RD-0007 REVISION 5
SC			BlackCL	InCnt1	12/7/2005 12:05:27 PM	RICH-RD-0007 REVISION 5
SC			StringerR	CalcC	12/7/2005 1:48:32 PM	RICH-RD-0007 REVISION 5
AC			**GiroirB**	11/30/2005 10:21:10		
AC			**ScottM**	12/2/2005 7:26:41		
AC			**ScottM**	12/2/2005 8:05:31		
AC			**BlackCL**	12/2/2005 8:27:28		
AC			**StringerR**	12/2/2005 2:22:19 PM		
AC			**BlackCL**	12/7/2005 12:05:27		
AC			**StringerR**	12/7/2005 1:48:32 PM		

AC: Accepting Entry; SC: Status Change

12/1/2005 7:28:07 AM

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 #: 227

Report Due: 12/16/2005 W04805

Sep1 DT/Tm Tech:

Batch: 5318599 WATER pCi/L

PM, Quote: HC , 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 HNTFM-1-AD J5J270426-1-SAMP 10/27/2005 11:54	109.50g,in AmtRec: 20ML,500,2XLP	#Containers: 4		1.5	40.1	100	1A	1756	12/13/05	Scr: Alpha: 6.60E-05 uCi/Sa Beta: 1.12E-03 uCi/Sa
2 HNTF2-1-AA J5J270429-1-SAMP 10/27/2005 10:16	198.20g,in AmtRec: 20ML,LP	#Containers: 2			44.0		1B			Scr: Alpha: -1.02E-04 uCi/Sa Beta: 1.63E-04 uCi/Sa
3 HNTF4-1-AC J5J270430-1-SAMP 10/27/2005 11:18	196.50g,in AmtRec: 20ML,2X500P,2XLP,2X4LP	#Containers: 7			42.8		1C			Scr: Alpha: 2.47E-03 uCi/Sa Beta: 3.49E-04 uCi/Sa
4 HNTF6-1-AC J5J270431-1-SAMP 10/27/2005 09:18	199.00g,in AmtRec: 20ML,5XLP	#Containers: 6			31.7		1D			Scr: Alpha: -1.61E-06 uCi/Sa Beta: 1.65E-06 uCi/Sa
5 HN2C7-1-AC J5J310215-1-SAMP 10/31/2005 09:30	197.10g,in AmtRec: 20ML,5XLP	#Containers: 6			51.9		1C	1951		Scr: Alpha: 1.33E-06 uCi/Sa Beta: 1.08E-06 uCi/Sa
6 HN46L-1-AC J5K010349-1-SAMP 11/01/2005 11:21	171.50g,in AmtRec: 20ML,2XLP	#Containers: 3			30.1		1A			Scr: Alpha: 2.99E-04 uCi/Sa Beta: 3.33E-04 uCi/Sa
7 HN46L-1-AE-X J5K010349-1-DUP 11/01/2005 11:21	170.90g,in AmtRec: 20ML,2XLP	#Containers: 3			31.0		1B			Scr: Alpha: 2.99E-04 uCi/Sa Beta: 3.33E-04 uCi/Sa

12/1/2005 7:28:08 AM

Sample Preparation/Analysis

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

Balance Id:1120482733
Pipet #: 229

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318599 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

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 HP580-1-AA-B J5K140000-599-BLK 11/01/2005 11:21	AmtRec:	202.90g,in	#Containers: 1	1.5	0.2	100	11D	1951	12/13/05 DP Scr: Alpha: Beta:	
9 HP580-1-AC-C J5K140000-599-LCS 11/01/2005 11:21	AmtRec:	205.80g,in	ASD3716 11/08/05,pd #Containers: 1	↓	0.5	↓	12A	2109	D Scr: Alpha: Beta:	

Comments:

pH verified

HNTFM-SAMP "Comments: Alpha and beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HNTF6-SAMP "Comments: count dup on dif det. Bg"
HN45X-SAMP "Comments: Beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HN451-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HN46L-SAMP "Comments: Alpha and beta aliq reduced due to dis-solid content as determined by wt scn. Bg"
HPAJE-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAJQ-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAJ9-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"
HPAKD-SAMP "Comments: Beta aliq reduced as determined by activity scn. Bg"

All Clients fc
384868, Pa

HNTFM1AD-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
HP5801AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
HP5801AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

HNTFM1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5801AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5801AC-LCS:

12/1/2005 7:28:08 AM

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: 12/16/2005

Sep1 DT/Tm Tech:

Batch: 5318599 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

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:

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

Approved By _____ Date: _____

12/15/2005 1:31:01 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/15/2004, 12/20/2005, Batch: '5318599', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318599						
AC		**CalcC**	**GiroirB**	11/22/2005 7:37:20		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:20 AM	RICH-RC-5014 REVISION 6
SC			GiroirB	Prep1C	12/1/2005 7:32:18 AM	RICH-RC-5014 REVISION 6
SC			ScottM	Prep2C	12/13/2005 3:11:17 PM	RICH-RC-5014 REVISION 6
SC			DAWKINSO	InCnt1	12/13/2005 4:06:46 PM	RICH-RD-0003 REVISION 4
SC			DAWKINSO	CalcC	12/13/2005 10:10:49 PM	RICH-RD-0003 REVISION 4
AC			**GiroirB**	12/1/2005 7:32:18		
AC			**ScottM**	12/13/2005 3:11:17		
AC			**DAWKINSO**	12/13/2005 4:06:46		
AC			**DAWKINSO**	12/13/2005 10:10:49		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.15

12/1/2005 7:28:04 AM

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: 12/16/2005 W04805

Sep1 DT/Tm Tech:

Batch: 5318595 **WATER** **pCi/L**

PM, Quote: HC , 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 HNTFM-1-AE J5J270426-1-SAMP 10/27/2005 11:54	72.00g,in	AmtRec: 20ML,500,2XLP #Containers: 4		1.5	24.3	200	26A	2022	12/13/05 DP	Scr: Alpha: 6.60E-05 uCi/Sa Beta: 1.12E-03 uCi/Sa
2 HNTF2-1-AC J5J270429-1-SAMP 10/27/2005 10:16	198.70g,in	AmtRec: 20ML,LP #Containers: 2			48.6		26B			Scr: Alpha: -1.02E-04 uCi/Sa Beta: 1.63E-04 uCi/Sa
3 HNTF4-1-AD J5J270430-1-SAMP 10/27/2005 11:18	200.90g,in	AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7			52.1		26C			Scr: Alpha: 2.47E-03 uCi/Sa Beta: 3.49E-04 uCi/Sa
4 HNTF6-1-AD J5J270431-1-SAMP 10/27/2005 09:18	197.30g,in	AmtRec: 20ML,5XLP #Containers: 6			36.8		26D			Scr: Alpha: -1.61E-06 uCi/Sa Beta: 1.65E-06 uCi/Sa
5 HN2C7-1-AD J5J310215-1-SAMP 10/31/2005 09:30	208.50g,in	AmtRec: 20ML,5XLP #Containers: 6			55.7		27A			Scr: Alpha: 1.33E-06 uCi/Sa Beta: 1.08E-06 uCi/Sa
6 HN45X-1-AA J5K010344-1-SAMP 11/01/2005 09:07	143.70g,in	AmtRec: 20ML,LP #Containers: 2			45.6		27B			Scr: Alpha: -1.00E-04 uCi/Sa Beta: 2.85E-04 uCi/Sa
7 HN45X-1-AC-X J5K010344-1-DUP 11/01/2005 09:07	147.70g,in	AmtRec: 20ML,LP #Containers: 2			46.5		27C			Scr: Alpha: -1.00E-04 uCi/Sa Beta: 2.85E-04 uCi/Sa

11/30/2005 1:13:07 PM

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: 12/16/2005 W04805

Sep1 DT/Tm Tech:

Batch: 5318602 WATER pCi/L PM, Quote: HC , 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 HNTF4-1-AF J5J270430-1-SAMP 10/27/2005 11:18			128.90g,in	128.90g						
AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7								Scr:	Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
2 HNTF4-1-AH-S J5J270430-1-MS 10/27/2005 11:18			127.40g,in	127.40g	TCSG1359 09/30/05,pd					
AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7								Scr:	Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
3 HNTF4-1-AJ-X J5J270430-1-DUP 10/27/2005 11:18			127.80g,in	127.80g						
AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7								Scr:	Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
4 HP586-1-AA-B J5K140000-602-BLK 10/27/2005 11:18			124.90g,in	124.90g						
AmtRec: #Containers: 1								Scr:	Alpha:	Beta:
5 HP586-1-AC-C J5K140000-602-LCS 10/27/2005 11:18			126.10g,in	126.10g	TCSE1794 07/18/05,pd					
AmtRec: #Containers: 1								Scr:	Alpha:	Beta:
6 HP586-1-AD-BN J5K140000-602-IBLK 10/27/2005 11:18										
AmtRec: #Containers: 1								Scr:	Alpha:	Beta:

12/21/2005 8:34:47 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/21/2004, 12/26/2005, Batch: '5318602', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318602						
AC		**CalcC**	**GiroirB**	11/22/2005 7:37:16		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:16 AM	RICH-RC-5016 REVISION 5
SC			GiroirB	Prep1C	11/30/2005 1:15:46 PM	RICH-RC-5016 REVISION 5
SC			RiceL	Sep1C	12/18/2005 1:02:26 PM	RICH-RC-5065 REVISION 5
SC			StringerR	InCnt1	12/18/2005 1:22:19 PM	RICH-RD-0001 REVISION 3
SC			BlackCL	CalcC	12/19/2005 8:26:18 AM	RICH-RD-0001 REVISION 3
AC			**GiroirB**	11/30/2005 1:15:46		
AC			**RiceL**	12/18/2005 1:02:26		
AC			**StringerR**	12/18/2005 1:22:19		
AC			**BlackCL**	12/19/2005 8:26:18		

AC: Accepting Entry; SC: Status Change

11/14/2005 4:26:16 PM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

Report Due: 12/16/2005 W04805

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

Batch: 5318600 **WATER** **pCi/L**
SEQ Batch, Test: None

PM, Quote: HC , 57671

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 HNTFM-1-AA J5J270426-1-SAMP 10/27/2005 11:54	AmtRec: 20ML,500,2XLP	#Containers: 4				Scr:	Alpha: 6.60E-05 uCi/Sa	Beta: 1.12E-03 uCi/Sa
2 HNTF4-1-AA J5J270430-1-SAMP 10/27/2005 11:18	AmtRec: 20ML,2X500P,2XLP,2X4LP	#Containers: 7				Scr:	Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
3 HNTF6-1-AA J5J270431-1-SAMP 10/27/2005 09:18	AmtRec: 20ML,5XLP	#Containers: 6				Scr:	Alpha: -1.61E-06 uCi/Sa	Beta: 1.65E-06 uCi/Sa
4 HN2CF-1-AA J5J310213-1-SAMP 10/31/2005 12:14	AmtRec: 20ML,LP	#Containers: 2				Scr:	Alpha: 1.98E-04 uCi/Sa	Beta: -9.91E-06 uCi/Sa
5 HN2CF-1-AC-X J5J310213-1-DUP 10/31/2005 12:14	AmtRec: 20ML,LP	#Containers: 2				Scr:	Alpha: 1.98E-04 uCi/Sa	Beta: -9.91E-06 uCi/Sa
6 HN2CJ-1-AA J5J310213-2-SAMP 10/31/2005 11:14	AmtRec: 20ML,LP	#Containers: 2				Scr:	Alpha: 1.38E-04 uCi/Sa	Beta: -9.89E-06 uCi/Sa
7 HN2C4-1-AA J5J310213-3-SAMP 10/31/2005 11:16	AmtRec: 20ML,LP	#Containers: 2				Scr:	Alpha: -1.40E-04 uCi/Sa	Beta: 5.02E-04 uCi/Sa 1.8E-01L

11/14/2005 4:26:16 PM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

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

Report Due: 12/16/2005

Batch: 5318600 **WATER** **pCi/L** **PM, Quote: HC , 57671**
SEQ Batch, Test: None

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:
8 HN2C7-1-AA J5J310215-1-SAMP 10/31/2005 09:30	AmtRec: 20ML,5XLP	#Containers: 6				Scr:	Alpha: 1.33E-06 uCi/Sa	Beta: 1.08E-06 uCi/Sa
9 HN46L-1-AA J5K010349-1-SAMP 11/01/2005 11:21	AmtRec: 20ML,2XLP	#Containers: 3				Scr:	Alpha: 2.99E-04 uCi/Sa	Beta: 3.33E-04 uCi/Sa
10 HP581-1-AA-B J5K140000-600-BLK 10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
11 HP581-1-AC-C J5K140000-600-LCS 10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
12 HP581-1-AD-BX J5K140000-600-MBLK 10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
13 HP581-1-AE-CM J5K140000-600-MLCS 10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
14 HP581-1-AF-BN J5K140000-600-IBLK 10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

11/14/2005 4:26:18 PM

Sample Preparation/Analysis

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

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

Report Due: 12/16/2005

Batch: 5318600 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:
15HP581-1-AG-BN								
J5K140000-600-IBLK								
10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
16HP581-1-AH-BN								
J5K140000-600-IBLK								
10/31/2005 12:14	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

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

HNTFM1AA-SAMP Constituent List:

H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
HP5811AA-BLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HP5811AC-LCS:					
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
HP5811AD-MBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HP5811AE-MLCS:					
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
HP5811AF-IBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HP5811AG-IBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
HP5811AH-IBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:

HNTFM1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP5811AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

12/19/2005 3:16:04 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/19/2004, 12/24/2005, Batch: '5318600', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318600						
AC		**CalcC**	**LEGLERM**	12/14/2005 3:36:54		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			LEGLERM	Sep1C	12/14/2005 3:36:54 PM	RICH-RC-5007 REVISION 6
SC			StringerR	InCnt1	12/14/2005 4:28:57 PM	RICH-RD-0001 REVISION 3
SC			StringerR	CalcC	12/17/2005 1:51:01 PM	RICH-RD-0001 REVISION 3
AC			**StringerR**	12/14/2005 4:28:57		
AC			**StringerR**	12/17/2005 1:51:01		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 3

ICOCFractions v4.8.15

11/30/2005 12:36:53 PM

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 #: 240

Report Due: 12/16/2005 W04805

Sep1 DT/Tm Tech:

Batch: 5318607 **WATER** **ug/L** **PM, Quote: HC , 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	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HNTF4-1-AG J5J270430-1-SAMP 10/27/2005 11:18	Final Vol 10.0 ml	25.20g,in AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7					Scr: Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
2 HNTF4-1-AK-S J5J270430-1-MS 10/27/2005 11:18		26.80g,in AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7	UNSF2787 11/29/05,pd				Scr: Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
3 HNTF4-1-AL-X J5J270430-1-DUP 10/27/2005 11:18		26.90g,in AmtRec: 20ML,2X500P,2XLP,2X4LP #Containers: 7					Scr: Alpha: 2.47E-03 uCi/Sa	Beta: 3.49E-04 uCi/Sa
4 HP59F-1-AA-B J5K140000-607-BLK 10/27/2005 11:18		25.00g,in AmtRec: #Containers: 1					Scr: Alpha:	Beta:
5 HP59F-1-AC-C J5K140000-607-LCS 10/27/2005 11:18		29.00g,in AmtRec: #Containers: 1	UNSF2788 11/29/05,pd				Scr: Alpha:	Beta:
6 HP59F-1-AD-C J5K140000-607-LCS 10/27/2005 11:18		24.10g,in AmtRec: #Containers: 1	UNSC0933 11/08/05,pd				Scr: Alpha:	Beta:

11/30/2005 12:36:55 PM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: _____

Report Due: 12/16/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5318607 ug/L
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:

Comments:

pH verified

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

HNTF41AG-SAMP Constituent List:
Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:
HNTF41AK-MS Constituent List:

HP59F1AA-BLK:
Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:
HP59F1AC-LCS:
Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20
HP59F1AD-LCS:
Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

HNTF41AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HNTF41AK-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP59F1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP59F1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HP59F1AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/16/2005 9:17:37 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/16/2004, 12/21/2005, Batch: '5318607', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5318607						
AC		**Cnt1C**	**GiroirB**	11/22/2005 7:37:10		
SC			wagarr	IsBatched	11/14/2005 4:27:55 PM	ICOC_RADCALC v4.8.15
SC			GiroirB	InPrep	11/22/2005 7:37:10 AM	RICH-RC-5015 REVISION 4
SC			GiroirB	Prep1C	11/30/2005 12:39:21 PM	RICH-RC-5015 REVISION 4
SC			ScottM	InPrep2	12/12/2005 5:20:57 PM	RICH-RC-5015 REVISION 4
SC			ScottM	Prep2C	12/15/2005 2:23:21 PM	RICH-RC-5015 REVISION 4
SC			BarbosaH	Cnt1C	12/15/2005 4:41:06 PM	RICH-RC-5058 REVISION 6
AC			**GiroirB**	11/30/2005 12:39:21		
AC			**ScottM**	12/12/2005 5:20:57		
AC			**ScottM**	12/15/2005 2:23:21		
AC			**BarbosaH**	12/15/2005 4:41:06		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.15

11/14/2005 4:26:21 PM

Sample Preparation/Analysis

384868, Pacific Northwest National Labortories ,
Pacific Northwest National Lab

Report Due: 12/16/2005 W04805

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
IZ COLIFORM BY METHOD 9223
5I CLIENT: HANFORD

Batch: 5318606 WATER
SEQ Batch, Test: None

PM, Quote: HC , 57671

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 HNTFM-1-AC J5J270426-1-SAMP 10/27/2005 11:54	AmtRec: 20ML,500,2XLP	#Containers: 4				Scr:	Alpha: 6.60E-05 uCi/Sa	Beta: 1.12E-03 uCi/Sa
2 HNTFM-1-AF-X J5J270426-1-DUP 10/27/2005 11:54	AmtRec: 20ML,500,2XLP	#Containers: 4				Scr:	Alpha: 6.60E-05 uCi/Sa	Beta: 1.12E-03 uCi/Sa
3 HP59D-1-AA-B J5K140000-606-BLK 10/27/2005 11:54	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
4 HP59D-1-AC-C J5K140000-606-LCS 10/27/2005 11:54	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

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

HNTFM1AC-SAMP Constituent List:

HP59D1AA-BLK:

HP59D1AC-LCS:

HNTFM1AC-SAMP Calc Info:

11/14/2005 4:26:21 PM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
IZ COLIFORM BY METHOD 9223
5I CLIENT: HANFORD

Report Due: 12/16/2005

Batch: 5318606
SEQ Batch, Test: None

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:

```
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
HP59D1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
HP59D1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

RQC050

Severn Trent Laboratories, Inc.
WET CHEM BATCHSHEET

Run Date: 11/22/05
Time: 10:42:17

STL Richland

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE

METHOD: IZ COLIFORM BY METHOD 9223
QC BATCH #: **5318606**
PREP DATE: 11/14/05
COMP DATE: 11/14/05
USER: KENITZEP

INITIALS:
PREP DMC by PA
ANAL DMC

DATA ENTRY:
INITIALS _____
DATE _____

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:	# colonies
HNTFM-1-AC	J-5J270426-001	XX I 88 IZ 5I	E	10-27-05	B1F1D2	0
HNTFM-1-AF	J-5J270426-001-X	XX I 88 IZ 5I	E		B1F1D2 DUP	0
HP59D-1-AA	J-5K140000-606-B	XX I 88 IZ 5I			INTRA-LAB BLANK	0
HP59D-1-AC	J-5K140000-606-C	XX I 88 IZ 5I			INTRA-LAB CHECK	7.4

Control Limits

(0-0)