Analytical Data Package Prepared For

Pacific Northwest National Lab

Radiochemical Analysis By

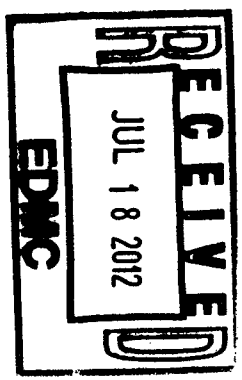
STL Richland STLRL

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

Data Package Contains _____ Pages

Report Nbr: 33606

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04999	X06-048	B1K8W0	J6H310210-1	JDHKD1AA	9JDHKD10	6256512
		B1K8W2	J6H310210-2	JDHKH1AA	9JDHKH10	6256512
	X06-025	B1HR67	J6I070137-1	JDVJ11AA	9JDVJ110	6256514
		B1HR67	J6I070137-1	JDVJ11AC	9JDVJ110	6256512
		B1HR70	J6I070137-2	JDVJ51AA	9JDVJ510	6256512
		B1HR74	J6I070137-3	JDVKA1AA	9JDVKA10	6256512
		B1HR78	J6I070137-4	JDVKH1AA	9JDVKH10	6256512
		B1HR84	J6I070137-5	JDVKR1AA	9JDVKR10	6256512
		B1HR84	J6I070137-5	JDVKR1AC	9JDVKR10	6256514
		B1HR87	J6I070137-6	JDVK61AA	9JDVK610	6256512
		B1HR91	J6I070137-7	JDVK91AA	9JDVK910	6256512
		B1HR95	J6I070137-8	JDVLA1AA	9JDVLA10	6264326
		B1HRB1	J6I070137-9	JDVLD1AA	9JDVLD10	6256514
		B1HRB1	J6I070137-9	JDVLD1AC	9JDVLD10	6256512



Comments:

1215446

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:

Liquid Scintillation Counting
Tritium by method RICH-RC-5007
Laser Induced Phosphorimetry
Total Uranium by method RICH-RC-5058

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

Liquid Scintillation Counting
Tritium by method RICH-RC-5007:
The LCS, batch blank, samples and sample duplicate (B1HR67) results are within contractual requirements.

Total Uranium

Total Uranium by method RICH-RC-5058:

Batch 6256512
Samples B1HR84, B1HR87, B1HR91 and B1HRB1 were recounted at a dilution when the concentrations were over the calibration limit. Recount data is acceptable. Except as noted, the LCS, batch blank, samples, sample duplicate (B1K8W0), and sample matrix spike (B1K8W2) results are within contractual requirements.

Batch 6264326
B1HR95 was cooked down and leached due to an excessive amount of sediment in the sample. Except as noted, the LCS, batch blank, samples, sample duplicate (B1HR95), and sample matrix spike (B1HR95) results are within contractual requirements.

Pacific Northwest National Laboratories
October 30, 2006

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Sherryl A. Adam
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**STL Richland's SOP number**
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = 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: 33606 File Name: h:\Reportdb\edd\FeadIV\Rad\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.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:
9JDHKD10	B1K8W0		MW6-SBB-A1	X06-048	W04999					08/31/2006 09:10

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	2.40E+01	ug/L	2.8E+00	2.8E+00		8.22E-02		UTOT_KPA	2.55E-02	ML	10/24/2006 21:16	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:
9JDHKH10	B1K8W2		MW6-SBB-A1	X06-048	W04999					08/31/2006 09:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	1.94E+01	ug/L	2.3E+00	2.3E+00		8.25E-02		UTOT_KPA	2.54E-02	ML	10/24/2006 21:22	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9JDVJ110	B1HR67		MW6-SBB-A1	X06-025	W04999					09/05/2006 14:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256514	H-3	10028-17-8	3.30E+03	pCi/L	2.2E+02	2.8E+02		3.10E+02	100.0	906.0_H3_LSC	5.00E-03	L	09/24/2006 06:41	I
6256512	Uranium	7440-61-1	5.84E+01	ug/L	6.9E+00	6.9E+00		8.35E-02		UTOT_KPA	2.51E-02	ML	10/24/2006 21:28	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:
9JDVJ510	B1HR70		MW6-SBB-A1	X06-025	W04999					09/05/2006 10:15

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	7.80E+01	ug/L	9.2E+00	9.2E+00		8.15E-02		UTOT_KPA	2.57E-02	ML	10/24/2006 21:30	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:
9JDVK610	B1HR87		MW6-SBB-A1	X06-025	W04999					09/05/2006 12:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	1.31E+02	ug/L	1.6E+01	1.6E+01		8.32E-02		UTOT_KPA	2.52E-02	ML	10/25/2006 12:06	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:
9JDVK910	B1HR91		MW6-SBB-A1	X06-025	W04999					09/05/2006 11:35

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	1.57E+02	ug/L	1.9E+01	1.9E+01		8.28E-02		UTOT_KPA	2.53E-02	ML	10/25/2006 12:10	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:
9JDVKA10	B1HR74		MW6-SBB-A1	X06-025	W04999					09/05/2006 09:55

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.

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	6.91E+01	ug/L	8.2E+00	8.2E+00		8.35E-02		UTOT_KPA	2.51E-02	ML	10/24/2006 21:33	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:
9JDVKH10	B1HR78		MW6-SBB-A1	X06-025	W04999					09/05/2006 13:20

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256512	Uranium	7440-61-1	2.39E+00	ug/L	2.5E-01	2.5E-01		8.19E-02		UTOT_KPA	2.56E-02	ML	10/24/2006 21:36	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:
9JDVKR10	B1HR84		MW6-SBB-A1	X06-025	W04999					09/05/2006 13:10

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256514	H-3	10028-17-8	7.20E+03	pCi/L	3.0E+02	4.3E+02		3.12E+02	100.0	906.0_H3_LSC	5.00E-03	L	09/24/2006 09:24	I
6256512	Uranium	7440-61-1	1.38E+02	ug/L	1.7E+01	1.7E+01		8.35E-02		UTOT_KPA	2.51E-02	ML	10/25/2006 12:04	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:
9JDVLA10	B1HR95		MW6-SBB-A1	X06-025	W04999					09/05/2006 11:20

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6264326	Uranium	7440-61-1	8.84E+01	ug/L	1.0E+01	1.0E+01		8.40E-01		UTOT_KPA	2.502E-02	ML	09/28/2006 11:44	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9JDVLD10	B1HRB1		MW6-SBB-A1	X06-025	W04999					09/05/2006 11:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6256514	H-3	10028-17-8	6.52E+03	pCi/L	2.9E+02	4.0E+02		3.06E+02	100.0	906.0_H3_LSC	5.00E-03	L	09/24/2006 10:46	I
6256512	Uranium	7440-61-1	1.70E+02	ug/L	2.0E+01	2.0E+01		8.25E-02		UTOT_KPA	2.54E-02	ML	10/25/2006 12:14	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.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JD8Q61AB	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 08/31/2006 09:10
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**BLK**		**Received Date:** 08/31/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AL	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
6256512	Uranium	1.92E-02	ug/L	2.2E-03	U	8.15E-02			UTOT_KPA	2.57E-02	10/24/2006				D
BLK	7440-61-1			2.2E-03						ML	21:09				

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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JD8RJ1AB	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 09/05/2006 14:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**BLK**		**Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AO	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
6256514	H-3	-1.46E+02	pCi/L	1.4E+02	U	3.11E+02	100.0		906.0_H3_LSC	5.00E-03	09/24/2006				D
BLK	10028-17-8			1.2E+02						L	01:14				

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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JD8RJ1DX	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 09/05/2006 14:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**BLK**		**Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AQ	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
6256514	H-3	-1.15E+02	pCi/L	1.4E+02	U	3.13E+02	100.0		906.0_H3_LSC	5.00E-03	09/24/2006				D
BLK	10028-17-8			1.2E+02						L	03:57				

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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JEQCF1AB	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 09/05/2006 11:20
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	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
6264326	Uranium	1.09E-01	ug/L	1.2E-02	U	8.43E-01			UTOT_KPA	2.50E-02	09/28/2006				D
BLK	7440-61-1			1.2E-02						ML	11:37				

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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id: JD8Q61CS **Sdg/Rept Nbr:** W04999 33606 **Collection Date:** 08/31/2006 09:10

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/31/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AM	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
6256512	Uranium	3.50E+01	ug/L	4.1E+00		8.35E-02		3.60E+01	UTOT_KPA	2.51E-02	10/24/2006			75	D
BS	7440-61-1			4.1E+00				97.2		ML	21:12			125	

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: JD8Q61DS **Sdg/Rept Nbr:** W04999 33606 **Collection Date:** 08/31/2006 09:10

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/31/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AN	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
6256512	Uranium	3.49E+00	ug/L	3.6E-01		8.25E-02		3.57E+00	UTOT_KPA	2.54E-02	10/24/2006			75	D
BS	7440-61-1			3.6E-01				97.7		ML	21:14			125	

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: JD8RJ1CS **Sdg/Rept Nbr:** W04999 33606 **Collection Date:** 09/05/2006 14:30

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AP	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
6256514	H-3	2.57E+03	pCi/L	2.5E+02		3.10E+02	100.0	2.72E+03	906.0_H3_LSC	5.00E-03	09/24/2006			75	D
BS	10028-17-8			2.1E+02				94.3		L	02:35			125	

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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JD8RJ1EM	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 09/05/2006 14:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AR	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
6256514	H-3	2.52E+03	pCi/L	2.5E+02		3.12E+02	100.0	2.72E+03	906.0_H3_LSC	5.00E-03	09/24/2006			75	D
BS	10028-17-8			2.1E+02				92.7		L	05:19			125	

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: JEQCF1CS **Sdg/Rept Nbr:** W04999 33606 **Collection Date:** 09/05/2006 11:20

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

Moisture/Solids%*: **QC Type:** BS **Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	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
6264326	Uranium	3.32E+01	ug/L	3.4E+00		8.40E-01		3.65E+01	UTOT_KPA	2.50E-02	09/28/2006			70	D
BS	7440-61-1			3.4E+00				91.0		ML	11:40			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 Duplicate Report

Lab Code: STLRL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JDHKD1CR	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 08/31/2006 09:10
Client Id:	B1K8W0	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/31/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X06-048	MW6-SBB-A19981								AS	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
6256512	Uranium	2.42E+01	ug/L	2.9E+00		8.38E-02			UTOT_KPA	2.50E-02	10/24/2006	.7	0.1		D
DUP	7440-61-1	2.40E+01		2.9E+00						ML	21:20	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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JDVJ11DR	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 09/05/2006 14:30
Client Id:	B1HR67	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X06-025	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
6256514	H-3	3.46E+03	pCi/L	2.9E+02		3.07E+02	100.0		906.0_H3_LSC	5.00E-03	09/24/2006	4.6	0.8		D
DUP	10028-17-8	3.30E+03		2.3E+02						L	08:02	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.

Lab Sample Id: JDVLA1DR **Sdg/Rept Nbr:** W04999 33606 **Collection Date:** 09/05/2006 11:20

Client Id: B1HR95 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X06-025	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
6264326	Uranium	1.04E+02	ug/L	1.2E+01		8.36E-01			UTOT_KPA	2.515E-02	09/28/2006	15.8	1.8		D
DUP	7440-61-1	8.84E+01		1.2E+01						ML	11:48	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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JDHKH1CW	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 08/31/2006 09:00
Client Id:	B1K8W2	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	MS		**Received Date:** 08/31/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X06-048	MW6-SBB-A19981								AT	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6256512	Uranium	3.58E+01	ug/L	6.9E+00		8.28E-02		3.57E+01	UTOT_KPA	2.53E-02	10/24/2006			60	D
MS	7440-61-1			6.9E+00				100.3		ML	21:25			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\W04999.Edd, h:\Reportdb\edd\FeadIV\Rad\33606.Edd

Lab Sample Id:	JDVLA1CW	**Sdg/Rept Nbr:**	W04999	33606	**Collection Date:** 09/05/2006 11:20
Client Id:	B1HR95	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	MS		**Received Date:** 09/06/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X06-025	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
6264326	Uranium	5.22E+01	ug/L	2.0E+01		8.33E-01		3.56E+01	UTOT_KPA	2.521E-02	09/28/2006			60	D
MS	7440-61-1			2.0E+01				146.4		ML	11:46			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.

PNNL W04999 JGH310210 Due 10-16-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X06-048-1**

Page 1 of 1

Collector CJD	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-048	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 331 Bldg Aquaculture Outfall		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol Other	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K8W0	STL RL	W	8-31-06	9:10	1x20-mL P	Activity Scan	None
B1K8W0	STL RL	W	8-31-06	9:10	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDHKD	

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CJ Duchsherer	CJ Duchsherer	CJ Duchsherer	8-31-06/9:25	S. Smith	S. Smith	S. Smith	8-31-06 09:25
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PNNL 0004999
J6H310210
Due 10-16-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-048-3

Page 1 of 1

Collector CJD	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-048	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 331 Bldg Aquaculture Outfall		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol Other	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K8W2	STLRL	W	8-31-06	9:00	1x20-mL P	Activity Scan	None
B1K8W2	STLRL	W	8-31-06	9:00	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDHKH	

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CJ Duchsherer		CJ Duchsherer	8-31-06 9:25	L. Smith		S Smith	8-31-06 09:25
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PNNL J6I070137 W04999 Due 10.20.06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-3

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR67		W	9/5/06	14:30	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1HR67		W	9/5/06	14:30	1x20-mL P	Activity Scan	None
B1HR67		W	9/5/06	14:30	1x500-mL G/P	UTOT_KPA: Uranium (1) JDVJ1	HNO3 to pH <2

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Ferrito	Ferrito	9-5-06 1630		SIG 5 LOCKED STORAGE	9-5-06 1630
LOCKED STORAGE		9-6-06 1340	J. Ferrito	Ferrito	9-6-06 1340
Ferrito	Ferrito	9-6-06 1350	S. Smith	S. Smith	9-6-06 1350

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 06I070137
W04999
Due 10-20-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-7

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incornorated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR70		W	9/5/06	10:15	1x20-mL P	Activity Scan	None
B1HR70		W	9/5/06	10:15	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDVJS	

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Ferrito /	9-5-06 1630	SIG S LOCKED STORAGE	9-5-06 1630
Relinquished By	Date/Time	Received By	Date/Time
LOCKED STORAGE	9-6-06 1340	J. Ferrito	9-6-06 1340
Relinquished By	Date/Time	Received By	Date/Time
Ferrito /	9-6-06 1350	S. Smith S. Smith	9-6-06 1350
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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

PNNL 36H070137
W04999
Due 10.20.06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-11

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR74		W	9/5/06	9:55	1x20-mL P	Activity Scan	None
B1HR74		W	9/5/06	9:55	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDVKA	

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
J. Ferrito	Ferrito	9/5/06 1630	SIG 5 LOCKED STORAGE		9-5-06 1630
LOCKED STORAGE		9/6/06 1340	Ferrito	Ferrito	9-6-06 1340
J. Ferrito	Ferrito	9/6/06 1350	L. Smith	S. Smith	9.6.06 1350
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

PNNL J6I070137 W04999 Due 10-20-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-15

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR78		W	9/5/06	13:20	1x20-mL P	Activity Scan	None
B1HR78		W	9/5/06	13:20	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDVKH	

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ferrito	Ferrito		9-5-06 1630		SIG 5 LOCKED STORAGE		9-5-06 1630
Locked Storage			9-6-06 1340	Ferrito	Ferrito		9-6-06 1340
Ferrito	Ferrito		9-6-06 1350	S. Smith	S. Smith		9-6-06 1350

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 JGI070137
W04999
Due 10-20-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X06-025-19**

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR84		W	9/5/06	13:10	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1HR84		W	9/5/06	13:18	1x20-mL P	Activity Scan	None
B1HR84		W	9/5/06	13:40	1x500-mL G/P	UTOT_KPA: Uranium (1) JDVKR	HNO3 to pH <2

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Ferrito	Ferrito	9-5-06 1630		SIG 5 LOCKED STORAGE	9-5-06 1630
Locked Storage		9/6/06 1340	J. Ferrito	Ferrito	9-6-06 1340
Ferrito	Ferrito	9/6/06 1350	S. Smith	S. Smith	9-6-06 1350
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

PNNL J6I070137
W04999
Due 10-20-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-23

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR87		W	9/5/06	1245	1x20-mL P	Activity Scan	None
B1HR87		W	9/5/06	1245	1x500-mL G/P	UTOT_KPA: Uranium (1) JDVK6	HNO3 to pH <2

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Ferrito /	9/5/06 1430	SIG 5 LOCKED STORAGE	9/5/06 1630
LOCKED STORAGE	9/6/06 1340	J. Ferrito /	9-6-06 1340
Ferrito /	9/6/06 1350	S. Smith S. Smith	9-6-06 1350

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 J6I070137
W04999
Due 10.20.06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-27

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR91		W	9/5/06	11:35	1x20-mL P	Activity Scan	None
B1HR91		W	9/5/06	11:35	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDVK9	

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Ferrito /	9/5/06 1630	SIG 5 LOCKED STORAGE /	9/5/06 1632
Locked Storage	9/6/06 1340	J. Ferrito /	9/6/06 1340
Ferrito /	9.6.06 1350	L. Smith S. Smith	9.6.06 1350
/		/	

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 06I070137
W04999
due 10-20-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X06-025-31**

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incorporated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HR95		W	9/5/06	11:20	1x20-mL P	Activity Scan	None
B1HR95		W	9/5/06	11:20	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						JDVLA	

Relinquished By	Print	Sign	Date/Time	Received By	Sign	Date/Time
Ferrito			9-5-06 1630		SHB 5 LOCKED STORAGE	9/5/06 1630
Locked Storage			9-6-06 1340	J. Ferrito		9/6/06 1340
Ferrito			9-6-06 1350	S. Smith	S. Smith	9-6-06 1350
Relinquished By			Date/Time	Received By		Date/Time

Matrix *

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

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

PNNL J6F070137 W04999 Due 10-20-06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X06-025-35

Page 1 of 1

Collector Ferrito	**Contact/Requester** Dot Stewart	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. X06-025	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title AQUIFER TUBES		**Ice Chest No.** **Temp.**
Shipped To (Lab) Severn Trent Incornorated, Richland	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol LTMC	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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
B1HRB1		W	9/5/06	11:00	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1HRB1		W	9/5/06	11:00	1x20-mL P	Activity Scan	None
B1HRB1		W	9/5/06	11:00	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
						J D V L D	

Relinquished By Print: Ferrito Sign:	Date/Time 9/5/06 1630	Received By Print: SIG 5 LOCKED STORAGE Sign:	Date/Time 9-5-06 1630
Relinquished By Print: Local Storage Sign:	Date/Time 9/6/06 1340	Received By Print: Ferrito Sign:	Date/Time 9/6/06 1340
Relinquished By Print: Sign:	Date/Time 9/6/06 1350	Received By Print: S. Smith Sign: S. Smith	Date/Time 9-6-06 1350
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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