

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: 31985

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04864B	W06-002	B1HC87	J6D130167-1	H26001AA	9H260010	6103345
		B1HCF1	J6D130167-2	H26051AA	9H260510	6103345



Comments:

Certificate of Analysis
RECHECK, RECOUNT, OR REANALYSIS ORDER
ORDER NUMBER MW6-SBB-

Certificate of Analysis

Pacific Northwest National Laboratories
Sigma V Building
Richland, WA 99352

April 18, 2006

Attention: Dot Stewart

SAF Number : W06-002
Date SDG Closed : April 10, 2006
Number of Samples : Two (2)
Sample Type : Water
SDG Number : W04864B
Data Deliverable : 15-Day / Priority

CASE NARRATIVE

I. Introduction

On April 10, 2006, a request for reanalysis of two water samples was received at STL Richland (STLR). Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Pacific Northwest National Laboratories (PGW) specific ID:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1HC87	H2600(HW64E)	WATER	2/9/06
B1HCF1	H2605(HW64D)	WATER	2/9/06

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analysis was:

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

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058:

The reanalysis results are within RER acceptance criteria. The LCS, batch blank, samples, sample duplicate (B1HC87) and the sample matrix spike (B1HC87) results are within contractual requirements.

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

Reviewed and approved:

Hans Carman
Project Manager

Drinking Water Method Cross References

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

Uncertainty Estimation

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

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c - Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty</i> . The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor CRDL (RL)	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations. 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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt} / \text{BkgndCntMin}) / \text{SCntMin})) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. 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%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt} / \text{BkgndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. 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.

4/26/2006 4:38:12 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 31985 File Name: h:\Reportdb\edd\Fead\W04864B.Edd, h:\Reportdb\edd\Fead\W04864B.Edd, h:\Reportdb\edd\Fead\W04864B.Edd, h:\Reportdb\edd\Fead\W04864B.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:			
9H260010	B1HC87		MW6-SBB-A1	W06-002	W04864B				02/09/2006	07:45			
Batch 6103345	Analyte Uranium	CAS# 7440-61-1	Result 3.92E+01	Unit ug/L	CntU 2S 4.6E+00	TotU 2S 4.6E+00	MDA 7.51E-02	TrcYield UTOT_KPA	Method UTOT_KPA	Alq Size 2.79E-02	Unit ML	Analy Date/Time 04/17/200 10:05	Act 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:			
9H260510	B1HCF1		MW6-SBB-A1	W06-002	W04864B				02/09/2006	07:45			
Batch 6103345	Analyte Uranium	CAS# 7440-61-1	Result 5.78E+00	Unit ug/L	CntU 2S 6.8E-01	TotU 2S 6.8E-01	MDA 7.01E-02	TrcYield UTOT_KPA	Method UTOT_KPA	Alq Size 2.99E-02	Unit ML	Analy Date/Time 04/17/200 10:12	Act I

Wednesday, April 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W04864B.Edd, h:\Reportdb\edd\Fead\VRad\31985.E

Lab Sample Id: H27EN1AB **Sdg/Rept Nbr:** W04864B **31985** **Collection Date:** 02/09/2006 07:45
Client Id: NA **Matrix:** WATER **WATER**
Moisture/Solids%*: **QC Type:** BLK

Received Date: 04/10/2006
Sample On Date:

SAF Nbr **Contract Nbr** **Test User** **Case Nbr** **SAS Nbr** **Suffix** **Decant** **Distilled Volume** **File Id** **FSuffix** **RType**
 MW6-SBB-A19981

Batch # /	Analyt/	Result/	Toi/Cnt	Qu-	Tracer	Spk Conc/	Analy	Aliq	Date/Time	RPD/	RER/	LCS
Qc Type	CAS#	Orig Rst	Uncert 2S	al	Yield	%Rec	Method	Size/	Analyzed	UCL	UCL	LCL/UCL
6103345	Uranium	3.21E-02	3.4E-03	U	8.38E-02		UTOT_KPA	2.50E-02	04/17/2006			
BLK	7440-61-1		3.4E-03					ML	09:54			D

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.

Wednesday, April 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLR

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\Rad\W04864B.Edd, h:\Reportdb\edd\Fead\Rad\31985.E

Lab Sample Id: H27EN1CS **Sdg/Rept Nbr:** W04864B **31985** **Collection Date:** 02/09/2006 07:45
Client Id: NA **Matrix:** WATER **WATER** **Sample On Date:**
Moisture/Solids%*: **QC Type:** BS **Received Date:** 04/10/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	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
6103345	Uranium	3.06E+01	ug/L	3.6E+00		8.32E-02		3.62E+01	UTOT_KPA	2.52E-02	04/17/2006			70	D
BS	7440-61-1			3.6E+00				84.6		ML	09:59			130	

Wednesday, April 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddl\Fead\W04864B.Edd, h:\Reportdb\eddl\Fead\W04864B.Edd, h:\Reportdb\eddl\Fead\W04864B.Edd, h:\Reportdb\eddl\Fead\W04864B.Edd

Lab Sample Id: H27EN1DS

Sdg/Rept Nbr: W04864B 31985

Collection Date: 02/09/2006 07:45

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/10/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AG	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
6103345	Uranium	3.22E+00	ug/L	3.3E-01		8.09E-02		3.50E+00	UTOT_KPA	2.59E-02	04/17/2006			70	D
BS	7440-61-1			3.3E-01				91.9		ML	10:01			130	

STL Richland

rptFeadRadEdd v3.68

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.

Wednesday, April 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04864B.Edd, h:\Reportdb\edd\Fead\Rad\31985.E

Lab Sample Id: H26001DR
Client Id: B1HC87
Moisture/Solids%*:

Sdg/Rept Nbr: W04864B 31985
Matrix: WATER WATER
QC Type: DUP
Collection Date: 02/09/2006 07:45
Sample On Date:
Received Date: 04/10/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-002	MW6-SBB-A19981								AD	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6103345	Uranium	3.83E+01	ug/L	4.5E+00		7.48E-02			UTOT_KPA	2.80E-02	04/17/2006	2.4	0.3		D
DUP	7440-61-1	3.92E+01		4.5E+00						ML	10:09	20.0	3		

Wednesday, April 26, 2006

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\Rad\W04864B.Edd, h:\Reportdb\edd\Fead\Rad\31985.E

Lab Sample Id: H26001CW **Sdg/Rept Nbr:** W04864B 31985 **Collection Date:** 02/09/2006 07:45
Client Id: B1HC87 **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** MS **Received Date:** 04/10/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W06-002	MW6-SBB-A19981								AC	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6103345	Uranium	2.48E+01	ug/L	8.8E+00		7.68E-02		3.33E+01	UTOT_KPA	2.73E-02	04/17/2006			60	D
MS	7440-61-1			8.8E+00				74.4		ML	10:07			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.

Lot No., Due Date: J6D130167; 04/25/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6103345; RUNAT UNat by KPA
SDG, Matrix: ^{C4B Hanf} W04846A; 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

[Handwritten Signature]

Date

4/17/06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6103345

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: 

Date: 4-26-06

JGD130167
W04864AB SKS
Due 4/25/06 4/17/06

04/10/2006
RECHECK, RECOUNT, OR REANALYSIS ORDER
CONTRACT NO MW6-SBB-

lot #

Severn Trent
2800 George Washington
Richland, WA 99354

Battelle PNNL Order 060410STLRL-R3390

Sample Delivery W04864

Special None

Samples(s)

Lab Sample ID	PNNL Sample	Action	TAT	METHOD_NAME
9HW64E10	B1HC87	Reanalysis	15/15	UTOT_KPA H2600
9HW64D10	B1HCF1	Reanalysis	15/15	UTOT_KPA H2605

JBB 090387

W06-002

received

2-9-06

Deliver Report Results Dorothy L. Stewart, K6-96

c/o Secretary
3110 Port of Benton Blvd.

The report results must reference the Battelle PNNL-order number, SDG number, and the Battelle PNNL sample identification number shown above.

4/13/2006 1:01:22 PM

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

Sample Preparation/Analysis

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
51 CLIENT: HANFORD

Balance Id:1120482733

Pipet #: 240
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:

Report Due: 04/25/2006

Batch: 6103345 WATER ug/L PM, Quote: HC, 57671

SEQ Batch, Test: None

Prep Tech: WAGNERJ

Comments:

CR Analyst,
Init/Date

Count On | Off
(24hr) Circle

Detector
Id

Count
Time Min

QC-Tracer
Prep Date

Initial Aliquot
Amt/Unit

Total
Amt/Unit

Work Order, Lot,
Sample Date Time

1 H2600-1-AA Hand Vol 27.90g.in

J6D130167-1-SAMP

10.0 ml

02/09/2006 07:45

AmtRec: LP

#Containers: 1

Scr:

Alpha:

Beta:

2 H2600-1-AC-S

UNSF3074

27.30g.in

04/12/06.pd
03/22/05.r

02/09/2006 07:45

AmtRec: LP

#Containers: 1

Scr:

Alpha:

Beta:

3 H2600-1-AD-X

28.00g.in

J6D130167-1-DUP

02/09/2006 07:45

AmtRec: LP

#Containers: 1

Scr:

Alpha:

Beta:

4 H2605-1-AA

29.90g.in

J6D130167-2-SAMP

02/09/2006 07:45

AmtRec: LP

#Containers: 1

Scr:

Alpha:

Beta:

5 H27EN-1-AA-B

25.00g.in

J6D130000-345-BLK

02/09/2006 07:45

AmtRec: LP

#Containers: 1

Scr:

Alpha:

Beta:

6 H27EN-1-AC-C

25.20g.in

J6D130000-345-LCS

02/09/2006 07:45

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

7 H27EN-1-AD-C

25.90g.in

J6D130000-345-LCS

02/09/2006 07:45

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

4/13/2006 1:01:25 PM

Sample Preparation/Analysis

Balance Id:120482733

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

Pipet #:

Report Due: 04/25/2006

Sep1 DT/Tm Tech:

Batch: 6103345

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

ug/L

Prep Tech: ,WAGNERJ

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:

Comments: *PHL 2.4.13.06*

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

H26001AA-SAMP Constituent List:

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

H26001AC-MS Constituent List:

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

H27EN1AA-BLK:

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

H27EN1AC-LCS:

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

H27EN1AD-LCS:

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

H26001AA-SAMP Calc Info:

Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H26001AC-MS Calc Info:

Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H27EN1AA-BLK:

Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H27EN1AC-LCS:

Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H27EN1AD-LCS:

Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

ICOC Fraction Transfer/Status Report

ByDate: 4/17/2005, 4/22/2006, Batch: '6103345', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6103345				
AC	Cnt1C	WAGNERJ	4/13/2006 12:55:48	
SC		wagnerj	IsBatched	4/13/2006 12:54:32 PM
SC		WAGNERJ	InPrep	4/13/2006 12:55:48 PM
SC		WAGNERJ	Prep1C	4/13/2006 1:03:20 PM
SC		ScottM	Prep2C	4/15/2006 11:15:00 AM
SC		BarbosaH	Cnt1C	4/17/2006 10:48:05 AM
AC		WAGNERJ	4/13/2006 1:03:20 PM	ICOC_RADCALC v4.8.20
AC		ScottM	4/15/2006 11:15:00	RICH-RC-5015 REVISION 4
AC		BarbosaH	4/17/2006 10:48:05	RICH-RC-5015 REVISION 4
				RICH-RC-5058 REVISION 7

AC: Accepting Entry; SC: Status Change