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MAY 21 2008
EDMC

Analytical Data Package Prepared For

Fluor Handord

Radiochemical Analysis By

TAL Richland STLRL

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

Data Package Contains _____ Pages

Report Nbr: 36139

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
<u>W05212</u>	S07-007	B1NX82	J7G190340-1	J26LD1AA	9J26LD10	7200538

Comments:

RECEIVED JULY 31, 2007

0077295

STL Richland
 2800 George Washington Way
 Richland, WA 99354

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

Certificate of Analysis

Pacific Northwest National Laboratories
 Sigma V Building
 Richland, WA 99352

July 30, 2007

Attention: Steve Trent

SAF Number	:	S07-012
Date SDG Closed	:	July 17, 2007
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W05212
Data Deliverable	:	15-Day / Summary

CASE NARRATIVE

I. Introduction

On July 17, 2007 one water sample was 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:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
BINX82	J26LD	7/17/07	WATER

II. Sample Receipt

The sample was received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Liquid Scintillation Counting
 Tritium by method RICH-RC-5007

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

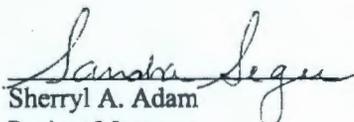
Liquid Scintillation Counting

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1NX82) results are within contractual requirements.

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

Reviewed and approved:


Sherryl A. Adam
Project Manager

SA

Drinking Water Method Cross References

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

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,\dots)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c - Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty.</i> 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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgmdCnt}/\text{BkgmdCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC/MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgmdCnt}/\text{BkgmdCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 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 = $(S-D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by 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

7/30/2007 10:57:41 AM

TAL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 36139 File Name: h:\Reportdb\edd\Fead\W05212.Edd, h:\Reportdb\edd\Fead\W05212.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:				
9J26LD10	B1NX82		MW6-SBB-A1	S07-007	W05212					07/17/2007 09:16				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7200538	H-3	10028-17-8	6.90E+03	pCi/L	2.9E+02	4.2E+02		2.98E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/25/2007 04:19	I

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Monday, July 30, 2007

TAL Richland QC Blank Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\Rad\W05212.Edd, h:\Reportdb\ledd\Fead\Rad\36139.Edd

Lab Sample Id: J27DR1AB

Sdg/Rept Nbr: W05212 36139

Collection Date: 07/17/2007 09:16

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/17/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AC	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7200538 BLK	H-3 10028-17-8	1.10E+02	pCi/L	1.4E+02 1.3E+02	U	3.02E+02	100.0		906.0_H3_LSC	5.00E-03 L	07/24/2007 22:52				D

STL RICHLAND

Monday, July 30, 2007

TAL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\VRad\W05212.Edd, h:\Reportdb\edd\Fead\VRad\36139.Edd

Lab Sample Id: J27DR1DX Sdg/Rept Nbr: W05212 36139 Collection Date: 07/17/2007 09:16
 Client Id: NA Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: BLK Received Date: 07/17/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Toi/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
7200538 BLK	H-3 10028-17-8	-1.60E+01	pCi/L	1.4E+02 1.2E+02	U	3.08E+02	100.0		906.0_H3_LSC	5.00E-03 L	07/25/2007 01:36				D

8

Monday, July 30, 2007

TAL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W05212.Edd, h:\Reportdb\edd\Fead\W05212.Edd, h:\Reportdb\edd\Fead\W05212.Edd, h:\Reportdb\edd\Fead\W05212.Edd

Lab Sample Id: J27DR1CS

Sdg/Rept Nbr: W05212 36139

Collection Date: 07/17/2007 09:16

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/17/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AD	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7200538 BS	H-3 10028-17-8	2.66E+03	pCi/L	2.5E+02 2.1E+02		2.99E+02	100.0	2.71E+03 98.2	906.0_H3_LSC	5.00E-03 L	07/25/2007 00:14			70 130	D

STL RICHLAND

Monday, July 30, 2007

TAL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05212.Edd, h:\Reportdb\edd\Fead\VRad\36139.Edd

Lab Sample Id: J27DR1EM

Sdg/Rept Nbr: W05212

36139

Collection Date: 07/17/2007 09:16

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/17/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AF	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
7200538 BS	H-3 10028-17-8	2.55E+03	pCi/L	2.5E+02 2.0E+02		2.98E+02	100.0	2.73E+03 93.3	906.0_H3_LSC	5.00E-03 L	07/25/2007 02:58			70 130	D

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Monday, July 30, 2007

TAL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W05212.Edd, h:\Reportdb\ledd\Fead\I\Rad\36139.Edd

Lab Sample Id: J26LD1CR

Sdg/Rept Nbr: W05212 36139

Collection Date: 07/17/2007 09:16

Client Id: B1NX82

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/17/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-007	MW6-SBB-A19981								AB	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
7200538 DUP	H-3 10028-17-8	7.00E+03 6.90E+03	pCi/L	4.2E+02 3.0E+02		2.97E+02	100.0		906.0_H3_LSC	5.00E-03 L	07/25/2007 05:41	1.5 20.0	0.4 3		D

Lot No., Due Date: J7G190340; 08/01/2007
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 7200538; RTRITIUM H-3 by LSC
 SDG, Matrix: W05212; WATER

Item	Yes	No	N/A
8.0 Correction Calculation Protocol Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.02 Final Results Are in the Appropriate Activity Units OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.03 Batch Contains the Required QC Appropriate for the Method OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.06 At Least the Minimum Sample Volume Was Used Analysis Volume => J26LD1AA 5.00<10.00 Q:VB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.07 The Correct Count Geometry was Used. Count Geometry => J27DR1AF SVP15/5<->SVP10/10 J27DR1AG SVP15/5<->SVP10/10 J27DR1AA SVP15/5<->SVP10/10 J27DR1AC SVP15/5<->SVP10/10 J27DR1AD SVP15/5<->SVP10/10 J27DR1AE SVP15/5<->SVP10/10 J26LD1AA SVP15/5<->SVP10/10 J26LD1AC SVP15/5<->SVP10/10 Q:VC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.09 Method Blank is within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.13 QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.14 LCS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.15 MLCS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.17 Tracer within Control Limits. No Tracers found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.19 Sample Specific MDC <= CRDL. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.22 Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK Calc_IDL Not Calculated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => H-3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OK AL 7/25/07
OK AL 7/25/07

OK; No Callin Level Found => H-3			
8.24 Result + 3s >=0, Not Too Negative.	Yes	No	N/A
OK	<input checked="" type="checkbox"/>		
8.25 Counting Spectrum are within FWHM Limits.	Yes	No	N/A
No FWHM found in Batch Data!			<input checked="" type="checkbox"/>
8.26 Instruments have Current Calibrations.	Yes	No	N/A
8.27 Correct Count Library Used.	Yes	No	N/A
No Count Library found in Batch Data!			<input checked="" type="checkbox"/>
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version)	Yes	No	N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later version)	Yes	No	N/A
8.3 Comments:			
8.31 Results Blank Subtracted as Appropriate.	Yes	No	N/A
OK	<input checked="" type="checkbox"/>		

First Level Review Angela Long

Date 7/25/07



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

OC Batch Number:

7200538
W05212

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:

Sheryl A. Adams

Date:

7-26-07

Collector Fluor Hanford R. T. SICKLE	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN FAX
SAF No. S07-007	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title SURV. JULY 2007	Logbook: HNF-N-506-8	Ice Chest No. GRP-03-019	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 15 Days PRIORITY	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS
 ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
 All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.
 WSCF: Batch all GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1NX82		W	7/17/07	0916	1x250-mL G	906.0_H3_LSC: Tritium (1)	None
B1NX82		W	↓	↓	1x20-mL P	Activity Scan	None
<i>J26LD</i>							
<i>A. Wood 7/17/07</i>							

Relinquished By Fluor Hanford R. T. SICKLE	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 17 2007 / 1600	Received By <i>[Signature]</i>	Print LJ LANE	Sign <i>[Signature]</i>	Date/Time JUL 17 2007 / 1600	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time	Received By			Date/Time	
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	

Sample Check-in List

Date/Time Received: 07/07 1600

Client: PGW SDG #: W05212 NA SAF #: S07-007 NA

Work Order Number: J76190040 Chain of Custody # S07-007-34

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: 1 (1-20MLP & 1-250MLP)
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 HAD TO ADJUST PH
11. Sample Location, Sample Collector Listed? * Yes No
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 07/07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager _____ Date _____

7/19/2007 12:42:56 PM

Sample Preparation/Analysis

Balance Id: 12445

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

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

PRIORITY

Pipet #:

AnalyDueDate: 08/01/2007 *W05212*

Sep1 DT/Tm Tech: 7-24-07 *AM*

Batch: 7200538 WATER pCi/L
SEQ Batch, Test: None All Tests: 7200538 ARS6,

PM, Quote: SA, 57671

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J26LD-1-AA								
J7G190340-1-SAMP								
								
07/17/2007 09:16		AmtRec: 20ML,250G	#Containers: 2			Scr:	Alpha:	Beta:
2 J26LD-1-AC-X								
J7G190340-1-DUP								
								
07/17/2007 09:16		AmtRec: 20ML,250G	#Containers: 2			Scr:	Alpha:	Beta:
3 J27DR-1-AA-B								
J7G190000-538-BLK								
								
07/17/2007 09:16		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
4 J27DR-1-AC-C								
J7G190000-538-LCS								
								
07/17/2007 09:16		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
5 J27DR-1-AD-BX								
J7G190000-538-MBLK								
								
07/17/2007 09:16		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
6 J27DR-1-AE-CM								
J7G190000-538-MLCS								
								
07/17/2007 09:16		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 J27DR-1-AF-BN								
J7G190000-538-IBLK								
								
07/17/2007 09:16		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

07/19/2007 12:42:58 PM

Sample Preparation/Analysis

Balance Id:

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

PRIORITY

Pipet #:

AnalDueDate: 08/01/2007

Sep1 DT/Tm Tech:

Batch: 7200538

pCi/L

Sep2 DT/Tm Tech:

REQ Batch, Test: None

Prep Tech:



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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8 J27DR-1-AG-BN

J7G190000-538-IBLK



07/17/2007 09:16

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SA, 57671

J26LD1AA-SAMP Constituent List:

H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20	
J27DR1AA-BLK:						
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:	
J27DR1AC-LCS:						
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20	
J27DR1AD-MBLK:						
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:	
J27DR1AE-MLCS:						
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20	
J27DR1AF-IBLK:						
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:	
J27DR1AG-IBLK:						
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:	
J26LD1AA-SAMP Calc Info:						
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B		
J27DR1AA-BLK:						
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B		
J27DR1AC-LCS:						
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B		
J27DR1AD-MBLK:						
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B		
J27DR1AE-MLCS:						
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B		
J27DR1AF-IBLK:						
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B		

STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt. s1 - Sep1, s2 - Sep2 Page 2
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 8

ICOC v4.8.26

STL RICHLAND
19/2007 12:42:58 PM

Sample Preparation/Analysis

Balance Id: _____

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

PRIORITY

Pipet #: _____

Analysis Due Date: 08/01/2007

Sep1 DT/Tm Tech: _____

Batch: 7200538
REQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech: _____

Prep Tech: _____



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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J27DR1AG-IBLK:

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

Approved By _____ Date: _____

19

7/25/2007 12:51:49 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2006, 7/30/2007, Batch: '7200538', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
7200538				
AC	CalcC	McDowellD	7/24/2007 6:31:48	
SC		wagarr	IsBatched 7/19/2007 12:43:23 PM	ICOC_RADCALC v4.8.26
SC		McDowellD	InSep1 7/24/2007 6:31:48 AM	RICH-RC-5007 REVISION 6
SC		McDowellD	Sep1C 7/24/2007 1:07:31 PM	RICH-RC-5007 REVISION 6
SC		BlackCL	InCnt1 7/24/2007 1:15:44 PM	RICH-RD-0001 REVISION 4
SC		BlackCL	CalcC 7/25/2007 7:10:07 AM	RICH-RD-0001 REVISION 4
AC		McDowellD	7/24/2007 1:07:31 PM	
AC		BlackCL	7/24/2007 1:15:44 PM	
AC		BlackCL	7/25/2007 7:10:07	

AC: Accepting Entry; SC: Status Change

STL Richland
Richland Wa.