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6/12/05*

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: 29125

| SDG Nbr | ORDER Nbr | CLIENT ID NUMBER | LOT Nbr | WORK ORDER | RPT DB ID | BATCH |
|---------|-----------|------------------|-------------|------------|-----------|---------|
| W04622 | X05-010 | B1CKX0 | J5D210347-1 | G8WN61AA | 9G8WN610 | 5112430 |
| | | B1CL19 | J5D250207-1 | G85L01AA | 9G85L010 | 5124434 |
| | | B1CL19 | J5D250207-1 | G85L01AC | 9G85L010 | 5124445 |
| | | B1CL20 | J5D250207-2 | G85L21AA | 9G85L210 | 5116415 |
| | | B1CKY2 | J5D250207-3 | G95L31AA | 9G95L310 | 5116415 |
| | | B1CL00 | J5D260136-1 | G86HG1AA | 9G86HG10 | 5116415 |
| | | B1CKY6 | J5D260136-2 | G86HQ1AA | 9G86HQ10 | 5116415 |
| | X04-056 | B1B9J6 | J5D260313-1 | G87361AA | 9G873610 | 5124434 |
| | | B1B9J6 | J5D260313-1 | G87361AC | 9G873610 | 5124417 |
| | | B1B9J6 | J5D260313-1 | G87361AD | 9G873610 | 5124410 |
| | | B1B9J6 | J5D260313-1 | G87361AE | 9G873610 | 5124418 |
| | | B1B9J6 | J5D260313-1 | G87361AF | 9G873610 | 5124445 |
| | | B1B9J6 | J5D260313-1 | G87361AG | 9G873610 | 5124420 |
| | | B1B9J6 | J5D260313-1 | G87361AH | 9G873610 | 5124426 |
| | | B1B9J6 | J5D260313-1 | G87361AJ | 9G873610 | 5124422 |

Comments:

Report Nbr: 29125

| SDG Nbr | ORDER Nbr | CLIENT ID NUMBER | LOT Nbr | WORK ORDER | RPT DB ID | BATCH |
|---------|-----------|------------------|-------------|-------------|-----------|----------|
| W04622 | X04-056 | B1B9K0 | J5D260313-2 | G874K1AA | 9G874K10 | 5124434 |
| | | B1B9K0 | J5D260313-2 | G874K1AC | 9G874K10 | 5124417 |
| | | B1B9K0 | J5D260313-2 | G874K1AD | 9G874K10 | 5124410 |
| | | B1B9K0 | J5D260313-2 | G874K1AE | 9G874K10 | 5124418 |
| | | B1B9K0 | J5D260313-2 | G874K1AF | 9G874K10 | 5124445 |
| | | B1B9K0 | J5D260313-2 | G874K1AG | 9G874K10 | 5124420 |
| | | B1B9K0 | J5D260313-2 | G874K1AH | 9G874K10 | 5124426 |
| | X05-010 | B1B9K0 | J5D260313-2 | G874K1AJ | 9G874K10 | 5124422 |
| | | B1CL26 | J5D260342-1 | G88DD1AA | 9G88DD10 | 5117510 |
| | | B1CKV3 | J5D260342-2 | G88DK1AA | 9G88DK10 | 5117510 |
| | | B1CKV2 | J5D260342-3 | G88DL1AA | 9G88DL10 | 5124434 |
| | | B1CKV2 | J5D260342-3 | G88DL1AC | 9G88DL10 | 5124445 |
| | | B1CL30 | J5D270349-1 | G9CA81AA | 9G9CA810 | 5119260 |
| | | B1CXF1 | J5D270349-2 | G9CCL1AA | 9G9CCL10 | 5119260 |
| | | B1CL38 | J5D270349-3 | G9CCM1AA | 9G9CCM10 | 5119260 |
| | | B1CL34 | J5D270349-4 | G9CCP1AA | 9G9CCP10 | 5119260 |
| | | B1CKW6 | J5D270349-5 | G9CCT1AA | 9G9CCT10 | 5119260 |
| | | B1CKW5 | J5D270349-6 | G9CC21AA | 9G9CC210 | 5124434 |
| | | B1CKW5 | J5D270349-6 | G9CC21AC | 9G9CC210 | 5124445 |
| | | X05-002 | B1BVV2 | J5D280301-1 | G9ETM1AA | 9G9ETM10 |
| | B1BVV2 | | J5D280301-1 | G9ETM1AC | 9G9ETM10 | 5124410 |
| | B1BVV2 | | J5D280301-1 | G9ETM1AD | 9G9ETM10 | 5124426 |
| | B1BVT4 | | J5D280301-2 | G9ET71AA | 9G9ET710 | 5124417 |
| | B1BVT4 | | J5D280301-2 | G9ET71AC | 9G9ET710 | 5124410 |
| | B1BVT4 | | J5D280301-2 | G9ET71AD | 9G9ET710 | 5124426 |
| | B1BVT0 | | J5D280301-3 | G9EVF1AA | 9G9EVF10 | 5124434 |

Comments:

Report Nbr: 29125

| SDG Nbr | ORDER Nbr | CLIENT ID NUMBER | LOT Nbr | WORK ORDER | RPT DB ID | BATCH |
|----------------|------------------|-------------------------|--------------------|-------------------|------------------|----------------|
| W04622 | X05-002 | B1BVT0 | J5D280301-3 | G9EVF1AC | 9G9EVF10 | 5124426 |

Comments:



STL

STL Richland
2800 George Washington Way
Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590
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Certificate of Analysis

Pacific Northwest National Laboratories
Sigma V Building
Richland, WA 99352

June 13, 2005

Attention: Dot Stewart

| | | |
|-------------------|---|---------------------------|
| SAF Number | : | X04-056, X05-002, X05-010 |
| Date SDG Closed | : | April 28, 2005 |
| Number of Samples | : | Twenty (20) |
| Sample Type | : | Water |
| SDG Number | : | W04622 |
| Data Deliverable | : | 45-Day Summary |

CASE NARRATIVE

I. Introduction

Between April 21, 2005 and April 27, 2005, twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

| <u>PGW ID#</u> | <u>STLR ID#</u> | <u>MATRIX</u> | <u>DATE OF RECEIPT</u> |
|----------------|-----------------|---------------|------------------------|
| B1CKX0 | G8WN6 | WATER | 4/21/05 |
| B1CL19 | G85L0 | WATER | 4/25/05 |
| B1CL20 | G85L2 | WATER | 4/25/05 |
| B1CKY2 | G85L3 | WATER | 4/25/05 |
| B1CL00 | G86HG | WATER | 4/26/05 |
| B1CKY6 | G86HQ | WATER | 4/26/05 |
| B1B9J6 | G8736 | WATER | 4/26/05 |
| B1B9K0 | G874K | WATER | 4/26/05 |
| B1CL26 | G88DD | WATER | 4/26/05 |
| B1CKV3 | G88DK | WATER | 4/26/05 |
| B1CKV2 | G88DL | WATER | 4/26/05 |
| B1BVV2 | G9ETM | WATER | 4/27/05 |

| | | | |
|--------|-------|-------|---------|
| B1BVT4 | G9ET7 | WATER | 4/27/05 |
| B1BVT0 | G9EVF | WATER | 4/27/05 |
| B1CL30 | G9CA8 | WATER | 4/27/05 |
| B1CXF1 | G9CCL | WATER | 4/27/05 |
| B1CL38 | G9CCM | WATER | 4/27/05 |
| B1CL34 | G9CCP | WATER | 4/27/05 |
| B1CKW6 | G9CCT | WATER | 4/27/05 |
| B1CKW5 | G9CC2 | WATER | 4/27/05 |

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

Gamma Spectroscopy

Gamma (LL) by method RICH-RC-5017

Iodine-129 (LL) by method RICH-RC-5025

Liquid Scintillation Counting

Tritium by method RICH-RC-5007

Technetium-99 by method RICH-RC-5065

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

IV. Quality Control

The analytical results for each analysis performed under SDG W04622 includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, sample and sample duplicate (B1B9J6) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The LCS, batch blank, sample and sample duplicate (B1BVV2) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006:

The LCS, batch blank, sample and sample duplicate (B1B9K0) results are within contractual requirements.

Gamma Spectroscopy

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

The LCS, batch blank, sample and sample duplicate (B1B9J6) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025:

The LCS, batch blank, sample and sample duplicate (B1CKW5) results are within contractual requirements.

Liquid Scintillation Counting

Tritium by method RICH-RC-5007:

The LCS, batch blank, sample and sample duplicate (B1CK55) results are within contractual requirements.

Technetium-99 by method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1BVV2), and sample matrix spike (B1BVV2) results are within contractual requirements.

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1B9K0), and sample matrix spike (B1B9K0) results are within contractual requirements.

Chemical Analysis

The Hexavalent Chromium method contains a 24-hour holding time requirement. Therefore, samples received (within an SDG) on different dates are processed in individual analytical batches with appropriate QC. Results for each analytical batch are discussed below.

Hexavalent Chromium by EPA method 7196A:

Batch 5112430. Two SDGs were batched together due to an analyst error. The LCS, batch blank, sample, sample duplicate (B1CKW1), and sample matrix spike/matrix spike duplicate (B1CKW1) results are within contractual requirements.

Batch 5116415. The LCS, batch blank, sample, sample duplicate (B1CL20), and sample matrix spike/matrix spike duplicate (B1CL20) results are within contractual requirements.

Batch 5117510. The LCS, batch blank, sample, sample duplicate (B1CL26), and sample matrix spike/matrix spike duplicate (B1CL26) results are within contractual requirements.

Batch 5119260. The sample extract for B1CXF1 was cloudy and had to be diluted 1:1. The LCS, batch blank, sample, sample duplicate (B1CL30), and sample matrix spike/matrix spike duplicate (B1CL30) 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:


for Becky Warrington
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, $R = \text{constants} * f(x,y,z,\dots)$. 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%. $Lc = (1.645 * \sqrt{2 * (BkgrndCnt / BkgrndCntMin) / SCntMin}) * (ConvFct / (Eff * Yld * Abn * Vol) * IngrFct)$. 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. |

6/13/2005 4:27:58 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29125 File Name: h:\Reportdb\edd\Fead\I\Rad\W04622.Edd, h:\Reportdb\edd\Fead\I\Rad\29125.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: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|--------------------|------------------|-----------------|------------------|------------|------|-----------------|-----|
| 9G85L010 | B1CL19 | | MW6-SBB-A1 | X05-010 | W04622 | | | | | 04/25/2005 11:21 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124434 | H-3 | 10028-17-8 | 8.60E+04 | pCi/L | 1.3E+03 | 3.3E+03 | | 3.36E+02 | 100.0 | 906.0_H3_LSC | 1.00E-02 | L | 06/02/200 19:28 | I |
| 5124445 | I-129L | 15046-84-1 | 2.96E+00 | pCi/L | 5.2E-01 | 5.2E-01 | | 3.44E-01 | 93.0 | I129LL_SEP_LEPS | 4.0138E+00 | L | 06/08/200 13:35 | I |

| Lab Sample Id: | Client Id: | Test User | Contract Nbr | SAF Nbr | Sdg Nbr: | QC Type: | Moisture/Solids%*: | Distilled Volume | Sample On Date: | Collection Date: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|--------------------|------------------|-----------------|------------------|------------|------|-----------------|-----|
| 9G873610 | B1B9J6 | | MW6-SBB-A1 | X04-056 | W04622 | | | | | 04/26/2005 10:34 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124434 | H-3 | 10028-17-8 | 9.67E+01 | pCi/L | 1.4E+02 | 1.5E+02 | U | 3.39E+02 | 100.0 | 906.0_H3_LSC | 1.00E-02 | L | 06/02/200 20:10 | I |
| 5124417 | ALPHA | 12587-46-1 | 2.90E+00 | pCi/L | 1.7E+00 | 1.8E+00 | | 1.80E+00 | 100.0 | 9310_ALPHABETA | 1.97E-01 | L | 05/17/200 18:48 | I |
| 5124410 | BETA | 12587-47-2 | 8.29E+00 | pCi/L | 1.8E+00 | 2.2E+00 | | 2.79E+00 | 100.0 | 9310_ALPHABETA | 1.973E-01 | L | 05/17/200 19:24 | I |
| 5124418 | BE-7 | 13966-02-4 | -1.61E+01 | pCi/L | 2.3E+01 | 2.3E+01 | U | 3.93E+01 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | CO-60 | 10198-40-0 | -1.64E-01 | pCi/L | 2.5E+00 | 2.5E+00 | U | 4.74E+00 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | CS-134 | 13967-70-9 | -1.58E+00 | pCi/L | 2.5E+00 | 2.5E+00 | U | 4.09E+00 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | CS-137 | 10045-97-3 | 1.02E+00 | pCi/L | 2.0E+00 | 2.0E+00 | U | 4.12E+00 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | EU-152 | 14683-23-9 | 6.48E-01 | pCi/L | 4.8E+00 | 4.8E+00 | U | 9.00E+00 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | EU-154 | 15585-10-1 | -1.03E+00 | pCi/L | 6.4E+00 | 6.4E+00 | U | 1.22E+01 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | EU-155 | 14391-16-3 | 5.70E-01 | pCi/L | 4.4E+00 | 4.4E+00 | U | 8.25E+00 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | K-40 | 13966-00-2 | -4.10E+01 | pCi/L | 5.2E+01 | 5.2E+01 | U | 1.15E+02 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | RU-106 | 13967-48-1 | 1.55E+01 | pCi/L | 2.1E+01 | 2.1E+01 | U | 4.21E+01 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124418 | SB-125 | 14234-35-6 | -1.95E+00 | pCi/L | 5.4E+00 | 5.4E+00 | U | 9.30E+00 | | GAMMALL_GS | 2.0049E+00 | L | 06/02/200 13:35 | I |
| 5124445 | I-129L | 15046-84-1 | 6.53E-02 | pCi/L | 1.3E-01 | 1.3E-01 | U | 2.57E-01 | 92.7 | I129LL_SEP_LEPS | 3.8884E+00 | L | 06/08/200 13:36 | I |
| 5124420 | SR-90 | 10098-97-2 | 5.63E-01 | pCi/L | 2.8E-01 | 2.9E-01 | | 5.15E-01 | 80.7 | SRISO_SEP_PRE | 1.0006E+00 | L | 06/03/200 09:00 | I |
| 5124426 | TC-99 | 14133-76-7 | 5.31E-01 | pCi/L | 4.5E+00 | 6.4E+00 | U | 1.08E+01 | 100.0 | TC99_ETVDSK_LS | 1.25E-01 | L | 06/10/200 01:12 | I |
| 5124422 | Uranium | 7440-61-1 | 3.18E+00 | ug/L | 3.3E-01 | 3.3E-01 | | 7.73E-02 | | UTOT_KPA | 2.71E-02 | ML | 06/03/200 07:48 | 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: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|--------------------|------------------|-----------------|------------------|-----------|------|-----------------|-----|
| 9G874K10 | B1B9K0 | | MW6-SBB-A1 | X04-056 | W04622 | | | | | 04/26/2005 09:06 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124434 | H-3 | 10028-17-8 | -1.49E+02 | pCi/L | 1.2E+02 | 1.3E+02 | U | 3.39E+02 | 100.0 | 906.0_H3_LSC | 1.00E-02 | L | 06/02/200 20:53 | I |
| 5124417 | ALPHA | 12587-46-1 | 2.11E+00 | pCi/L | 1.6E+00 | 1.7E+00 | U | 2.43E+00 | 100.0 | 9310_ALPHABETA | 1.748E-01 | L | 05/17/200 18:48 | I |
| 5124410 | BETA | 12587-47-2 | 7.10E+00 | pCi/L | 1.7E+00 | 2.1E+00 | | 2.68E+00 | 100.0 | 9310_ALPHABETA | 2.003E-01 | L | 05/17/200 19:24 | I |

STL Richland

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.

rptFeadRadSummaryEdd v3.48

6/13/2005 4:27:58 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29125 File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

| | | | | | | | | | | | | | | | |
|---------|---------|------------|-----------|-------|---------|---------|---|----------|------------|-----------------|------------|-----------|-----------|-------|---|
| 5124418 | BE-7 | 13966-02-4 | -1.69E+00 | pCi/L | 1.6E+01 | 1.6E+01 | U | 2.95E+01 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | CO-60 | 10198-40-0 | 4.90E-01 | pCi/L | 1.3E+00 | 1.3E+00 | U | 2.92E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | CS-134 | 13967-70-9 | 1.87E-01 | pCi/L | 1.5E+00 | 1.5E+00 | U | 2.98E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | CS-137 | 10045-97-3 | 2.62E+00 | pCi/L | 2.7E+00 | 2.7E+00 | U | 2.24E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | EU-152 | 14683-23-9 | 2.93E-01 | pCi/L | 3.5E+00 | 3.5E+00 | U | 6.44E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | EU-154 | 15585-10-1 | -7.96E-01 | pCi/L | 4.2E+00 | 4.2E+00 | U | 8.07E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | EU-155 | 14391-16-3 | -8.65E-01 | pCi/L | 3.3E+00 | 3.3E+00 | U | 5.75E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | K-40 | 13966-00-2 | 9.19E+00 | pCi/L | 3.3E+01 | 3.3E+01 | U | 3.45E+01 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | RU-106 | 13967-48-1 | -4.42E+00 | pCi/L | 1.6E+01 | 1.6E+01 | U | 2.34E+01 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124418 | SB-125 | 14234-35-6 | -3.47E+00 | pCi/L | 3.7E+00 | 3.7E+00 | U | 5.84E+00 | GAMMALL_GS | 1.9993E+00 | L | 06/02/200 | 13:35 | I | |
| 5124445 | I-129L | 15046-84-1 | -4.94E-02 | pCi/L | 1.3E-01 | 1.3E-01 | U | 2.24E-01 | 92.7 | I129LL_SEP_LEPS | 3.9701E+00 | L | 06/08/200 | 15:28 | I |
| 5124420 | SR-90 | 10098-97-2 | 1.63E-01 | pCi/L | 2.3E-01 | 2.3E-01 | U | 4.68E-01 | 82.3 | SRISO_SEP_PRE | 1.00E+00 | L | 06/03/200 | 09:00 | I |
| 5124426 | TC-99 | 14133-76-7 | 4.83E-02 | pCi/L | 4.0E+00 | 5.8E+00 | U | 9.69E+00 | 100.0 | TC99_ETVDSK_LS | 1.373E-01 | L | 06/10/200 | 02:15 | I |
| 5124422 | Uranium | 7440-61-1 | 2.70E+00 | ug/L | 2.8E-01 | 2.8E-01 | | 8.32E-02 | | UTOT_KPA | 2.52E-02 | ML | 06/03/200 | 07:53 | 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: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|--------------------|------------------|-----------------|------------------|------------|------|-----------------|-----|
| 9G88DL10 | B1CKV2 | | MW6-SBB-A1 | X05-010 | W04622 | | | | | 04/26/2005 09:03 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124434 | H-3 | 10028-17-8 | 4.53E+04 | pCi/L | 9.6E+02 | 1.9E+03 | | 3.37E+02 | 100.0 | 906.0_H3_LSC | 1.00E-02 | L | 06/02/200 21:35 | I |
| 5124445 | I-129L | 15046-84-1 | 1.11E+00 | pCi/L | 3.3E-01 | 3.3E-01 | U | 5.56E-01 | 94.3 | I129LL_SEP_LEPS | 3.9586E+00 | L | 06/08/200 15:28 | 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: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|--------------------|------------------|-----------------|------------------|------------|------|-----------------|-----|
| 9G9CC210 | B1CKW5 | | MW6-SBB-A1 | X05-010 | W04622 | | | | | 04/27/2005 11:40 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124434 | H-3 | 10028-17-8 | 2.74E+04 | pCi/L | 7.5E+02 | 1.2E+03 | | 3.37E+02 | 100.0 | 906.0_H3_LSC | 1.00E-02 | L | 06/02/200 23:00 | I |
| 5124445 | I-129L | 15046-84-1 | 5.67E-01 | pCi/L | 3.2E-01 | 3.2E-01 | U | 5.00E-01 | 93.5 | I129LL_SEP_LEPS | 3.3351E+00 | L | 06/08/200 17:26 | 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: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|--------------------|------------------|-----------------|------------------|-----------|------|-----------------|-----|
| 9G9ET710 | B1BVT4 | | MW6-SBB-A1 | X05-002 | W04622 | | | | | 04/27/2005 10:55 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124417 | ALPHA | 12587-46-1 | 1.94E+00 | pCi/L | 1.5E+00 | 1.5E+00 | U | 2.33E+00 | 100.0 | 9310_ALPHABETA | 1.941E-01 | L | 05/17/200 18:49 | I |
| 5124410 | BETA | 12587-47-2 | 6.76E+00 | pCi/L | 1.7E+00 | 2.0E+00 | | 2.68E+00 | 100.0 | 9310_ALPHABETA | 2.066E-01 | L | 05/17/200 19:24 | I |
| 5124426 | TC-99 | 14133-76-7 | 5.72E+00 | pCi/L | 4.3E+00 | 6.3E+00 | U | 9.97E+00 | 100.0 | TC99_ETVDSK_LS | 1.327E-01 | L | 06/10/200 06:24 | I |

STL Richland

rptFeadRadSummaryEdd v3.48

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

6/13/2005 4:27:58 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 29125 File Name: h:\Reportdb\edd\Fead\IVRad\W04622.Edd, h:\Reportdb\edd\Fead\IVRad\29125.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: | | | | |
|----------------|------------|------------|--------------|---------|----------|----------|------------------------|---------------------|--------------------|---------------------|-----------|------|-----------------|-----|
| 9G9ETM10 | B1BVV2 | | MW6-SBB-A1 | X05-002 | W04622 | | | | | 04/27/2005 11:30 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124417 | ALPHA | 12587-46-1 | 9.17E-02 | pCi/L | 3.0E-01 | 3.0E-01 | U | 7.73E-01 | 100.0 | 9310_ALPHABETA | 1.968E-01 | L | 05/17/200 18:48 | I |
| 5124410 | BETA | 12587-47-2 | 3.53E-01 | pCi/L | 1.1E+00 | 1.1E+00 | U | 2.40E+00 | 100.0 | 9310_ALPHABETA | 1.975E-01 | L | 05/17/200 19:24 | I |
| 5124426 | TC-99 | 14133-76-7 | -3.11E+00 | pCi/L | 4.3E+00 | 6.2E+00 | U | 1.07E+01 | 100.0 | TC99_ETVDSK_LS | 1.25E-01 | L | 06/10/200 03:17 | I |
| Lab Sample Id: | Client Id: | Test User | Contract Nbr | SAF Nbr | Sdg Nbr: | QC Type: | Moisture/ Solids%*: | Distilled Volume | Sample On Date: | Collection Date: | | | | |
| 9G9EVF10 | B1BVT0 | | MW6-SBB-A1 | X05-002 | W04622 | | | | | 04/26/2005 12:35 | | | | |
| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
| 5124434 | H-3 | 10028-17-8 | 5.44E+02 | pCi/L | 1.7E+02 | 1.8E+02 | | 3.37E+02 | 100.0 | 906.0_H3_LSC | 1.00E-02 | L | 06/02/200 23:42 | I |
| 5124426 | TC-99 | 14133-76-7 | 2.26E+00 | pCi/L | 4.0E+00 | 5.9E+00 | U | 9.48E+00 | 100.0 | TC99_ETVDSK_LS | 1.382E-01 | L | 06/10/200 07:27 | I |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04622.Edd, h:\Reportdb\edd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9T101AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|-------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|--------------------|-----------------------|-------------|-------------|----------------|----------|
| | 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/ L | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124434 BLK | H-3 10028-17-8 | 1.15E+02 | pCi/L | 1.5E+02 1.4E+02 | U | 3.38E+02 | 100.0 | | 906.0_H3_LSC | 1.00E-02 | 06/03/2005 00:25 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04622.Edd, h:\Reportdb\edd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9T101DX

Sdg/Rept Nbr: W04622

29125

Collection Date: 04/26/2005 09:03

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|-------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|---------------|-----------------------|-------------|-------------|----------------|----------|
| | 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 |
| 5124434 BLK | H-3 10028-17-8 | 1.26E+02 | pCi/L | 1.5E+02 1.4E+02 | U | 3.41E+02 | 100.0 | | 906.0_H3_LSC | 1.00E-02 L | 06/03/2005 01:49 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9T191AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:40

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RType | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | 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 |
| 5124445 BLK | I-129L 15046-84-1 | -2.78E-02 | pCi/L | 1.3E-01 1.3E-01 | U | 2.31E-01 | 94.9 | | I129LL_SEP_L | 4.035E+00 L | 06/08/2005 19:22 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9TT21AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 10:34

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RType | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | 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 |
| 5124417 BLK | ALPHA 12587-46-1 | 2.93E-01 | pCi/L | 5.2E-01 5.1E-01 | U | 1.13E+00 | 100.0 | | 9310_ALPHAB | 1.992E-01 L | 05/17/2005 18:49 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04622.Edd, h:\Reportdb\edd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9TTE1AB

Sdg/Rept Nbr: W04622

29125

Collection Date: 04/27/2005 11:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|--------------------|---------------------|----------|----------------------|--------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BA | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qual | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124410 BLK | BETA 12587-47-2 | -9.44E-03 | pCi/L | 1.1E+00 1.1E+00 | U | 2.47E+00 | 100.0 | | 9310_ALPHAB | 2.016E-01 L | 05/17/2005 19:24 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04622.Edd, h:\Reportdb\edd\Fead\VRad\29125.Edd

Lab Sample Id: G9TVT1AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 10:34

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|-----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BC | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124418 BLK | BE-7 13966-02-4 | -1.00E+01 | pCi/L | 2.5E+01 2.5E+01 | U | 4.30E+01 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | CO-60 10198-40-0 | -1.59E+00 | pCi/L | 3.0E+00 3.0E+00 | U | 5.24E+00 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | CS-134 13967-70-9 | 4.77E-01 | pCi/L | 2.9E+00 2.9E+00 | U | 5.42E+00 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | CS-137 10045-97-3 | 1.96E+00 | pCi/L | 2.7E+00 2.7E+00 | U | 5.40E+00 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | EU-152 14683-23-9 | 1.83E+00 | pCi/L | 6.5E+00 6.5E+00 | U | 1.20E+01 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | EU-154 15585-10-1 | -5.24E-02 | pCi/L | 6.6E+00 6.6E+00 | U | 1.31E+01 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | EU-155 14391-16-3 | 2.38E+00 | pCi/L | 4.2E+00 4.2E+00 | U | 7.79E+00 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | K-40 13966-00-2 | -2.46E+01 | pCi/L | 6.0E+01 6.0E+01 | U | 1.34E+02 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | RU-106 13967-48-1 | -1.10E+01 | pCi/L | 2.2E+01 2.2E+01 | U | 3.78E+01 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |
| 5124418 BLK | SB-125 14234-35-6 | 2.94E+00 | pCi/L | 5.7E+00 5.7E+00 | U | 1.10E+01 | | | GAMMALL_GS | 2.0033E+00 L | 06/02/2005 13:36 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04622.Edd, h:\Reportdb\ledd\Fead\VRad\29125.Edd

Lab Sample Id: G9TWC1AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|-----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BE | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124420 BLK | SR-90 10098-97-2 | 3.31E-02 | pCi/L | 2.1E-01 2.1E-01 | U | 4.65E-01 | 89.7 | | SRISO_SEP_P | 1.0002E+00 L | 06/03/2005 10:43 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9TWT1AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BG | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124422 BLK | Uranium 7440-61-1 | 1.80E-02 | ug/L | 2.0E-03 2.0E-03 | U | 7.15E-02 | | | UTOT_KPA | 2.93E-02 ML | 06/03/2005 07:34 | | | | D |

Monday, June 13, 2005

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9TXH1AB

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:30

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BJ | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124426 BLK | TC-99 14133-76-7 | -8.93E-01 | pCi/L | 6.3E+00 4.3E+00 | U | 1.05E+01 | 100.0 | | TC99_ETVDSK | 1.259E-01 L | 06/10/2005 08:29 | | | | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04622.Edd, h:\Reportdb\edd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9T101CS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|-------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|---------------|-----------------------|-------------|-------------|----------------|----------|
| | 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 |
| 5124434 BS | H-3 10028-17-8 | 2.67E+03 | pCi/L | 2.9E+02 2.7E+02 | | 3.39E+02 | 100.0 | 2.73E+03 97.9 | 906.0_H3_LSC | 1.00E-02 L | 06/03/2005 01:07 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04622.Edd, h:\Reportdb\ledd\Fead\VRad\29125.Edd

Lab Sample Id: G9T101EM

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|-------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|--------------------|-----------------------|-------------|-------------|----------------|----------|
| | 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/ L | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124434 BS | H-3 10028-17-8 | 2.62E+03 | pCi/L | 2.9E+02 2.7E+02 | | 3.43E+02 | 100.0 | 2.73E+03 95.8 | 906.0_H3_LSC | 1.00E-02 | 06/03/2005 02:32 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9T191CS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:40

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/27/2005

| 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 |
| 5124445 BS | I-129L 15046-84-1 | 7.78E+00 | pCi/L | 1.0E+00 1.0E+00 | | 3.79E-01 | 92.6 | 9.59E+00 81.1 | I129LL_SEP_L | 4.0012E+00 L | 06/08/2005 19:23 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04622.Edd, h:\Reportdb\edd\Fead\Rad\29125.Edd

Lab Sample Id: G9TT21CS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 10:34

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | AZ | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124417 BS | ALPHA 12587-46-1 | 1.62E+01 | pCi/L | 4.1E+00 2.5E+00 | | 8.38E-01 | 100.0 | 2.30E+01 70.5 | 9310_ALPHAB | 2.034E-01 L | 05/17/2005 18:49 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04622.Edd, h:\Reportdb\edd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9TTE1CS

Sdg/Rept Nbr: W04622

29125

Collection Date: 04/27/2005 11:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|--------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BB | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124410 BS | BETA 12587-47-2 | 2.15E+01 | pCi/L | 4.0E+00 2.3E+00 | | 2.42E+00 | 100.0 | 2.25E+01 95.5 | 9310_ALPHAB | 2.014E-01 L | 05/17/2005 19:24 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIV\Rad\W04622.Edd, h:\Reportdb\ledd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9TVT1CS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 10:34

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RType | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|-----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BD | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124418 BS | CO-60 10198-40-0 | 4.35E+01 | pCi/L | 1.2E+01 1.2E+01 | | 4.97E+00 | | 3.77E+01 115.4 | GAMMALL_GS | 2.0031E+00 L | 06/02/2005 13:36 | | | 70 130 | D |
| 5124418 BS | CS-137 10045-97-3 | 3.08E+01 | pCi/L | 7.4E+00 7.4E+00 | | 5.12E+00 | | 2.50E+01 123.2 | GAMMALL_GS | 2.0031E+00 L | 06/02/2005 13:36 | | | 70 130 | D |
| 5124418 BS | EU-152 14683-23-9 | 8.72E+01 | pCi/L | 2.1E+01 2.1E+01 | U | 2.92E+01 | | 7.66E+01 113.8 | GAMMALL_GS | 2.0031E+00 L | 06/02/2005 13:36 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04622.Edd, h:\Reportdb\edd\Fead\VRad\29125.Edd

Lab Sample Id: G9TWC1CS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|---------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BF | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124420 BS | SR-90 10098-97-2 | 1.34E+01 | pCi/L | 2.1E+00 7.1E-01 | | 4.81E-01 | 82.0 | 1.37E+01 98.0 | SRISO_SEP_P | 1.00E+00 L | 06/03/2005 10:43 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04622.Edd, h:\Reportdb\edd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9TWT1CS

Sdg/Rept Nbr: W04622

29125

Collection Date: 04/26/2005 09:06

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BH | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124422 BS | Uranium 7440-61-1 | 3.47E+01 | ug/L | 4.1E+00 4.1E+00 | | 8.15E-02 | | 3.49E+01 99.4 | UTOT_KPA | 2.57E-02 ML | 06/03/2005 07:38 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04622.Edd, h:\Reportdb\edd\Fead\Rad\29125.Edd

Lab Sample Id: G9TWT1DS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BI | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124422 BS | Uranium 7440-61-1 | 3.32E+01 | ug/L | 3.9E+00 3.9E+00 | | 7.85E-02 | | 3.41E+01 97.3 | UTOT_KPA | 2.67E-02 ML | 06/03/2005 07:43 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9TXH1CS

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:30

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| | MW6-SBB-A19981 | | | | | | | | BK | H | | | | | |
| Batch # / Qc Type | Analyt/ CAS# | Result/ Orig Rst | Unit | Tot/Cnt Uncert 2S | Qu- al | MDC | Tracer Yield | Spk Conc/ %Rec | Analy Method | Aliq Size/ | Date/Time Analyzed | RPD/ UCL | RER/ UCL | LCS LCL/UCL | R Typ |
| 5124426 BS | TC-99 14133-76-7 | 4.76E+02 | pCi/L | 3.5E+01 1.3E+01 | | 1.04E+01 | 100.0 | 5.43E+02 87.8 | TC99_ETVDSK | 1.259E-01 L | 06/10/2005 09:31 | | | 70 130 | D |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04622.Edd, h:\Reportdb\ledd\Fead\VRad\29125.Edd

Lab Sample Id: G87361KR

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 10:34

Client Id: B1B9J6

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RType | | | | | |
|----------------------|-----------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|---------------|-----------------------|-------------|-------------|----------------|----------|
| X04-056 | MW6-SBB-A19981 | | | | | | | | AI | 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 |
| 5124417 | ALPHA | 2.72E+00 | pCi/L | 1.8E+00 | | 2.11E+00 | 100.0 | | 9310_ALPHAB | 2.023E-01 | 05/17/2005 | 6.2 | 0.1 | | D |
| DUP | 12587-46-1 | 2.90E+00 | | 1.7E+00 | | | | | | L | 18:48 | 20.0 | 3 | | |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04622.Edd, h:\Reportdb\edd\FeadIV\Rad\29125.Edd

Lab Sample Id: G87361LR

Sdg/Rept Nbr: W04622

29125

Collection Date: 04/26/2005 10:34

Client Id: B1B9J6

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|-----------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|---------------|-----------------------|-------------|-------------|----------------|----------|
| X04-056 | MW6-SBB-A19981 | | | | | | | | AJ | 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 |
| 5124418 | BE-7 | -5.92E+00 | pCi/L | 2.5E+01 | U | 4.41E+01 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 0.0 | 0.6 | | D |
| DUP | 13966-02-4 | -1.61E+01 | | 2.5E+01 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | CO-60 | 5.66E-01 | pCi/L | 2.2E+00 | U | 4.72E+00 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 363.2 | 0.5 | | D |
| DUP | 10198-40-0 | -1.64E-01 | | 2.2E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | CS-134 | 1.50E+00 | pCi/L | 2.1E+00 | U | 4.54E+00 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 0.0 | 2.1 | | D |
| DUP | 13967-70-9 | -1.58E+00 | | 2.1E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | CS-137 | 3.69E-01 | pCi/L | 2.0E+00 | U | 3.88E+00 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 93.7 | 0.5 | | D |
| DUP | 10045-97-3 | 1.02E+00 | | 2.0E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | EU-152 | 1.10E+00 | pCi/L | 5.7E+00 | U | 1.04E+01 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 51.5 | 0.1 | | D |
| DUP | 14683-23-9 | 6.48E-01 | | 5.7E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | EU-154 | -1.61E+00 | pCi/L | 7.2E+00 | U | 1.33E+01 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 0.0 | 0.1 | | D |
| DUP | 15585-10-1 | -1.03E+00 | | 7.2E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | EU-155 | 3.43E+00 | pCi/L | 4.8E+00 | U | 9.14E+00 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 142.9 | 0.8 | | D |
| DUP | 14391-16-3 | 5.70E-01 | | 4.8E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | K-40 | 6.73E+01 | pCi/L | 5.9E+01 | | 3.43E+01 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 824.6 | 2.6 | | D |
| DUP | 13966-00-2 | -4.10E+01 | | 5.9E+01 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | RU-106 | -4.99E+00 | pCi/L | 1.9E+01 | U | 3.40E+01 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 390.5 | 1.5 | | D |
| DUP | 13967-48-1 | 1.55E+01 | | 1.9E+01 | | | | | | L | 15:28 | 20.0 | 3 | | |
| 5124418 | SB-125 | 1.36E+00 | pCi/L | 5.5E+00 | U | 1.04E+01 | | | GAMMALL_GS | 2.0049E+00 | 06/02/2005 | 0.0 | 0.9 | | D |
| DUP | 14234-35-6 | -1.95E+00 | | 5.5E+00 | | | | | | L | 15:28 | 20.0 | 3 | | |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04622.Edd, h:\Reportdb\ledd\Fead\VRad\29125.Edd

Lab Sample Id: G874K1KR

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: B1B9K0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|----------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|-----------------|-----------------------|--------------|-------------|----------------|----------|
| X04-056 | MW6-SBB-A19981 | | | | | | | | AK | 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 |
| 5124420 DUP | SR-90 10098-97-2 | 1.09E-01 1.63E-01 | pCi/L | 2.2E-01 2.1E-01 | U | 4.65E-01 | 84.4 | | SRISO_SEP_P | 1.0003E+00 L | 06/03/2005 09:00 | 40.1 20.0 | 0.4 3 | | D |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04622.Edd, h:\Reportdb\ledd\Fead\VRad\29125.Edd

Lab Sample Id: G874K1MR

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: B1B9K0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RType | | | | | |
|----------------------|----------------------|----------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| X04-056 | 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 |
| 5124422 DUP | Uranium 7440-61-1 | 2.62E+00 2.70E+00 | ug/L | 2.7E-01 2.7E-01 | | 7.68E-02 | | | UTOT_KPA | 2.73E-02 ML | 06/03/2005 08:10 | 2.9 20.0 | 0.4 3 | | D |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04622.Edd, h:\Reportdb\edd\Fead\Rad\29125.Edd

Lab Sample Id: G88DL1DR

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:03

Client Id: B1CKV2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|-----------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|---------------|-----------------------|-------------|-------------|----------------|----------|
| X05-010 | 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 |
| 5124434 | H-3 | 4.62E+04 | pCi/L | 1.9E+03 | | 3.38E+02 | 100.0 | | 906.0_H3_LSC | 1.00E-02 | 06/02/2005 | 2.2 | 0.7 | | D |
| DUP | 10028-17-8 | 4.53E+04 | | 9.7E+02 | | | | | | L | 22:17 | 20.0 | 3 | | |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\IVRad\W04622.Edd, h:\Reportdb\ledd\Fead\IVRad\29125.Edd

Lab Sample Id: G9CC21DR

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:40

Client Id: B1CKW5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|----------------------|----------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|-----------------|-----------------------|--------------|-------------|----------------|----------|
| X05-010 | 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 |
| 5124445 DUP | I-129L 15046-84-1 | 3.45E-01 5.67E-01 | pCi/L | 2.1E-01 2.1E-01 | U | 4.31E-01 | 92.2 | | I129LL_SEP_L | 3.5545E+00 L | 06/08/2005 17:27 | 48.5 20.0 | 1.5 3 | | D |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIV\Rad\W04622.Edd, h:\Reportdb\ledd\FeadIV\Rad\29125.Edd

Lab Sample Id: G9ETM1ER

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:30

Client Id: B1BVV2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|--------------------|----------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|--------------|-------------|----------------|----------|
| X05-002 | 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 |
| 5124410 DUP | BETA 12587-47-2 | 6.47E-01 3.53E-01 | pCi/L | 1.2E+00 1.2E+00 | U | 2.53E+00 | 100.0 | | 9310_ALPHAB | 1.966E-01 L | 05/17/2005 19:24 | 58.9 20.0 | 0.4 3 | | D |

Monday, June 13, 2005

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04622.Edd, h:\Reportdb\edd\Fead\VRad\29125.Edd

Lab Sample Id: G9ETM1GR

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:30

Client Id: B1BVV2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|------------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| X05-002 | 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 |
| 5124426 DUP | TC-99 14133-76-7 | -1.96E+00 -3.11E+00 | pCi/L | 6.2E+00 4.3E+00 | U | 1.05E+01 | 100.0 | | TC99_ETVDSK | 1.259E-01 L | 06/10/2005 05:22 | 0.0 20.0 | 0.3 3 | | D |

Monday, June 13, 2005

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04622.Edd, h:\Reportdb\edd\Fead\Rad\29125.Edd

Lab Sample Id: G874K1LW

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/26/2005 09:06

Client Id: B1B9K0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: MS

Received Date: 04/26/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|----------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| X04-056 | 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 |
| 5124422 MS | Uranium 7440-61-1 | 3.11E+01 | ug/L | 4.0E+00 4.0E+00 | | 7.59E-02 | | 3.27E+01 95.1 | UTOT_KPA | 2.76E-02 ML | 06/03/2005 07:58 | | | 60 140 | D |

Monday, June 13, 2005

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04622.Edd, h:\Reportdb\ledd\Fead\I\Rad\29125.Edd

Lab Sample Id: G9ETM1FW

Sdg/Rept Nbr: W04622 29125

Collection Date: 04/27/2005 11:30

Client Id: B1BVV2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: MS

Received Date: 04/27/2005

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp | | | | | |
|----------------------|---------------------|---------------------|----------|----------------------|-----------|----------|------------------|-------------------|-----------------|----------------|-----------------------|-------------|-------------|----------------|----------|
| X05-002 | 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 |
| 5124426 MS | TC-99 14133-76-7 | 2.79E+03 | pCi/L | 1.8E+02 2.9E+01 | | 1.03E+01 | 100.0 | 3.49E+03 80.0 | TC99_ETVDSK | 1.304E-01 L | 06/10/2005 04:20 | | | 60 140 | D |

Lot No., Due Date: J5D260313,J5D280301; 06/10/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124417; RALPHA-A Alpha by GPC-Am
 SDG, Matrix: W04622; WATER

1.0 COC

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

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

First Level Review Pam Anderson

Date 5-19-05



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124417

| 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: *Jessie Woodlee* Date: 5/22/05

Lot No., Due Date: J5D260313,J5D280301; 06/10/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124410; RBETA-SR Beta by GPC-Sr/Y
 SDG, Matrix: W04622; WATER

1.0 COC

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

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

First Level Review Pam Anderson

Date 5-19-05



STL

Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number: 5724410

| 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: Julie Waddell Date: 5/22/05

Lot No., Due Date: J5D260313; 06/10/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124420; RSR85907 Sr-85/90 by GPC-7
 SDG, Matrix: W04622; 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 John Norton

Date 6-6-5



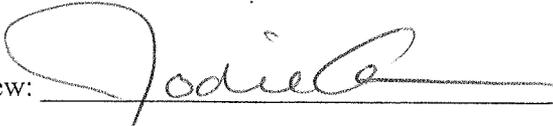
STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124420

| 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: 6/13/05

Lot No., Due Date: J5D260313; 06/10/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124418; RGAMMA Gamma by GER
 SDG, Matrix: W04622; 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

Alan E. Whitland

Date

6/6/05



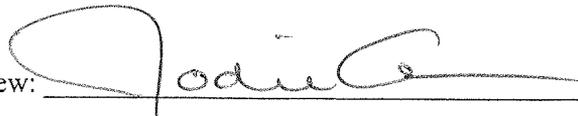
STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124418

| 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: 6/13/05

Lot No., Due Date: J5D250207,J5D260313,J5D260342,J5D270349; 06/13/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124445; RGAMLEPS Gamma by LEPS
 SDG, Matrix: W04622; 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 *Ann E. Whitcomb*

Date 6/13/05



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124445

| Review Item | Yes (✓) | No (✓) | N/A (✓) |
|-------------------------------------------------------------------------------------------------------------|---------|--------|---------|
| A. Sample Analysis | | | |
| 1. Are the sample yields within acceptance criteria? | | | ✓ |
| 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? | ✓ | | |
| 3. Are the correct isotopes reported? | ✓ | | |
| B. QC Samples | | | |
| 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? | ✓ | | |
| 2. Does the blank result meet the Contract criteria? | ✓ | | |
| 3. Is the blank result < the Contract Detection Limit? | ✓ | | |
| 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? | | | ✓ |
| 5. Is the LCS recovery with contract acceptance criteria? | ✓ | | |
| 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? | ✓ | | |
| 8. Do the MS/MSD results and yields meet acceptance criteria? | | | ✓ |
| 9. Do the duplicate sample results and yields meet acceptance criteria? | ✓ | | |
| C. Other | | | |
| 1. Are all Nonconformances included and noted? | | | ✓ |
| 2. Are all required forms filled out? | ✓ | | |
| 3. Was the correct methodology used? | ✓ | | |
| 4. Was transcription checked? | ✓ | | |
| 5. Were all calculations checked at a minimum frequency? | ✓ | | |
| 6. Were units checked? | ✓ | | |

Comments on any "No" response: _____

Second Level Review: Jodie C

Date: 6/13/05

Lot No., Due Date: J5D250207,J5D260313,J5D260342,J5D270349,J5D280301; 06/13/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124434; RTRITIUM H-3 by LSC
 SDG, Matrix: W04622; 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

Thomas E. Mulvaney

Date

6/8/05



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124434

| Review Item | Yes (✓) | No (✓) | N/A (✓) |
|-------------------------------------------------------------------------------------------------------------|---------|--------|---------|
| A. Sample Analysis | | | |
| 1. Are the sample yields within acceptance criteria? | | | ✓ |
| 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? | ✓ | | |
| 3. Are the correct isotopes reported? | ✓ | | |
| B. QC Samples | | | |
| 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? | ✓ | | |
| 2. Does the blank result meet the Contract criteria? | ✓ | | |
| 3. Is the blank result < the Contract Detection Limit? | ✓ | | |
| 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? | | | ✓ |
| 5. Is the LCS recovery with contract acceptance criteria? | ✓ | | |
| 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? | ✓ | | |
| 8. Do the MS/MSD results and yields meet acceptance criteria? | | | ✓ |
| 9. Do the duplicate sample results and yields meet acceptance criteria? | ✓ | | |
| C. Other | | | |
| 1. Are all Nonconformances included and noted? | | | ✓ |
| 2. Are all required forms filled out? | ✓ | | |
| 3. Was the correct methodology used? | ✓ | | |
| 4. Was transcription checked? | ✓ | | |
| 5. Were all calculations checked at a minimum frequency? | ✓ | | |
| 6. Were units checked? | ✓ | | |

Comments on any "No" response: _____

Second Level Review: Jodie C Date: 6/13/05

Lot No., Due Date: J5D260313, J5D280301; 06/10/2005
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 5124426; RTC99 Tc-99 by LSC
 SDG, Matrix: W04622; WATER

1.0 COC

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

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

First Level Review Pam Anderson

Date 6-13-05



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124426

| Review Item | Yes (✓) | No (✓) | N/A (✓) |
|-------------------------------------------------------------------------------------------------------------|---------|--------|---------|
| A. Sample Analysis | | | |
| 1. Are the sample yields within acceptance criteria? | | | ✓ |
| 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? | ✓ | | |
| 3. Are the correct isotopes reported? | ✓ | | |
| B. QC Samples | | | |
| 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? | ✓ | | |
| 2. Does the blank result meet the Contract criteria? | ✓ | | |
| 3. Is the blank result < the Contract Detection Limit? | ✓ | | |
| 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? | | | ✓ |
| 5. Is the LCS recovery with contract acceptance criteria? | ✓ | | |
| 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? | ✓ | | |
| 8. Do the MS/MSD results and yields meet acceptance criteria? | ✓ | | |
| 9. Do the duplicate sample results and yields meet acceptance criteria? | ✓ | | |
| C. Other | | | |
| 1. Are all Nonconformances included and noted? | | | ✓ |
| 2. Are all required forms filled out? | ✓ | | |
| 3. Was the correct methodology used? | ✓ | | |
| 4. Was transcription checked? | ✓ | | |
| 5. Were all calculations checked at a minimum frequency? | ✓ | | |
| 6. Were units checked? | ✓ | | |

Comments on any "No" response: _____

Second Level Review: Jodie Co Date: 6/13/05

Lot No., Due Date: J5D260313; 06/10/2005
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 5124422; RUNAT
SDG, Matrix: W04622; 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 John Norton

Date 6-8-5



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5124422

| 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: *Jodica* Date: 6/13/05



STL

Richland Laboratory
Data Review Check List
METALS

| Work Order Number(s): G8WM9, G8WN6 | | | | |
|----------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|----------------------------------|
| Lab Sample Numbers or SDG: W04614, W04622 | | | | |
| Method/Test/Parameter: Cr+6 in Water / RICH-WC-5003 | | | | |
| Review Item | Yes (✓) | No (✓) | N/A (✓) | 2 nd Level Review (✓) |
| A. Initial Calibration | | | | |
| 1. Performed at required frequency with required number of levels? | ✓ | | | ✓ |
| 2. Correlation coefficient within QC limits? | ✓ | | | ✓ |
| 3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits? | ✓ | | | ✓ |
| 4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit? | ✓ | | | ✓ |
| B. Continuing Calibration | | | | |
| 1. CCV analyzed at required frequency and all parameters within QC limits? | ✓ | | | ✓ |
| 2. CCB analyzed at required frequency and all results ≤ reporting limit? | ✓ | | | ✓ |
| C. Sample Analysis | | | | |
| 1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed? | | | ✓ | ✓ |
| 2. Were all sample holding times met? | ✓ | | | ✓ |
| D. QC Samples | | | | |
| 1. All results for the preparation blank below limits? | ✓ | | | ✓ |
| 2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable? | ✓ | | | ✓ |
| 3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable? | ✓ | | | ✓ |
| 4. Analytical spikes within QC limits where applicable? | | | ✓ | ✓ |
| 5. ICP only: One serial dilution performed per SDG? | | | ✓ | ✓ |
| 6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency? | | | ✓ | ✓ |
| 7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits? | | | ✓ | ✓ |

Clouseau Nonconformance Memo

| | |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCM #: 10-05585 NCM Initiated By: Debbie Manis Date Opened: 04/22/2005 Date Closed: | Classification: Anomaly Status: GLREVIEW Production Area: Classical Chemistry Tests: None Lot #'s (Sample #'s): , QC Batches: None. |
| Nonconformance: Other (describe in detail) Subcategory: Other (explanation required) | |

Problem Description / Root Cause

| <u>Name</u> | <u>Date</u> | <u>Description</u> |
|--------------|-------------|----------------------------------------------------------------------------|
| Debbie Manis | 04/22/2005 | Two samples with seperate SDG's batched together. Due to technician error. |

Corrective Action

| <u>Name</u> | <u>Date</u> | <u>Corrective Action</u> |
|--------------|-------------|--------------------------|
| Debbie Manis | 04/22/2005 | |

Client Notification Summary

| <u>Client</u> | <u>Project Manager</u> | <u>Notified</u> | <u>Response</u> | <u>How Notified</u> | <u>Note</u> |
|---------------|------------------------|-----------------|-----------------|---------------------|----------------------|
| | | | <u>Response</u> | | <u>Response Note</u> |

Quality Assurance Verification

| <u>Verified By</u> | <u>Due Date</u> | <u>Status</u> | <u>Notes</u> |
|--------------------|-----------------|---------------------------------------|--------------|
| | | This section not yet completed by QA. | |

Approval History

| <u>Date Approved</u> | <u>Approved By</u> | <u>Position</u> |
|----------------------|--------------------|-----------------|
| | | |



STL

Richland Laboratory
Data Review Check List
METALS

*Entered
JH 5/23/05*

| Work Order Number(s): G85L2, G85L3, G86HG, G86HQ | | | | |
|----------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|----------------------------------|
| Lab Sample Numbers or SDG: W04622 | | | | |
| Method/Test/Parameter: Cr+6 in WATER / RICH-WC-5003 | | | | |
| Review Item | Yes (✓) | No (✓) | N/A (✓) | 2 nd Level Review (✓) |
| A. Initial Calibration | | | | |
| 1. Performed at required frequency with required number of levels? | ✓ | | | ✓ |
| 2. Correlation coefficient within QC limits? | ✓ | | | ✓ |
| 3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits? | ✓ | | | ✓ |
| 4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit? | ✓ | | | ✓ |
| B. Continuing Calibration | | | | |
| 1. CCV analyzed at required frequency and all parameters within QC limits? | ✓ | | | ✓ |
| 2. CCB analyzed at required frequency and all results ≤ reporting limit? | ✓ | | | ✓ |
| C. Sample Analysis | | | | |
| 1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed? | | | ✓ | ✓ |
| 2. Were all sample holding times met? | ✓ | | | ✓ |
| D. QC Samples | | | | |
| 1. All results for the preparation blank below limits? | ✓ | | | ✓ |
| 2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable? | ✓ | | | ✓ |
| 3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable? | ✓ | | | ✓ |
| 4. Analytical spikes within QC limits where applicable? | | | ✓ | ✓ |
| 5. ICP only: One serial dilution performed per SDG? | | | ✓ | ✓ |
| 6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency? | | | ✓ | ✓ |
| 7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits? | | | ✓ | ✓ |



STL

Richland Laboratory Data Review Check List METALS

| Work Order Number(s): <u>WO 4622</u> | | | | |
|----------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|----------------------------------|
| Lab Sample Numbers or SDG: <u>G8800-1-AA ; G880K-1-AA</u> | | | | |
| Method/Test/Parameter: <u>PICW-WC-5003 / CR+G / WATER</u> | | | | |
| Review Item | Yes (✓) | No (✓) | N/A (✓) | 2 nd Level Review (✓) |
| A. Initial Calibration | | | | |
| 1. Performed at required frequency with required number of levels? | ✓ | | | ✓ |
| 2. Correlation coefficient within QC limits? | ✓ | | | ✓ |
| 3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits? | ✓ | | | ✓ |
| 4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit? | ✓ | | | ✓ |
| B. Continuing Calibration | | | | |
| 1. CCV analyzed at required frequency and all parameters within QC limits? | ✓ | | | ✓ |
| 2. CCB analyzed at required frequency and all results ≤ reporting limit? | ✓ | | | ✓ |
| C. Sample Analysis | | | | |
| 1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed? | | | ✓ | ✓ |
| 2. Were all sample holding times met? | ✓ | | | ✓ |
| D. QC Samples | | | | |
| 1. All results for the preparation blank below limits? | ✓ | | | ✓ |
| 2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable? | ✓ | | | ✓ |
| 3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable? | ✓ | | | ✓ |
| 4. Analytical spikes within QC limits where applicable? | | | ✓ | ✓ |
| 5. ICP only: One serial dilution performed per SDG? | | | ✓ | ✓ |
| 6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency? | | | ✓ | ✓ |
| 7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits? | | | ✓ | ✓ |



STL

Richland Laboratory Data Review Check List METALS

*Entered
JH/1/10/05*

| Work Order Number(s): <u>W04622</u> <u>BATCH# - 5119260</u> | | | | |
|----------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|----------------------------------|
| Lab Sample Numbers or SDG: <u>G9CAB, G9CCL, G9CCM, G9CCP, G9CCT, G9GOV</u> | | | | |
| Method/Test/Parameter: <u>RICH ^{N/C} INC 5003 REV. 7</u> | | | | |
| Review Item | Yes (✓) | No (✓) | N/A (✓) | 2 nd Level Review (✓) |
| A. Initial Calibration | | | | |
| 1. Performed at required frequency with required number of levels? | ✓ | | | — |
| 2. Correlation coefficient within QC limits? | ✓ | | | — |
| 3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits? | ✓ | | | — |
| 4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit? | ✓ | | | — |
| B. Continuing Calibration | | | | |
| 1. CCV analyzed at required frequency and all parameters within QC limits? | ✓ | | | — |
| 2. CCB analyzed at required frequency and all results ≤ reporting limit? | ✓ | | | — |
| C. Sample Analysis | | | | |
| 1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed? | | ✓ | | — |
| 2. Were all sample holding times met? | ✓ | | | — |
| D. QC Samples | | | | |
| 1. All results for the preparation blank below limits? | ✓ | | | — |
| 2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable? | ✓ | | | — |
| 3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable? | ✓ | | | — |
| 4. Analytical spikes within QC limits where applicable? | ✓ | | | — |
| 5. ICP only: One serial dilution performed per SDG? | | | ✓ | — |
| 6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency? | | | ✓ | — |
| 7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits? | | | ✓ | — |

| | | |
|---------------------------|-------------------------------------------------|-------------------------------|
| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C.# X05-010-108 |
| Page <u>1</u> of <u>1</u> | | |

| | | |
|-------------------------------------------------------------------|----------------------|----------------------------------------|
| Collector <u>D. Parcher</u> | Contact/Requester | Telephone No. MSIN FAX |
| SAF No. <u>X05-010</u> | Sampling Origin | Purchase Order/Charge Code |
| Project Title <u>INTERVAL SAMPLING, NOVEMBER/DECEMBER 2004</u> | <u>DTS-SAWS-H 93</u> | Ice Chest No. Temp. <u>SAWS-103</u> |
| Shipped To (Lab) <u>Severn Trent Incorporated, Richland</u> | Method of Shipment | Bill of Lading/Air Bill No. |
| Protocol <u>RCRA</u> | Priority: 45 Days | Offsite Property No. |

| | |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE SAMPLE HAZARDS/REMARKS ** ** | SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| <u>Q57671</u> <u>SDU W04622</u> <u>JSD210397</u> <u>Due 060605</u> | |

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|----------------|-------------|-------------------|----------------------------------------------------|--------------|
| B1CKX0 (F) | | W | <u>4-21-05</u> | <u>1311</u> | 1x500-mL P | 7196_CR6: Hexavalent Chromium (1) <u>GT8WN6</u> | Cool 4C |
| B1CKX1 | | W | <u>2</u> | <u>11</u> | 1x20-mL P | Activity Scan | None |
| | | | | | | | |
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|--------------------------------------|-------|----------------------------|----------------------------------|----------------------------------|-------|----------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relinquished By <u>D. Parcher</u> | Print | Sign <u>[Signature]</u> | Date/Time <u>1500 4-21-05</u> | Received By <u>Jeff Jones</u> | Print | Sign <u>[Signature]</u> | Date/Time <u>042105 1500</u> | Matrix * S = Soil DS = Drum Solid SF = Sediment DL = 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 |
|---------------------------------|--------------------------------------------------------------------------------|-------------|-----------|



STL

Sample Check-in List

Date/Time Received: 04 21 05 15:00

Client: P61W SDG #: W09622 NA SAF #: X05 010 NA

Work Order Number: JSD210347 Chain of Custody # X0501095, 108

Shipping Container ID: SAWS 103 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: 4
7. Sample holding times exceeded? NA Yes No
8. Samples have:
 _____ tape _____ hazard labels
 custody seals appropriate samples labels
9. Samples are:
 in good condition _____ leaking
 _____ broken _____ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA pH<2 pH>2 pH>9
11. Sample Location, Sample Collector Listed? * Yes No
 *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 04 21 05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
| | | | |
| | | | |
| | | | |

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager _____ Date _____



STL

Sample Check-in List

Date/Time Received: 09 25 05 1540

Client: POLW SDG #: W04622 NA SAF #: X05-010 NA

Work Order Number: JS0250207 Chain of Custody # X05-010-148, 174, 175

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: 8
7. Sample holding times exceeded? NA Yes No
8. Samples have:

| | |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> tape <input checked="" type="checkbox"/> custody seals | <input type="checkbox"/> hazard labels <input checked="" type="checkbox"/> appropriate samples labels |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
9. Samples are:

| | |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> in good condition <input type="checkbox"/> broken | <input type="checkbox"/> leaking <input type="checkbox"/> have air bubbles (Only for samples requiring head space) |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
10. Sample pH taken? NA pH<2 pH>2 pH>9
11. Sample Location, Sample Collector Listed? * Yes No
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 09 25 05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
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Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager _____ Date _____

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|-------------|-------------------------------------------------|--------------------------------|
| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-010-155 |
| | | Page <u>1</u> of <u>1</u> |

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|------------------------------------------------------------|----------------------------------------|------------------------------------|
| Collector <i>K.J. Young</i> | Contact/Requester | Telephone No. MSIN FAX |
| SAF No. X05-010 | Sampling Origin | Purchase Order/Charge Code |
| Project Title INTERVAL SAMPLING, NOVEMBER/DECEMBER 2004 | <i>DTS-SAWS-H93</i> | Ice Chest No. <i>BWS-160</i> Temp. |
| Shipped To (Lab) Severn Trent Incorporated, Richland | Method of Shipment <i>Gov Truck</i> | Bill of Lading/Air Bill No. |
| Protocol RCRA | Priority: 45 Days | Offsite Property No. |

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| POSSIBLE SAMPLE HAZARDS/REMARKS ** ** <i>57671</i> <i>SDU W 04622</i> <i>J50260136 Due 061005</i> | SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------------|-------------|-------------------|--------------------------------------------------|--------------|
| B1CL00 (F) | | W | <i>4/25/5</i> | <i>1534</i> | 1x500-mL P | 7196_CR6: Hexavalent Chromium (1) <i>G786H67</i> | Cool 4C |
| B1CL01 | | W | ↓ | ↓ | 1x20-mL P | Activity Scan | None |
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| Relinquished By <i>K.J. Young</i> <i>Jan Young</i> | Print | Sign | Date/Time <i>4/26/5 0840</i> | Received By <i>Jeff Juson</i> <i>[Signature]</i> | Print | Sign | Date/Time <i>4/26/5 0840</i> | Matrix * S = Soil DS = Drum Solid SF = 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 | Relinquished By | Date/Time | Received By | Date/Time | |
| Relinquished By | Date/Time | Received By | Date/Time | Relinquished By | Date/Time | Received By | Date/Time | |

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



STL

Sample Check-in List

Date/Time Received: 04 26 05 0840

Client: P67W SDG #: w09622 NA [] SAF #: X05-010 NA []

Work Order Number: J50260136 Chain of Custody # X05-010-151, 155

Shipping Container ID: 09WS 160 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: 5°C NA [] 5. Vermiculite/packing materials is NA Wet [] Dry []
6. Number of samples in shipping container: 4
7. Sample holding times exceeded? NA [] Yes [] No
8. Samples have:
 - tape
 - custody seals
 - hazard labels
 - appropriate samples labels
9. Samples are:
 - in good condition
 - broken
 - leaking
 - have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA [] pH<2 [] pH>2 pH>9 []
11. Sample Location, Sample Collector Listed? * Yes No []
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 04 26 05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
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Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** C.O.C. # **X04-056-25**
 Page 1 of 1

Collector **R.T. SICKLE** Contact/Requester **Dot Stewart** Telephone No. **509-376-5056** MSIN FAX
 SAF No. **X04-056** Sampling Origin **DTS - SAMS H 89** Purchase Order/Charge Code
 Project Title **Special 2-PO1-C Sent 04 Sampling** Ice Chest No. **SML 584** Temp.
 Shipped To (Lab) **Severn Trent Incorporated, Richland** Method of Shipment **Govt Truck** Bill of Lading/Air Bill No.
 Protocol **SURV** Priority: **45 Days** Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS **SDG W04622 Q57671** SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
**** ****
J50260313
Over 061005

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|-----------------------------------------|---------------|
| B1B9J6 (F) | | W | 4-26-05 | 1034 | 1x1000-mL P | 906.0_H3_LSC: Tritium (1) 678736 | None |
| B1B9J6 (F) | | W | | | 1x1000-mL P | 9310_ALPHABETA_GPC: Alpha + Beta (2) | HNO3 to pH <2 |
| B1B9J6 | | W | | | 1x20-mL P | Activity Scan | None |
| B1B9J6 (F) | | W | | | 1x4000-mL G/P | GAMMALL_GS: List-1 (9) | None |
| B1B9J6 (F) | | W | | | 2x4000-mL G/P | I129LL_SEP_LEPS_GS_LL: I-129 (1) | None |
| B1B9J6 (F) | | W | | | 3x1000-mL G/P | SRISO_SEP_PRECIP_GPC: Sr-90 (1) | HNO3 to pH <2 |
| B1B9J6 (F) | | W | | | 1x500-mL P | TC99_ETVDSK_LSC: Tc-99 (1) | HCl to pH <2 |
| B1B9J6 (F) | | W | | | 1x500-mL G/P | UTOT_KPA: Uranium (1) | HNO3 to pH <2 |
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Relinquished By **R.T. SICKLE** Print Sign Date/Time **14/10 APR 26 2005** Received By **Jeff Johnson** Print Sign Date/Time **14/10 APR 26 2005** Matrix *
 Relinquished By Date/Time Received By Date/Time
 Relinquished By Date/Time Received By Date/Time
 Relinquished By Date/Time Received By Date/Time

S = Soil DS = Drum Solid
 SE = Sediment DI = Drum Liquid
 SO = Solid T = Tissue
 SL = Sludge WL = 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

C 100 LPM

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| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X04-056-28 |
| | | Page 1 of 1 |

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|---------------------------------------------------------|----------------------------------|----------------------------------------|
| Collector: RT. SICKLE | Contact/Requester: Dot Stewart | Telephone No. MSIN FAX 509-376-5056 |
| SAF No. X04-056 | Sampling Origin | Purchase Order/Charge Code |
| Project Title Special 2-PO1-C Sept 04 Samplng | JTS - SAWS H 89 | Ice Chest No. SML 584 Temp. |
| Shipped To (Lab) Severn Trent Incorporated, Richland | Method of Shipment Govt Truck | Bill of Lading/Air Bill No. |
| Protocol SURV | Priority: 45 Days | Offsite Property No. |

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|------------------------------------------------------------------------------------|----------------------|-----------|-----------------------------------------------------------------------------------------------|
| POSSIBLE SAMPLE HAZARDS/REMARKS ** ** JSD 260313 SPG W04622 | SPECIAL INSTRUCTIONS | Hold Time | Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|------------------------------------------------------------------------------------|----------------------|-----------|-----------------------------------------------------------------------------------------------|

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|--------------------------------------------|---------------|
| B1B9K0 (F) | | W | 4-26-05 | 0906 | 1x1000-mL P | 906.0_H3_LSC: Tritium (1) 61874K | None |
| B1B9K0 (F) | | W | | | 1x1000-mL P | 9310_ALPHABETA_GPC: Alpha + Beta (2) | HNO3 to pH <2 |
| B1B9K0 | | W | | | 1x20-mL P | Activity Scan | None |
| B1B9K0 (F) | | W | | | 1x4000-mL G/P | GAMMALL_GS: List-1 (9) | None |
| B1B9K0 (F) | | W | | | 2x4000-mL G/P | I129LL_SEP_LEPS_GS_LL: I-129 (1) | None |
| B1B9K0 (F) | | W | | | 3x1000-mL G/P | SRISO_SEP_PRECIP_GPC: Sr-90 (1) | HNO3 to pH <2 |
| B1B9K0 (F) | | W | | | 1x500-mL P | TC99_ETVDSK_LSC: Tc-99 (1) | HCl to pH <2 |
| B1B9K0 (F) | | W | | | 1x500-mL G/P | UTOT_KPA: Uranium (1) | HNO3 to pH <2 |
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|-----------------------------------------------|-------------------------------|--------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relinquished By: RT. SICKLE Print Sign | Date/Time: APR 26 2005 | Received By: Jeff Jensen Print Sign | Date/Time: APR 26 2005 | Matrix * |
| Relinquished By | Date/Time | Received By | Date/Time | S = Soil DS = Drum Solid SF = Sediment DL = 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 | |

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

< 100 LPM



STL

Sample Check-in List

Date/Time Received: 04 26 05 1410

Client: P62W SDG #: W09622 NA [] SAF #: X09-056 NA []

Work Order Number: JSD260313 Chain of Custody # X04-056-25, 28

Shipping Container ID: SML 584 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: 22
7. Sample holding times exceeded? NA Yes [] No []
8. Samples have:
 - _____ tape
 - custody seals
 - _____ hazard labels
 - appropriate samples labels
9. Samples are:
 - in good condition
 - _____ broken
 - _____ leaking
 - _____ have air bubbles
 - (Only for samples requiring head space)
10. Sample pH taken? NA [] pH < 2 pH > 2 pH > 9 []
11. Sample Location, Sample Collector Listed? * Yes No []
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 04 26 05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
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Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** C.O.C. # **X05-010-89**
 Page 1 of 1

Collector **B. HELGESON** Contact/Requester **D. STEWART** Telephone No. **376-5056** MSIN FAX
 SAF No. **X05-010** Sampling Origin **HANFORD SITE** Purchase Order/Charge Code
 Project Title **INTERVAL SAMPLING NOVEMBER/DECEMBER 2004** Ice Chest No. **SAWS-113** Temp.
 Shipped To (Lab) **Severn Trent Incorporated, Richland** Method of Shipment **GOVT. VEHICLE** Bill of Lading/Air Bill No.
 Protocol **RCRA** Priority: 45 Days Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS **** ** C4668 100' bwe JSD260342 SD07 W 04622** SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|-------------------------------------------------|--------------|
| B1CKV3 (F) | | W | 4/26/05 | 0903 | 1x500-mL P | 7196_CR6: Hexavalent Chromium (1) G788DK | Cool 4C |
| B1CKV4 | | W | 4/26/05 | 0903 | 1x20-mL P | Activity Scan | None |
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| Relinquished By B. HELGESON Print Sign Bja Hg Date/Time 4/26/05 0950 | Received By DR Brewington/D.R. Brewington Print Sign D.R. Brewington Date/Time 4-26-05 1100 | Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Linni SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other |
| Relinquished By DR Brewington D.R. Brewington Print Sign D.R. Brewington Date/Time 4-26-05 1430 | Received By D Connolly Print Sign D Connolly Date/Time 4-26-05 1430 | |
| Relinquished By D Connolly Print Sign D Connolly Date/Time 4-26-05 1515 | Received By Jeff Jensen Print Sign Jeff Jensen Date/Time 04-26-05 1515 | |
| Relinquished By | Received By | |

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



STL

Sample Check-in List

Date/Time Received: 04 26 05 1515 505-004
505-003
 Client: P67W SDG #: W04622 NA [] SAF #: X05-010 NA []
W04623
 Work Order Number: JSD260342, 345, 347 Chain of Custody # X05-010-209, 89, 88
 Shipping Container ID: SAW 113 Air Bill # 505-003-9 505-004-17, 37

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: 7°C NA [] 5. Vermiculite/packing materials is NA [] Wet [] Dry []
6. Number of samples in shipping container: 18
7. Sample holding times exceeded? NA [] Yes [] No []
8. Samples have:
 tape hazard labels
 custody seals appropriate samples labels
9. Samples are:
 in good condition leaking
 broken have air bubbles
(Only for samples requiring head space)
10. Sample pH taken? NA [] pH<2 [] pH>2 [] pH>9 []
11. Sample Location, Sample Collector Listed? * Yes [] No []
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No []
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 04-26-05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
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Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

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| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-002-494 |
| | | Page 1 of 1 |

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|--------------------------------------------------------|------------------------------------|----------------------------------------|
| Collector <i>Feltow</i> | Contact/Requester DL STEWART | Telephone No. MSIN FAX 509-376-5056 |
| SAF No. X05-002 | Sampling Origin HANFORD SITE | Purchase Order/Charge Code |
| Project Title LTMC/SURV AQUIFER TUBES 2005 | | 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. |

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| POSSIBLE SAMPLE HAZARDS/REMARKS **Q-57671 JSD280309 W04622 Due 6/10/05 | SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TOTAL ACTIVITY EXEMPTION APPLIES UNLESS OTHERWISE STATED. Batch all PNNL GW samples submitted under this SAF 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 |
|------------|--------|---|---------|-------|-------------------|--------------------------------------|---------------|
| B1BVV2 ✓ | | W | 4/27/05 | 17:30 | 1x1000-mL P | 9310_ALPHABETA_GPC: Alpha + Beta (2) | HNO3 to pH <2 |
| B1BVV2 ✓ | | W | ↓ | ↓ | 1x20-mL P | Activity Scan | None |
| B1BVV2 ✓ | | W | ↓ | ↓ | 1x500-mL P | TC99_ETVDSK_LSC: Tc-99 (1) | HCl to pH <2 |
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| Relinquished By <i>R.W. Feltow</i> | Print <i>R.W. Feltow</i> | Sign <i>[Signature]</i> | Date/Time 4/27/05 14:00 | Received By <i>Felix</i> | Print <i>Felix</i> | Sign <i>[Signature]</i> | Date/Time 4/27/05 | Matrix * S = Soil DS = Drum Solid SF = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other |
| Relinquished By <i>RADFORD</i> | | | Date/Time 4/27/05 15:20 | Received By <i>[Signature]</i> | | | Date/Time 04 22 05 15 20 | |
| 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 | |

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| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-002-490 |
| | | Page <u>1</u> of <u>1</u> |

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|---------------------------------------------------------------|-------------------------------------------|-----------------------------------------------|
| Collector R.W. FULTON | Contact/Requester DL STEWART | Telephone No. 509-376-5056 MSIN FAX |
| SAF No. X05-002 | Sampling Origin HANFORD SITE | Purchase Order/Charge Code |
| Project Title LTM/SURV AQUIFER TUBES 2005 | | Ice Chest No. Temp. |
| Shipped To (Lab) Severn Trent Incorporated Richland | Method of Shipment GOVT VEHICLE | Bill of Lading/Air Bill No. |
| Protocol LTM | Priority: 45 Days | Offsite Property No. |

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| POSSIBLE SAMPLE HAZARDS/REMARKS **Q-57671 W04622 | SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TOTAL ACTIVITY EXEMPTION APPLIES UNLESS OTHERWISE STATED. Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

JSD 280301
Date 6/10/05

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|-------------------|--------|---|---------|------|-------------------|----------------------------------------------|---------------|
| B1BVT4 | | W | 4-16-05 | 1055 | 1x1000-mL P | 906.0_H3_LSC: Tritium (1) 4-27-05 | None |
| B1BVT4 | | W | | | 1x1000-mL P | 9310_ALPHABETA_GPC: Alpha + Beta (2) | HNO3 to pH <2 |
| B1BVT4 | | W | | | 1x20-mL P | Activity Scan | None |
| B1BVT4 | | W | | | 1x500-mL P | TC99_ETVDSK_LSC: Tc-99 (1) | HCl to pH <2 |
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|--------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relinquished By R.E. PETERSON <i>R.E. Peterson</i> | Date/Time APR 26 2005 <i>16:30</i> | Received By SIG 5 LOCKED STORAGE <i>Sig 5</i> | Date/Time APR 26 2005 <i>16:30</i> | Matrix * S = Soil DS = Drum Solid SF = 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 EL RADFORD <i>El Radford</i> | Date/Time 4/27/05 <i>15:20</i> | Received By <i>Jett J...</i> <i>[Signature]</i> | Date/Time 04 27 05 <i>15:20</i> | |
| Relinquished By | Date/Time | Received By | Date/Time | |
| Relinquished By | Date/Time | Received By | Date/Time | |

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

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| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-002-489 |
| | | Page <u>1</u> of <u>1</u> |

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|--------------------------------------------------------|-------------------------------------|----------------------------------------|
| Collector R.W. FULTON | Contact/Requester DL STEWART | Telephone No. MSIN FAX 509-376-5056 |
| SAF No. X05-002 | Sampling Origin HANFORD SITE | Purchase Order/Charge Code |
| Project Title LTMC/SURV AQUIFER TUBES 2005 | | 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. |

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| POSSIBLE SAMPLE HAZARDS/REMARKS ** Q-57671 JSD280301 W04622 Due 6/10/05 | SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TOTAL ACTIVITY EXEMPTION APPLIES UNLESS OTHERWISE STATED. Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL |
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| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|----------------------------|--------------|
| B1BVT0 | | W | 4-26-05 | 1235 | 1x1000-mL P | 906.0_H3_LSC: Tritium (1) | None |
| B1BVT0 | | W | ? | ? | 1x20-mL P | Activity Scan | None |
| B1BVT0 | | W | ? | ? | 1x500-mL P | TC99_ETVDSK_LSC: Tc-99 (1) | HCl to pH <2 |
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| Relinquished By R.E. PETERSON <i>R.E. Peterson</i> 16:30 Date/Time APR 26 2005 | Received By SIG 5 LOCKED STORAGE Date/Time APR 26 2005 16:30 | Matrix * S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other |
| Relinquished By EL. RADFORD <i>Radford</i> 4/27/05 1520 Date/Time | Received By <i>Jell-Jon</i> 042705 1520 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 |



STL

Sample Check-in List

Date/Time Received: 04 27 05 1520

Client: PNA SDG #: W04622 NA SAF #: F05-010 NA ^{X05-002}

Work Order Number: JSD280301 Chain of Custody # F05-010-262, 271, 269, 263, 302

Shipping Container ID: N/A Air Bill # X05-002-494, 489, 490, 487, 486
N/A

1. Custody Seals on shipping container intact? NA Yes No
2. Custody Seals dated and signed? NA Yes No
3. Chain of Custody record present? Yes No
4. Cooler temperature: _____ NA 5. Vermiculite/packing materials is NA Wet Dry
6. Number of samples in shipping container: 12 60
7. Sample holding times exceeded? ^{JH} 04 27 05 NA Yes No
8. Samples have:

| | |
|---------------------------------------------------|----------------------------------------------------------------|
| <input type="checkbox"/> tape | <input type="checkbox"/> hazard labels |
| <input checked="" type="checkbox"/> custody seals | <input checked="" type="checkbox"/> appropriate samples labels |
9. Samples are:

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|-------------------------------------------------------|-------------------------------------------|
| <input checked="" type="checkbox"/> in good condition | <input type="checkbox"/> leaking |
| <input type="checkbox"/> broken | <input type="checkbox"/> have air bubbles |

 (Only for samples requiring head space)
10. Sample pH taken? NA pH<2 pH>2 pH>9
11. Sample Location, Sample Collector Listed? * Yes No
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 04 27 05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
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Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager _____ Date _____

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| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-010-215 |
| | | Page 1 of 1 |

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|-------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|
| Collector L. D. WAU | Contact/Requester DL STEWART | Telephone No. 509-376-5056 |
| SAF No. X05-010 | Sampling Origin HANFORD SITE | Purchase Order/Charge Code |
| Project Title INTERVAL SAMPLING, NOVEMBER/DECEMBER 2004 | Logbook: DTS- SAWS-H93 | Ice Chest No. SANS III Temp. |
| Shipped To (Lab) Severn Trent Incorporated, Richland | Method of Shipment GOVT. VEHICLE | Bill of Lading/Air Bill No. |
| Protocol RCRA | Priority: 45 Days | Offsite Property No. |

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| POSSIBLE SAMPLE HAZARDS/REMARKS ** Q-57671 JSD270349 W04622 Due 6/10/05 | SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL |
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| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|-----------------------------------|--------------|
| B1CL34 (F) | | W | 4/27/05 | 0800 | 1x500-mL P | 7196_CR6: Hexavalent Chromium (1) | Cool 4C |
| B1CL35 | | W | ↓ | ↓ | 1x20-mL P | Activity Scan | None |
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|-----------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relinquished By L. D. WAU L. D. Wall 4/27/05 1450 | Received By Jill Jones [Signature] 042705 1450 | 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 | |

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

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| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-010-105 |
| | | Page <u>1</u> of <u>1</u> |

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|-------------------------------------------------------------------|-------------------------------------------|-------------------------------------|
| Collector <u>Helgeson / Alexander</u> | Contact/Requester | Telephone No. MSIN FAX |
| SAF No. <u>X05-010</u> | Sampling Origin <u>C4668 (299-W14-11)</u> | Purchase Order/Charge Code |
| Project Title <u>INTERVAL SAMPLING, NOVEMBER/DECEMBER 2004</u> | | Ice Chest No. <u>SAWS 111</u> Temp. |
| Shipped To (Lab) <u>Severn Trent Incorporated, Richland</u> | Method of Shipment | Bill of Lading/Air Bill No. |
| Protocol <u>RCRA</u> | Priority: 45 Days | Offsite Property No. |

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| POSSIBLE SAMPLE HAZARDS/REMARKS <u>Q-57671</u> <u>C4668</u> <u>120' bwt</u> <u>250270349</u> <u>W04622</u> <u>347' bgs</u> <u>4-27-05</u> <u>Due 6/10/05</u> | SPECIAL INSTRUCTIONS | Hold Time | Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------|------------------------------------------------------------------------------------------------------|

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|-----------------------------------|--------------|
| B1CKW6 (F) | | W | 4/27/05 | 1140 | 1x500-mL P | 7196_CR6: Hexavalent Chromium (1) | Cool 4C |
| B1CKW7 | | W | 4/27/05 | 1140 | 1x20-mL P | Activity Scan | None |
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| Relinquished By <u>AS Alexander / Alexander</u> <small>Print Sign</small> <u>4/27/05-1323</u> <small>Date/Time</small> | Received By <u>L.O. WAU</u> <small>Print Sign</small> <u>L.O. Wall</u> <u>4/27/05 1323</u> <small>Date/Time</small> | Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Lioni SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other |
| Relinquished By <u>L.O. WAU</u> <small>Print Sign</small> <u>L.O. Wall</u> <u>4/27/05 1450</u> <small>Date/Time</small> | Received By <u>Jeff Jensen</u> <small>Print Sign</small> <u>[Signature]</u> <u>042705 1450</u> <small>Date/Time</small> | |
| Relinquished By | Received By | |
| Relinquished By | Received By | |

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

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|-------------|-------------------------------------------------|---------------------------------------|
| PNNL | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | C.O.C. # X05-010-104 |
| | | Page <u>1</u> of <u>1</u> |

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|------------------------------------------------------------------|-------------------------------------------|------------------------------------|
| Collector <i>Helgeson / Alexander</i> | Contact/Requester | Telephone No. MSIN FAX |
| SAF No. <i>X05-010</i> | Sampling Origin <i>C4668 (299-W14-11)</i> | Purchase Order/Charge Code |
| Project Title <i>INTERVAL SAMPLING NOVEMBER/DECEMBER 2004</i> | | Ice Chest No. <i>SPWS111</i> Temp. |
| Shipped To (Lab) <i>Severn Trent Incorporated Richland</i> | Method of Shipment | Bill of Lading/Air Bill No. |
| Protocol <i>RCRA</i> | Priority: <i>45 Days</i> | Offsite Property No. |

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|------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------|------------------------------------------------------------------------------------------------------|
| POSSIBLE SAMPLE HAZARDS/REMARKS <i>Q-57671 C4668 120' bwt due</i> <i>W04622 J5D270349 347' bgs 6/6/05</i> | SPECIAL INSTRUCTIONS | Hold Time | Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------|------------------------------------------------------------------------------------------------------|

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|------------|--------|---|---------|------|-------------------|----------------------------------|--------------|
| B1CKW5 | | W | 4/27/05 | 1140 | 1x1000-mL P | 906.0_H3_LSC: Tritium (1) | None |
| B1CKW5 | | W | 4/27/05 | 1140 | 1x20-mL P | Activity Scan | None |
| B1CKW5 | | W | 4/27/05 | 1140 | 2x4000-mL G/P | 1129LL_SEP_LEPS_GS_LL: I-129 (1) | None |
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| Relinquished By <i>J. Alexander</i> <small>Print</small> <i>J. Alexander</i> <small>Sign</small> <i>4/27/05-1323</i> <small>Date/Time</small> | Received By <i>L.O. Wau</i> <small>Print</small> <i>L.O. Wau</i> <small>Sign</small> <i>4/27/05 1323</i> <small>Date/Time</small> | Matrix * |
| Relinquished By <i>L.O. Wau</i> <small>Print</small> <i>L.O. Wau</i> <small>Sign</small> <i>4/27/05 1450</i> <small>Date/Time</small> | Received By <i>J. J. Jenson</i> <small>Print</small> <i>J. J. Jenson</i> <small>Sign</small> <i>042705 1450</i> <small>Date/Time</small> | S = Soil DS = Drum Solid SE = Sediment DI = Drum Lining SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other |
| Relinquished By _____ <small>Date/Time</small> | Received By _____ <small>Date/Time</small> | |

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



STL

Sample Check-in List

Date/Time Received: 04 27 05 1450

Client: P07W SDG #: W04622 NA SAF #: X05-010 NA

Work Order Numbers: JSD270349 Chain of Custody # X05-010-104, 105, 215, 218, 221, 212

Shipping Container ID: SAWS 111 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: 3.5C NA 5. Vermiculite/packing materials is NA Wet Dry
6. Number of samples in shipping container: 14
7. Sample holding times exceeded? NA Yes No
8. Samples have:
 _____ tape _____ hazard labels
 custody seals appropriate samples labels
9. Samples are:
 _____ in good condition _____ leaking
 _____ broken _____ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA pH<2 pH>2 pH>9
11. Sample Location, Sample Collector Listed? * Yes No
 *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: Date: 04 27 05

| Client Sample ID | Analysis Requested | Condition | Comments/Action |
|------------------|--------------------|-----------|-----------------|
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Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

5/17/2005 3:20:35 PM

Sample Preparation/Analysis

Balance Id:1121153482

384868, Pacific Northwest National Laboratories ,
Pacific Northwest National Lab

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

Pipet #: 229

Report Due: 06/10/2005

W04622

Sep1 DT/Tm Tech: NA

Batch: 5124417 WATER pCi/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: NA

SEQ Batch, Test: None

Prep Tech: ,GiroirB



| Work Order, Lot, Sample Date/Time | Total Amt/Unit | Initial Aliquot Amt/Unit | QC Tracer Prep Date | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|-----------------------------------------------------------------------------------------------------------|----------------|--------------------------------------|---------------------|-----------|-----------------|----------------|-------------|------------------------------|-----------------------|-----------|
| 1 G8736-1-AC J5D260313-1-SAMP 04/26/2005 10:34 AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | 197.00g,in | | | | | | | | | |
| | | | | 1.5 | 40.7 | 50 | 12A | 1914 | 5/17/05 | |
| 2 G8736-1-AK-X J5D260313-1-DUP 04/26/2005 10:34 AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | 202.30g,in | | | | | | | | | |
| | | | | | 44.2 | | 12B | | | |
| 3 G874K-1-AC J5D260313-2-SAMP 04/26/2005 09:06 AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | 174.80g,in | | | | | | | | | |
| | | | | | 38.8 | | 12C | | | |
| 4 G9ETM-1-AA J5D280301-1-SAMP 04/27/2005 11:30 AmtRec: 20ML,500P,LP #Containers: 3 | 196.80g,in | | | | | | | | | |
| | | | | | 0.3 | | 12D | | | |
| 5 G9ET7-1-AA J5D280301-2-SAMP 04/27/2005 10:55 AmtRec: 20ML,500P,LP #Containers: 3 | 194.10g,in | | | | | | | | | |
| | | | | | 32.4 | | 11A | | | |
| 6 G9TT2-1-AA-B J5E040000-417-BLK 04/26/2005 10:34 AmtRec: #Containers: 1 | 199.20g,in | | | | | | | | | |
| | | | | | 0.3 | | 11B | | | |
| 7 G9TT2-1-AC-C J5E040000-417-LCS 04/26/2005 10:34 AmtRec: #Containers: 1 | 203.40g,in | ASD3460 04/25/05,pd 03/25/05,r | | | | | | | | |
| | | | | | 0.8 | | 11P | | | |

5/17/2005 3:20:39 PM

Sample Preparation/Analysis

Balance Id:1121153482

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

Pipet #: *229*

Report Due: 06/10/2005

Sep1 DT/Tm Tech: *NA*

Batch: 5124417

pCi/L

Sep2 DT/Tm Tech: *NA*

SEQ Batch, Test: None

Prep Tech: ,GiroirB



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

Comments:

pH verified @ ≤ 2 in prep

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G87361AC-SAMP Constituent List:

| | | | | | |
|---------------|-------|-------|--------|---------|--------|
| ALPHA | RDL:3 | pCi/L | LCL: | UCL: | RPD: |
| G9TT21AA-BLK: | | | | | |
| ALPHA | RDL:3 | pCi/L | LCL: | UCL: | RPD: |
| G9TT21AC-LCS: | | | | | |
| Am-241 | RDL: | pCi/L | LCL:70 | UCL:130 | RPD:20 |

G87361AC-SAMP Calc Info:

| | | | | |
|----------------------|------------------|--------------|-------------|---------|
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9TT21AA-BLK: | | | | |
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9TT21AC-LCS: | | | | |
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |

Approved By _____ Date: _____

5/19/2005 10:05:13 AM

ICOC Fraction Transfer/Status Report

ByDate: 5/19/2004, 5/24/2005, Batch: '5124417', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments |
|---------|----------|-------------|-------------------------------|-------------------------|
| 5124417 | | | | |
| AC | | CalcC | GiroirB 5/17/2005 3:20:21 PM | |
| SC | | heidelbergt | IsBatched 5/5/2005 8:02:07 AM | ICOC_RADCALC v4.8.08 |
| SC | | GiroirB | InPrep 5/17/2005 3:20:21 PM | RICH-RC-5014 Revision 6 |
| SC | | GiroirB | Prep1C 5/17/2005 3:25:09 PM | RICH-RC-5014 REVISION 6 |
| SC | | DAWKINSO | InCnt1 5/17/2005 6:14:36 PM | RICH-RD-0003 REVISION 4 |
| SC | | DAWKINSO | CalcC 5/17/2005 9:50:15 PM | RICH-RD-0003 REVISION 4 |
| AC | | GiroirB | 5/17/2005 3:25:09 PM | |
| AC | | DAWKINSO | 5/17/2005 6:14:36 PM | |
| AC | | DAWKINSO | 5/17/2005 9:50:15 PM | |

AC: Accepting Entry; SC: Status Change

5/17/2005 3:20:56 PM

Sample Preparation/Analysis

Balance Id:1121153482

384868, Pacific Northwest National Laboratories ,
Pacific Northwest National Lab

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

Pipet #: *229*

Report Due: 06/10/2005 *W04622*

Sep1 DT/Tm Tech: *NA*

Sep2 DT/Tm Tech: *NA*

Batch: 5124410 WATER pCi/L

PM, Quote: BG2, 57671

Prep Tech: ,GiroirB

SEQ Batch, Test: None

| Work Order, Lot, Sample Date/Time | Total Amt/Unit | Initial Aliquot Amt/Unit | QC Tracer Prep Date | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------|--------------------------------------------------|-----------|-----------------|----------------|-------------|-----------------------------------------------------|-----------------------|-----------|
| 1 G8736-1-AD J5D260313-1-SAMP  04/26/2005 10:34 | 197.30g,in | | | | | | | | | |
| | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | | Scr Rst: Alpha: 1.11E+02 pCi/L Beta: 5.32E+01 pCi/L | | |
| 2 G874K-1-AD J5D260313-2-SAMP  04/26/2005 09:06 | 200.30g,in | | | | | | | | | |
| | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | | Scr Rst: Alpha: 4.34E+01 pCi/L Beta: 2.07E+01 pCi/L | | |
| 3 G9ETM-1-AC J5D280301-1-SAMP  04/27/2005 11:30 | 197.50g,in | | | | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 1.07E+02 pCi/L Beta: 4.30E+01 pCi/L | | |
| 4 G9ETM-1-AE-X J5D280301-1-DUP  04/27/2005 11:30 | 196.60g,in | | | | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 1.07E+02 pCi/L Beta: 4.30E+01 pCi/L | | |
| 5 G9ET7-1-AC J5D280301-2-SAMP  04/27/2005 10:55 | 206.60g,in | | | | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 6.89E+01 pCi/L Beta: 8.80E+00 pCi/L | | |
| 6 G9TTE-1-AA-B J5E040000-410-BLK  04/27/2005 11:30 | 201.60g,in | | | | | | | | | |
| | | | AmtRec: #Containers: 1 | | | | | Scr Rst: Alpha: Beta: | | |
| 7 G9TTE-1-AC-C J5E040000-410-LCS  04/27/2005 11:30 | 201.40g,in | | BESB2430 04/25/05,pd 09/21/04,r | | | | | | | |
| | | | AmtRec: #Containers: 1 | | | | | Scr Rst: Alpha: Beta: | | |

5/17/2005 3:20:59 PM

Sample Preparation/Analysis

Balance Id:1121153482

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

Pipet #: *ZZ9*

Report Due: 06/10/2005

Sep1 DT/Tm Tech: *NA*

Batch: 5124410
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech: *NA*

Prep Tech: ,GiroirB



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

Comments:

pH verified @ 2m prep

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G87361AD-SAMP Constituent List:

| | | | | | |
|---------------|-------|-------|--------|---------|--------|
| BETA | RDL:4 | pCi/L | LCL: | UCL: | RPD: |
| G9TTE1AA-BLK: | | | | | |
| BETA | RDL:4 | pCi/L | LCL: | UCL: | RPD: |
| G9TTE1AC-LCS: | | | | | |
| Sr-90 | RDL: | pCi/L | LCL:70 | UCL:130 | RPD:20 |

G87361AD-SAMP Calc Info:

| | | | | |
|----------------------|------------------|--------------|-------------|---------|
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9TTE1AA-BLK: | | | | |
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9TTE1AC-LCS: | | | | |
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |

Approved By _____ Date: _____

5/19/2005 10:04:50 AM

ICOC Fraction Transfer/Status Report

ByDate: 5/19/2004, 5/24/2005, Batch: '5124410', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments |
|---------|----------|-----------------|----------------------------------|-------------------------|
| 5124410 | | | | |
| AC | | CalcC | GiroirB 5/17/2005 9:54:39 | |
| SC | | heidelbergt | IsBatched 5/5/2005 8:02:07 AM | ICOC_RADCALC v4.8.08 |
| SC | | GiroirB | InPrep 5/17/2005 9:54:39 AM | RICH-RC-5021 Revision 3 |
| SC | | GiroirB | Prep1C 5/17/2005 3:25:14 PM | RICH-RC-5014 REVISION 6 |
| SC | | DAWKINSO | CalcC 5/17/2005 9:48:13 PM | RICH-RD-0003 REVISION 4 |
| AC | | GiroirB | 5/17/2005 3:25:14 PM | |
| AC | | DAWKINSO | 5/17/2005 9:48:13 PM | |

AC: Accepting Entry; SC: Status Change

5/23/2005 6:07:48 PM

Sample Preparation/Analysis

Balance Id:PM4600

384868, Pacific Northwest National Laboratories,
Pacific Northwest National Lab

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

Pipet #: _____

Report Due: 06/10/2005

Sep1 DT/Tm Tech: 5-24-05 8:20 PM

Batch: 5124420 WATER pCi/L PM, Quote: BG2, 57671
SEQ Batch, Test: None All Tests: 5124410 BCS8, 5124417 AZS7, 5124418 AWTA, 5124420 CLTL, 5124422 DHSS, 5124426 FPS5, 5124434
ARS6, 5124445 BNTB,

Sep2 DT/Tm Tech: ~~5/31/05~~ 9:45 AM LW
6/6/11/05
Prep Tech: FABREM 5-23-05

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

| | | | | | | | | | | | |
|----------------------------------|-------------|-----------|--------------------------------------------------|----------|-----------|----|-----------------------------------------------------|------|------|----------|---------|
| 1 G8736-1-AG J5D260313-1-SAMP | 1000.60g,in | SRTB11702 | 04/19/05,pd 02/16/05,r | 0.8658 ✓ | 23.6mg | 30 | 3' | 0814 | 0727 | 6/2/05 K | 5/27/05 |
| | 1.807 | 2.0800 ✓ | | YTA13536 | Ex:3/8/06 | | | 6a | 0946 | 6/3/05 | |
| 04/26/2005 10:34 | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | Scr Rst: Alpha: 1.11E+02 pCi/L Beta: 5.32E+01 pCi/L | | | | |

| | | | | | | | | | | | |
|----------------------------------|-------------|-----------|--------------------------------------------------|----------|-----------|--|-----------------------------------------------------|------|------|----------|---------|
| 2 G874K-1-AG J5D260313-2-SAMP | 1000.00g,in | SRTB11703 | 04/19/05,pd 02/16/05,r | 0.8856 ✓ | 23.6mg | | 3' | 0846 | 0727 | 6/2/05 K | 5/27/05 |
| | 1.850 | 2.0889 - | | YTA13537 | Ex:3/8/06 | | | 6b | 0946 | 6/3/05 | |
| 04/26/2005 09:06 | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | Scr Rst: Alpha: 4.34E+01 pCi/L Beta: 2.07E+01 pCi/L | | | | |

| | | | | | | | | | | | |
|-----------------------------------|-------------|-----------|--------------------------------------------------|----------|-----------|--|-----------------------------------------------------|------|------|----------|---------|
| 3 G874K-1-AK-X J5D260313-2-DUP | 1000.30g,in | SRTB11704 | 04/19/05,pd 02/16/05,r | 0.8748 ✓ | 24.5mg | | 3' | 0917 | 0727 | 6/2/05 K | 5/27/05 |
| | 1.814 | 2.0737 - | | YTA13538 | Ex:3/8/06 | | | 6c | 0946 | 6/3/05 | |
| 04/26/2005 09:06 | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | Scr Rst: Alpha: 4.34E+01 pCi/L Beta: 2.07E+01 pCi/L | | | | |

| | | | | | | | | | | | |
|-------------------------------------|-------------|-----------|---------------------------|----------|-----------|--|-----------------------|------|------|----------|---------|
| 4 G9TWC-1-AA-B J5E040000-420-BLK | 1000.20g,in | SRTB11816 | 05/05/05,pd 02/16/05,r | 0.9075 ✓ | 25.1mg | | 3' | 0949 | 0727 | 6/2/05 K | 5/27/05 |
| | 1.899 | 2.0925 | | YTA13539 | Ex:3/8/06 | | | 6d | 1132 | 6/3/05 | |
| 04/26/2005 09:06 | | | AmtRec: #Containers: 1 | | | | Scr Rst: Alpha: Beta: | | | | |

5/23/2005 6:07:50 PM

Sample Preparation/Analysis

Balance Id:PM4600

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

Pipet #: _____

Report Due: 06/10/2005

Sep1 DT/Tm Tech: 5-24-05 8:20 *DM*

Batch: 5124420
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech: _____

Prep Tech: FABREM

| Work Order, Lot, Sample Date/Time | Total Amt/Unit | Initial Aliquot Amt/Unit | QC Tracer Prep Date | Tracer Yield | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On/Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|----------------------------------------------------------------------------------|----------------|--------------------------|---------------------------------------|-----------------------------------------------------------------------------------|-----------|-----------------|----------------|-------------|----------------------------|-----------------------|-----------|
| 5 G9TWC-1-AC-C J5E040000-420-LCS | | 1000.00g,in | SRSR1069 04/11/05,pd 02/16/05,r | 0.8538 | | 24.4mg 30 | 30 | 37 | 1022 | 5/10/05 | |
|  | | 1.781 | |  | | | 100 | 69 | 0916 | 6/2/05 RD | |
| | | 2.0860 | | Ex:3/8/06 | | | | 6C | 1132 | 6/3/05 | |

04/26/2005 09:06

AmtRec:

#Containers: 1

Scr Rst:

Alpha:

Beta:

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G87361AG-SAMP Constituent List:

| Sr-85 | RDL: | pCi/L | LCL:20 | UCL:105 | RPD:20 | Sr-90 | RDL:2 | pCi/L | LCL:70 | UCL:130 | RPD:20 |
|---------------|------|-------|--------|---------|--------|-------|-------|-------|--------|---------|--------|
| G9TWC1AA-BLK: | | | | | | | | | | | |
| Sr-85 | RDL: | pCi/L | LCL:20 | UCL:105 | RPD:20 | Sr-90 | RDL:2 | pCi/L | LCL: | UCL: | RPD: |
| G9TWC1AC-LCS: | | | | | | | | | | | |
| Sr-85 | RDL: | pCi/L | LCL:20 | UCL:105 | RPD:20 | Sr-90 | RDL:2 | pCi/L | LCL:70 | UCL:130 | RPD:20 |

G87361AG-SAMP Calc Info:

| | | | | |
|----------------------|------------------|--------------|-------------|---------|
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9TWC1AA-BLK: | | | | |
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9TWC1AC-LCS: | | | | |
| Uncert Level (#s): 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |

Approved By _____

Date: _____

6/6/2005 1:24:56 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/6/2004, 6/11/2005, Batch: '5124420', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments |
|----------------|----------|------------|----------------------|-----------------------|
| 5124420 | | | | |
| AC | Rev1C | FABREM | 5/9/2005 7:29:05 AM | |
| SC | | heidelberg | IsBatched | 5/5/2005 8:02:07 AM |
| SC | | FABREM | InSep1 | 5/9/2005 7:29:05 AM |
| SC | | FABREM | InPrep | 5/23/2005 6:02:20 PM |
| SC | | FABREM | Sep1C | 5/27/2005 7:27:33 AM |
| SC | | BlackCL | InCnt1 | 5/27/2005 7:36:06 AM |
| SC | | BlackCL | Cnt1C | 5/27/2005 10:32:05 AM |
| SC | | WillsL | InSep2 | 6/1/2005 8:26:41 AM |
| SC | | WillsL | Sep2C | 6/1/2005 5:20:09 PM |
| SC | | DAWKINSO | InCnt2 | 6/1/2005 5:36:19 PM |
| SC | | BlackCL | CalcC | 6/3/2005 12:11:24 PM |
| SC | | NortonJ | Rev1C | 6/6/2005 1:24:20 PM |
| AC | | FABREM | 5/23/2005 6:02:20 PM | |
| AC | | FABREM | 5/27/2005 7:27:33 | |
| AC | | BlackCL | 5/27/2005 7:36:06 | |
| AC | | BlackCL | 5/27/2005 10:32:05 | |
| AC | | WillsL | 6/1/2005 8:26:41 AM | |
| AC | | WillsL | 6/1/2005 5:20:09 PM | |
| AC | | DAWKINSO | 6/1/2005 5:36:19 PM | |
| AC | | BlackCL | 6/3/2005 12:11:24 PM | |
| AC | | NortonJ | 6/6/2005 1:24:20 PM | |

AC: Accepting Entry; SC: Status Change

5/31/2005 10:42:21 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratories
Pacific Northwest National Lab

AW Gamma PrpRC5017

TA Gamma by HPGE

5I CLIENT: HANFORD

Pipet #: *NA*

Sep1 DT/Tm Tech: *NA*

Sep2 DT/Tm Tech: *NA*

Report Due: 06/10/2005

W04622

Batch: 5124418 WATER

pCi/L

PM, Quote: BG2, 57671

Prep Tech: GiroirB

SEQ Batch, Test: None



| Work Order, Lot, Sample Date/Time | Total Amt/Unit | Initial Aliquot Amt/Unit | QC Tracer Prep Date | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|------------------------------------------------------------------------------------------------------|----------------|--------------------------|---------------------------------------|-----------|-----------------|----------------|-------------|------------------------------|-----------------------|-----------|
| 1 G8736-1-AE J5D260313-1-SAMP 04/26/2005 10:34 | 2004.90g,in | | | | | 100 | 100 | 64 1515 | 6/8/05 | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 Scr Rst: Alpha: 1.11E+02 pCi/L Beta: 5.32E+01 pCi/L | | | | | | | | | | |
| 2 G8736-1-AL-X J5D260313-1-DUP 04/26/2005 10:34 | 2004.90g,in | | | | | | | 67 1708 | 6/2/05 | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 Scr Rst: Alpha: 1.11E+02 pCi/L Beta: 5.32E+01 pCi/L | | | | | | | | | | |
| 3 G874K-1-AE J5D260313-2-SAMP 04/26/2005 09:06 | 1999.30g,in | | | | | | | 611 1515 | 6/10/05 | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 Scr Rst: Alpha: 4.34E+01 pCi/L Beta: 2.07E+01 pCi/L | | | | | | | | | | |
| 4 G9TVT-1-AA-B J5E040000-418-BLK 04/26/2005 10:34 | 2003.30g,in | | | | | | | 63 1516 | | |
| AmtRec: #Containers: 1 Scr Rst: Alpha: Beta: | | | | | | | | | | |
| 5 G9TVT-1-AC-C J5E040000-418-LCS 04/26/2005 10:34 | 2003.10g,in | | QCAG1080 03/28/05,pd 03/07/05,r | | | | | 67 1514 | | |
| AmtRec: #Containers: 1 Scr Rst: Alpha: Beta: | | | | | | | | | | |

Comments: G8736-SAMP "Comments: gamma added con HNO3 to sample until pH<=2. Bg"
G874K-SAMP "Comments: gamma added con HNO3 to sample until pH<=2. Bg"

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: *NA*

Report Due: 06/10/2005

Sep1 DT/Tm Tech: *NA*

Sep2 DT/Tm Tech: *NA*

Batch: 5124418

pCi/L

Prep Tech: ,GiroirB

SEQ Batch, Test: None



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

G87361AE-SAMP Constituent List:

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

G9TVT1AA-BLK:

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

G9TVT1AC-LCS:

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

G87361AE-SAMP Calc Info:

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

G9TVT1AA-BLK:

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

G9TVT1AC-LCS:

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

Approved By _____

Date: _____

6/6/2005 1:06:41 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/6/2004, 6/11/2005, Batch: '5124418', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments | |
|----------------|--------------|-----------------|---------------------|----------------------|-------------------------|
| 5124418 | | | | | |
| AC | CalcC | GiroirB | 6/2/2005 9:40:29 AM | | |
| SC | | heidelbergt | IsBatched | 5/5/2005 8:02:07 AM | ICOC_RADCALC v4.8.08 |
| SC | | GiroirB | Prep1C | 6/2/2005 9:40:29 AM | RICH-RC-5017 REVISION 4 |
| SC | | BlackCL | InCnt1 | 6/2/2005 10:05:30 AM | RICH-RD-0007 REVISION 5 |
| SC | | DAWKINSO | CalcC | 6/2/2005 8:47:52 PM | RICH-RD-0007 REVISION 5 |
| AC | | BlackCL | 6/2/2005 10:05:30 | | |
| AC | | DAWKINSO | 6/2/2005 8:47:52 PM | | |

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

5/5/2005 8:15:20 AM

Sample Preparation/Analysis

Balance Id: _____

384868, Pacific Northwest National Laboratories,
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025
TB Gamma by LE PD

Pipet #: _____

Report Due: 06/10/2005

SI CLIENT: HANFORD

Sep1 DT/Tm Tech: *Jun 8-05 jfn*

Batch: 5124445 WATER

pCi/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: *[Signature]*

W04622



| Work Order, Lot, Sample Date/Time | Total Amt/Unit | Initial Aliquot Amt/Unit | QC Tracer Prep Date | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|---------------------------------------------------------|----------------|--------------------------|---------------------------------|-----------|--------------------------------|----------------|----------------------|------------------------------|-----------------------|-----------|
| 1 G85L0-1-AC J5D250207-1-SAMP 04/25/2005 11:21 | 4013.8 | | ITA4433 Pr:5/4/05, Ex:1/3/06 | | IFA | 100 | | L4 | ISIS | 4/8/05 r |
| AmtRec: VIAL | | | 34.4 | | Scr Rst: Alpha: 7.85E+02 pCi/L | | Beta: 2.93E+02 pCi/L | | | |
| 2 G8736-1-AF J5D260313-1-SAMP 04/26/2005 10:34 | 3888.4 | | ITA4434 Pr:5/4/05, Ex:1/3/06 | | | | | L5 | ISIS | 6/8/05 r |
| AmtRec: VIAL | | | 34.3 | | Scr Rst: Alpha: 1.11E+02 pCi/L | | Beta: 5.32E+01 pCi/L | | | |
| 3 G874K-1-AF J5D260313-2-SAMP 04/26/2005 09:06 | 3970.1 | | ITA4435 Pr:5/4/05, Ex:1/3/06 | | | | | L4 | 1708 | 6/8/05 r |
| AmtRec: VIAL | | | 34.3 | | Scr Rst: Alpha: 4.34E+01 pCi/L | | Beta: 2.07E+01 pCi/L | | | |
| 4 G88DL-1-AC J5D260342-3-SAMP 04/26/2005 09:03 | 3958.6 | | ITA4436 Pr:5/4/05, Ex:1/3/06 | | | | | L5 | | |
| AmtRec: VIAL | | | 34.9 | | Scr Rst: Alpha: 6.01E+02 pCi/L | | Beta: 2.34E+02 pCi/L | | | |
| 5 G9CC2-1-AC J5D270349-6-SAMP 04/27/2005 11:40 | 3335.1 | | ITA4437 Pr:5/4/05, Ex:1/3/06 | | | | | L4 | 1907 | |
| AmtRec: 20 | | | 34.6 | | Scr Rst: Alpha: 4.97E+02 pCi/L | | Beta: 2.23E+02 pCi/L | | | |
| 6 G9CC2-1-AD-X J5D270349-6-DUP 04/27/2005 11:40 | 3554.5 | | ITA4438 Pr:5/4/05, Ex:1/3/06 | | | | | L5 | | |
| AmtRec: 20ML, LF, 20ML | | | 34.1 | | Scr Rst: Alpha: 4.97E+02 pCi/L | | Beta: 2.23E+02 pCi/L | | | |
| 7 G9T19-1-AA-B J5E040000-445-BLK 04/27/2005 11:40 | 4035.0 | | ITA4439 Pr:5/4/05, Ex:1/3/06 | | | | | L4 | 2102 | |
| AmtRec: | | | 35.1 | | Scr Rst: Alpha: | | Beta: | | | |

5/5/2005 8:15:21 AM

Sample Preparation/Analysis

Balance Id: _____

BN I-129 Prp/SepRC5025

Pipet #: _____

TB Gamma by LEPD

Sep1 DT/Tm Tech: _____

5I CLIENT: HANFORD

Report Due: 06/10/2005

Sep2 DT/Tm Tech: _____

Batch: 5124445

pCi/L

Prep Tech: _____

SEQ Batch, Test: None



| Work Order, Lot, Sample Date/Time | Total Amt/Unit | Initial Aliquot Amt/Unit | QC Tracer Prep Date | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|---------------------------------------------------------|-------------------|-----------------------------|-----------------------------------|--------------|--------------------|-------------------|----------------|---------------------------------|--------------------------|-----------|
| 8 G9T19-1-AC-C J5E040000-445-LCS 04/27/2005 11:40 | 4001.2 | | ISD0538 Pr:5/4/05, Ex:11/18/05 | | IFA | | L5 | 2103 | 6/8/05 | |
| | | AmtRec: | | | 37.4 | | | Scr Rst: | Alpha: | Beta: |

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G85L01AC-SAMP Constituent List:

| | | | | | |
|---------------------------------|--------------|------------------|--------------|-------------|---------|
| I-129 | RDL:1.00E+00 | pCi/L | LCL: | UCL: | RPD: |
| G9T191AA-BLK: | | | | | |
| I-129 | RDL:1.00E+00 | pCi/L | LCL: | UCL: | RPD: |
| G9T191AC-LCS: | | | | | |
| I-129 | RDL:5 | pCi/L | LCL:70 | UCL:130 | RPD:20 |
| G85L01AC-SAMP Calc Info: | | | | | |
| Uncert Level (#s): | 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9T191AA-BLK: | | | | | |
| Uncert Level (#s): | 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |
| G9T191AC-LCS: | | | | | |
| Uncert Level (#s): | 2 | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B |

Approved By _____ Date: _____

ICOC Fraction Transfer/Status Report

ByDate: 6/13/2004, 6/18/2005, Batch: '5124445', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments |
|---------|----------|-------------|-------------------------------|-------------------------|
| 5124445 | | | | |
| AC | CalcC | NortonJ | 6/1/2005 8:47:21 AM | |
| SC | | heidelbergt | IsBatched 5/5/2005 8:14:53 AM | ICOC_RADCALC v4.8.08 |
| SC | | NortonJ | InPrep 6/1/2005 8:47:21 AM | RICH-RC-5025 REVISION3 |
| SC | | HoganS | Prep2C 6/8/2005 11:26:04 AM | RICH-RC-5025 REV3 |
| SC | | StringerR | InCnt1 6/8/2005 1:33:33 PM | RICH-RD-0007 REVISION 5 |
| SC | | DAWKINSO | CalcC 6/8/2005 10:17:48 PM | RICH-RD-0007 REVISION 5 |
| AC | | HoganS | 6/8/2005 11:26:04 | |
| AC | | StringerR | 6/8/2005 1:33:33 PM | |
| AC | | DAWKINSO | 6/8/2005 10:17:48 PM | |

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

5/5/2005 8:02:48 AM

Sample Preparation/Analysis

Balance Id: _____

384868, Pacific Northwest National Laboratories ,
Pacific Northwest National Lab

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

Pipet #: _____

Report Due: 06/10/2005

Sep1 DT/Tm Tech: _____

Batch: 5124434 WATER

pCi/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: _____

W04622



| 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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|---------------------|--|-------------------------|----------------|--|--|--|--------------------------------|----------------------|
| 1 G85L0-1-AA | | | | | | | | |
| J5D250207-1-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: VIAL20,LP,2X4LP | #Containers: 4 | | | | Scr Rst: Alpha: 7.85E+02 pCi/L | Beta: 2.93E+02 pCi/L |

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|---------------------|--|----------------------------------|-----------------|--|--|--|--------------------------------|----------------------|
| 2 G8736-1-AA | | | | | | | | |
| J5D260313-1-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 10:34 | | AmtRec: VIAL20,2X500P,5XLP,3X4LP | #Containers: 11 | | | | Scr Rst: Alpha: 1.11E+02 pCi/L | Beta: 5.32E+01 pCi/L |

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|---------------------|--|----------------------------------|-----------------|--|--|--|--------------------------------|----------------------|
| 3 G874K-1-AA | | | | | | | | |
| J5D260313-2-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:06 | | AmtRec: VIAL20,2X500P,5XLP,3X4LP | #Containers: 11 | | | | Scr Rst: Alpha: 4.34E+01 pCi/L | Beta: 2.07E+01 pCi/L |

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|---------------------|--|-------------------------|----------------|--|--|--|--------------------------------|----------------------|
| 4 G88DL-1-AA | | | | | | | | |
| J5D260342-3-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: VIAL20,LP,2X4LP | #Containers: 4 | | | | Scr Rst: Alpha: 6.01E+02 pCi/L | Beta: 2.34E+02 pCi/L |

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|-----------------------|--|-------------------------|----------------|--|--|--|--------------------------------|----------------------|
| 5 G88DL-1-AD-X | | | | | | | | |
| J5D260342-3-DUP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: VIAL20,LP,2X4LP | #Containers: 4 | | | | Scr Rst: Alpha: 6.01E+02 pCi/L | Beta: 2.34E+02 pCi/L |

| | | | | | | | | |
|---------------------|--|-----------------------|----------------|--|--|--|--------------------------------|----------------------|
| 6 G9CC2-1-AA | | | | | | | | |
| J5D270349-6-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/27/2005 11:40 | | AmtRec: 20ML,LP,2X4LP | #Containers: 4 | | | | Scr Rst: Alpha: 4.97E+02 pCi/L | Beta: 2.23E+02 pCi/L |

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|---------------------|--|----------------------|----------------|--|--|--|-----------------|-------|
| 7 G9EVF-1-AA | | | | | | | | |
| J5D280301-3-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 12:35 | | AmtRec: 20ML,500P,LP | #Containers: 3 | | | | Scr Rst: Alpha: | Beta: |

5/5/2005 8:02:49 AM

Sample Preparation/Analysis

Balance Id: _____

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

Pipet #: _____

Report Due: 06/10/2005

Sep1 DT/Tm Tech: _____

Batch: 5124434

pCi/L

Sep2 DT/Tm Tech: _____

SEQ 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 G9T10-1-AA-B | | | | | | | | |
| J5E040000-434-BLK | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: | #Containers: 1 | | | Scr Rst: | Alpha: | Beta: |

| | | | | | | | | |
|-----------------------|--|---------|----------------|--|--|----------|--------|-------|
| 9 G9T10-1-AC-C | | | | | | | | |
| J5E040000-434-LCS | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: | #Containers: 1 | | | Scr Rst: | Alpha: | Beta: |

| | | | | | | | | |
|-------------------------|--|---------|----------------|--|--|----------|--------|-------|
| 10 G9T10-1-AD-BX | | | | | | | | |
| J5E040000-434-MBLK | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: | #Containers: 1 | | | Scr Rst: | Alpha: | Beta: |

| | | | | | | | | |
|-------------------------|--|---------|----------------|--|--|----------|--------|-------|
| 11 G9T10-1-AE-CM | | | | | | | | |
| J5E040000-434-MLCS | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: | #Containers: 1 | | | Scr Rst: | Alpha: | Beta: |

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|-------------------------|--|---------|----------------|--|--|----------|--------|-------|
| 12 G9T10-1-AF-BN | | | | | | | | |
| J5E040000-434-IBLK | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: | #Containers: 1 | | | Scr Rst: | Alpha: | Beta: |

| | | | | | | | | |
|-------------------------|--|---------|----------------|--|--|----------|--------|-------|
| 13 G9T10-1-AG-BN | | | | | | | | |
| J5E040000-434-IBLK | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: | #Containers: 1 | | | Scr Rst: | Alpha: | Beta: |

ICOC Fraction Transfer/Status Report

ByDate: 6/8/2004, 6/13/2005, Batch: '5124434', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments |
|----------------|----------|----------------|----------------------------------|-------------------------|
| 5124434 | | | | |
| AC | | CalcC | WillsL 5/19/2005 11:44:04 | |
| SC | | heidelbergt | IsBatched 5/5/2005 8:02:07 AM | ICOC_RADCALC v4.8.08 |
| SC | | WillsL | InPrep 5/19/2005 11:44:04 AM | RICHRC5007 REVISION 3 |
| SC | | WillsL | Prep2C 6/2/2005 10:20:57 AM | RICHRC5007 REVISION 3 |
| SC | | BlackCL | InCnt1 6/2/2005 10:36:42 AM | RICH-RD-0001 REVISION 3 |
| SC | | BlackCL | CalcC 6/7/2005 7:56:51 AM | RICH-RD-0001 REVISION 3 |
| AC | | WillsL | 6/2/2005 10:20:57 | |
| AC | | BlackCL | 6/2/2005 10:36:42 | |
| AC | | BlackCL | 6/7/2005 7:56:51 AM | |

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

6/9/2005 5:17:21 PM

Sample Preparation/Analysis

Balance Id:n/a

384868, Pacific Northwest National Laboratories,
Pacific Northwest National Lab

FP Tc-99 Prp/SepRC5065
S5

Pipet #: _____

Report Due: 06/10/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 5124426 WATER pCi/L PM, Quote: BG2, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 5124410 BCS8, 5124417 AZS7, 5124418 AWTA, 5124420 CLTL, 5124422 DHSS, 5124426 FPS5, 5124434
ARS6, 5124445 BNTB,

Prep Tech: GiroirB,FinchA

| Work Order, Lot, Sample Date | Total Amt /Unit | Total Acidified/Unit | Initial Aliquot Amt/Unit | Adj Aliq Amt (Un-Acidified) | QC Tracer Prep Date | Count Time Min | Detector Id | Count On Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------|--------------------------------------------------|-----------------------------|---------------------------------------|----------------|-------------|--------------------------------|-----------------------|-----------|
| 1 G8736-1-AH J5D260313-1-SAMP  04/26/2005 10:34 | | | 125.00g,in | 125.00g | | | | | | |
| | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | | Scr Rst: Alpha: 1.11E+02 pCi/L | Beta: 5.32E+01 pCi/L | |
| 2 G874K-1-AH J5D260313-2-SAMP  04/26/2005 09:06 | | | 137.30g,in | 137.30g | | | | | | |
| | | | AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | | | Scr Rst: Alpha: 4.34E+01 pCi/L | Beta: 2.07E+01 pCi/L | |
| 3 G9ETM-1-AD J5D280301-1-SAMP  04/27/2005 11:30 | | | 125.00g,in | 125.00g | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 1.07E+02 pCi/L | Beta: 4.30E+01 pCi/L | |
| 4 G9ETM-1-AF-S J5D280301-1-MS  04/27/2005 11:30 | | | 130.40g,in | 130.40g | TCSG1144 06/01/05,pd 02/15/05,r | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 1.07E+02 pCi/L | Beta: 4.30E+01 pCi/L | |
| 5 G9ETM-1-AG-X J5D280301-1-DUP  04/27/2005 11:30 | | | 125.90g,in | 125.90g | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 1.07E+02 pCi/L | Beta: 4.30E+01 pCi/L | |
| 6 G9ET7-1-AD J5D280301-2-SAMP  04/27/2005 10:55 | | | 132.70g,in | 132.70g | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 6.89E+01 pCi/L | Beta: 8.80E+00 pCi/L | |
| 7 G9EVF-1-AC J5D280301-3-SAMP  04/26/2005 12:35 | | | 138.20g,in | 138.20g | | | | | | |
| | | | AmtRec: 20ML,500P,LP #Containers: 3 | | | | | Scr Rst: Alpha: 4.10E+01 pCi/L | Beta: 1.45E+01 pCi/L | |

6/9/2005 5:17:25 PM

Sample Preparation/Analysis

Balance Id:n/a

FP Tc-99 Prp/SepRC5065
S5

Pipet #: _____

Report Due: 06/10/2005

SI CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5124426

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: FinchA



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

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|-------------------|--|--|------------|----------------|--|--|--|----------|--------|-------|
| 8 G9TXH-1-AA-B | | | 125.90g,in | 125.90g | | | | | | |
| J5E040000-426-BLK | | | | | | | | | | |
| | | | | | | | | | | |
| 04/27/2005 11:30 | | | AmtRec: | #Containers: 1 | | | | Scr Rst: | Alpha: | Beta: |

| | | | | | | | | | | |
|-------------------|--|--|------------|----------------|---------------------------|--|--|----------|--------|-------|
| 9 G9TXH-1-AC-C | | | 125.90g,in | 125.90g | TCSE1720 | | | | | |
| J5E040000-426-LCS | | | | | | | | | | |
| | | | | | | | | | | |
| 04/27/2005 11:30 | | | AmtRec: | #Containers: 1 | 04/19/05,pd 03/10/05,r | | | Scr Rst: | Alpha: | Beta: |

| | | | | | | | | | | |
|--------------------|--|--|---------|----------------|--|--|--|----------|--------|-------|
| 10 G9TXH-1-AD-BN | | | | | | | | | | |
| J5E040000-426-IBLK | | | | | | | | | | |
| | | | | | | | | | | |
| 04/27/2005 11:30 | | | AmtRec: | #Containers: 1 | | | | Scr Rst: | Alpha: | Beta: |

Comments: G8736-SAMP "Comments: gamma added con HNO3 to sample until pH<=2. Bg"
 G874K-SAMP "Comments: gamma added con HNO3 to sample until pH<=2. Bg"

All Clients for Batch:
 384868, Pacific Northwest National Labortories Pacific Northwest National Lab, BG2, 57671

G87361AH-SAMP Constituent List:

| | | | | | |
|-------|--------|-------|--------|---------|--------|
| Tc-99 | RDL:15 | pCi/L | LCL:70 | UCL:130 | RPD:20 |
|-------|--------|-------|--------|---------|--------|

G9ETM1AF-MS:

G9TXH1AA-BLK:

| | | | | | |
|-------|--------|-------|------|------|------|
| Tc-99 | RDL:15 | pCi/L | LCL: | UCL: | RPD: |
|-------|--------|-------|------|------|------|

G9TXH1AC-LCS:

| | | | | | |
|-------|--------|-------|--------|---------|--------|
| Tc-99 | RDL:15 | pCi/L | LCL:70 | UCL:130 | RPD:20 |
|-------|--------|-------|--------|---------|--------|

G9TXH1AD-IBLK:

| | | | | | |
|-------|--------|-------|------|------|------|
| Tc-99 | RDL:15 | pCi/L | LCL: | UCL: | RPD: |
|-------|--------|-------|------|------|------|

G87361AH-SAMP Calc Info:

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

6/9/2005 5:17:27 PM

Sample Preparation/Analysis

Balance Id: _____

FP Tc-99 Prp/SepRC5065
S5

Pipet #: _____

Report Due: 06/10/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5124426

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: _____



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

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|-----------------------|--|------------------|--------------|-------------|---------|--|--|--|--|--|
| G9ETM1AF-MS: | | | | | | | | | | |
| Uncert Level (#s) : 2 | | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B | | | | | |
| G9TXH1AA-BLK: | | | | | | | | | | |
| Uncert Level (#s) : 2 | | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B | | | | | |
| G9TXH1AC-LCS: | | | | | | | | | | |
| Uncert Level (#s) : 2 | | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B | | | | | |
| G9TXH1AD-IBLK: | | | | | | | | | | |
| Uncert Level (#s) : 2 | | Decay to SaDt: Y | Blk Subt.: N | Sci.Not.: Y | ODRs: B | | | | | |

Approved By _____ Date: _____

ICOC Fraction Transfer/Status Report

ByDate: 6/13/2004, 6/18/2005, Batch: '5124426', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | Comments | |
|----------------|----------|--------------|------------------|----------------------|-------------------------|
| 5124426 | | | | | |
| AC | | CalcC | FinchA | 6/9/2005 5:14:42 PM | |
| SC | | heidelbergt | IsBatched | 5/5/2005 8:02:07 AM | ICOC_RADCALC v4.8.08 |
| SC | | FinchA | InPrep | 6/9/2005 5:14:42 PM | rich-rc-5065 revision 5 |
| SC | | FinchA | Sep1C | 6/9/2005 6:17:09 PM | RICH-RC-5065 REVISION 5 |
| SC | | DAWKINSO | InCnt1 | 6/9/2005 6:21:52 PM | RICH-RD-0001 REVISION 3 |
| SC | | StringerR | CalcC | 6/10/2005 1:36:02 PM | RICH-RD-0001 REVISION 3 |
| AC | | | FinchA | 6/9/2005 6:17:09 PM | |
| AC | | | DAWKINSO | 6/9/2005 6:21:52 PM | |
| AC | | | StringerR | 6/10/2005 1:36:02 PM | |

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

5/31/2005 8:27:19 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratories
Pacific Northwest National Lab

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

Pipet #: 229

Report Due: 06/10/2005

Sep1 DT/Tm Tech: NA

Batch: 5124422 WATER

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: NA

SEQ Batch, Test: None

Prep Tech: GiroirB

| 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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|----------------------------------------------------------------------------------|-----------|--|----------|--|-----------------------|--|----------------------|--|
| 1 G8736-1-AJ | 27.10g,in | | | | | | | |
| J5D260313-1-SAMP | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 10:34 | | | | | | | | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | Scr Rst: | | Alpha: 1.11E+02 pCi/L | | Beta: 5.32E+01 pCi/L | |

| | | | | | | | | |
|----------------------------------------------------------------------------------|-----------|--|----------|--|-----------------------|--|----------------------|--|
| 2 G874K-1-AJ | 25.20g,in | | | | | | | |
| J5D260313-2-SAMP | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 09:06 | | | | | | | | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | Scr Rst: | | Alpha: 4.34E+01 pCi/L | | Beta: 2.07E+01 pCi/L | |

| | | | | | | | | |
|----------------------------------------------------------------------------------|-----------|--|---------------------------|--|-----------------------|--|----------------------|--|
| 3 G874K-1-AL-S | 27.60g,in | | UNSF2418 | | | | | |
| J5D260313-2-MS | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 09:06 | | | 04/08/05,pd 09/16/04,r | | | | | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | Scr Rst: | | Alpha: 4.34E+01 pCi/L | | Beta: 2.07E+01 pCi/L | |

| | | | | | | | | |
|----------------------------------------------------------------------------------|-----------|--|----------|--|-----------------------|--|----------------------|--|
| 4 G874K-1-AM-X | 27.30g,in | | | | | | | |
| J5D260313-2-DUP | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 09:06 | | | | | | | | |
| AmtRec: VIAL20,2X500P,5XLP,3X4LP #Containers: 11 | | | Scr Rst: | | Alpha: 4.34E+01 pCi/L | | Beta: 2.07E+01 pCi/L | |

| | | | | | | | | |
|------------------------------------------------------------------------------------|-----------|--|----------|--|--------|--|-------|--|
| 5 G9TWT-1-AA-B | 29.30g,in | | | | | | | |
| J5E040000-422-BLK | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 09:06 | | | | | | | | |
| AmtRec: #Containers: 1 | | | Scr Rst: | | Alpha: | | Beta: | |

| | | | | | | | | |
|------------------------------------------------------------------------------------|-----------|--|---------------------------|--|--------|--|-------|--|
| 6 G9TWT-1-AC-C | 25.70g,in | | UNSF2419 | | | | | |
| J5E040000-422-LCS | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 09:06 | | | 04/08/05,pd 09/16/04,r | | | | | |
| AmtRec: #Containers: 1 | | | Scr Rst: | | Alpha: | | Beta: | |

| | | | | | | | | |
|------------------------------------------------------------------------------------|-----------|--|---------------------------|--|--------|--|-------|--|
| 7 G9TWT-1-AD-C | 26.70g,in | | UNSF2420 | | | | | |
| J5E040000-422-LCS | | | | | | | | |
|  | | | | | | | | |
| 04/26/2005 09:06 | | | 04/08/05,pd 09/16/04,r | | | | | |
| AmtRec: #Containers: 1 | | | Scr Rst: | | Alpha: | | Beta: | |

5/31/2005 8:27:22 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: 229

Report Due: 06/10/2005

Sep1 DT/Tm Tech: NA

Batch: 5124422 ug/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech: NA

Prep Tech: ,GiroirB



| 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: G8736-SAMP "Comments: gamma added con HNO3 to sample until pH<=2. Bg"
G874K-SAMP "Comments: gamma added con HNO3 to sample until pH<=2. Bg"

pH verified @ <= 2 in prep. Bg

All Clients for Batch:
384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G87361AJ-SAMP Constituent List:

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

G874K1AL-MS:

G9TWT1AA-BLK:

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

G9TWT1AC-LCS:

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

G9TWT1AD-LCS:

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

G87361AJ-SAMP Calc Info:

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

G874K1AL-MS:

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

G9TWT1AA-BLK:

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

G9TWT1AC-LCS:

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

G9TWT1AD-LCS:

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

Approved By _____ Date: _____

4/22/2005 2:48:27 PM

Sample Preparation/Analysis

Balance Id: _____

384868, Pacific Northwest National Laboratories,
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Report Due: 06/06/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5112430 WATER

mg/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: _____

SEQ 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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|---------------------|--|---------------------|----------------|--|--|--|----------|--------------|
| 1 G8WM9-1-AA | | | | | | | | |
| J5D210342-1-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:08 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: | Alpha: Beta: |

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|-----------------------|--|---------------------|----------------|--|--|--|----------|--------------|
| 2 G8WM9-1-AC-S | | | | | | | | |
| J5D210342-1-MS | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:08 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: | Alpha: Beta: |

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|-----------------------|--|---------------------|----------------|--|--|--|----------|--------------|
| 3 G8WM9-1-AD-D | | | | | | | | |
| J5D210342-1-MSD | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:08 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: | Alpha: Beta: |

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|-----------------------|--|---------------------|----------------|--|--|--|----------|--------------|
| 4 G8WM9-1-AE-X | | | | | | | | |
| J5D210342-1-DUP | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:08 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: | Alpha: Beta: |

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|---------------------|--|---------------------|----------------|--|--|--|----------|--------------|
| 5 G8WN6-1-AA | | | | | | | | |
| J5D210347-1-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:11 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: | Alpha: Beta: |

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|-----------------------|--|---------|----------------|--|--|--|----------|--------------|
| 6 G81VN-1-AA-B | | | | | | | | |
| J5D220000-430-BLK | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:08 | | AmtRec: | #Containers: 1 | | | | Scr Rst: | Alpha: Beta: |

4/22/2005 2:48:28 PM

Sample Preparation/Analysis

Balance Id: _____

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

Pipet #: _____

EA Chromium, Hexavalent (7196A)

Report Due: 06/06/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5112430

mg/L

Sep2 DT/Tm Tech: _____

SEQ 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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|-------------------|---------|----------------|----------|--------|-------|--|--|--|
| 7 G81VN-1-AC-C | | | | | | | | |
| J5D220000-430-LCS | | | | | | | | |
| | | | | | | | | |
| 04/21/2005 13:08 | AmtRec: | #Containers: 1 | Scr Rst: | Alpha: | Beta: | | | |

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G8WM91AA-SAMP Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G8WM91AC-MS Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G8WM91AD-MSD:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G81VN1AA-BLK:

HEXCHROME RDL:0.002 mg/L LCL: UCL: RPD:

G81VN1AC-LCS:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G8WM91AA-SAMP Calc Info:

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

G8WM91AC-MS Calc Info:

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

G8WM91AD-MSD:

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

G81VN1AA-BLK:

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

G81VN1AC-LCS:

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

Approved By _____

Date: _____

4/26/2005 1:32:20 PM

Sample Preparation/Analysis

Balance Id: -

384868, Pacific Northwest National Laboratories ,
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Report Due: 06/09/2005

W04622

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: -

Batch: 5116415 WATER

mg/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: -

SEQ 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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| 1 G85L2-1-AA J5D250207-2-SAMP | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |

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|---------------------------------------------|--|---------------------|----------------|--|--|--|-----------------------|--|
| 2 G85L2-1-AC-S J5D250207-2-MS | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |

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|----------------------------------------------|--|---------------------|----------------|--|--|--|-----------------------|--|
| 3 G85L2-1-AD-D J5D250207-2-MSD | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |

| | | | | | | | | |
|----------------------------------------------|--|---------------------|----------------|--|--|--|-----------------------|--|
| 4 G85L2-1-AE-X J5D250207-2-DUP | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |

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|---------------------------------------------|--|---------------------|----------------|--|--|--|-----------------------|--|
| 5 G85L3-1-AA J5D250207-3-SAMP | | | | | | | | |
| 04/25/2005 13:20 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |

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|---------------------------------------------|--|---------------------|----------------|--|--|--|-----------------------|--|
| 6 G86HG-1-AA J5D260136-1-SAMP | | | | | | | | |
| 04/25/2005 15:34 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |

4/26/2005 1:32:21 PM

Sample Preparation/Analysis

Balance Id: _____

384868, Pacific Northwest National Laboratories ,
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Report Due: 06/09/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5116415 WATER mg/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: _____

SEQ 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: |
|--------------------------------------|-------------------|-----------------------------|------------------------|-------------------|----------------|---------------------------------|--------------------------|-----------|
| 7 G86HQ-1-AA | | | | | | | | |
| J5D260136-2-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/25/2005 15:30 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: Beta: | |
| 8 G87Q3-1-AA-B | | | | | | | | |
| J5D260000-415-BLK | | | | | | | | |
| | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: | #Containers: 1 | | | | Scr Rst: Alpha: Beta: | |
| 9 G87Q3-1-AC-C | | | | | | | | |
| J5D260000-415-LCS | | | | | | | | |
| | | | | | | | | |
| 04/25/2005 11:21 | | AmtRec: | #Containers: 1 | | | | Scr Rst: Alpha: Beta: | |

Comments:

All Clients for Batch:
384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G85L21AA-SAMP Constituent List:
 HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G85L21AC-MS Constituent List:
 HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G85L21AD-MSD:
 HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G87Q31AA-BLK:
 HEXCHROME RDL:0.002 mg/L LCL: UCL: RPD:

G87Q31AC-LCS:
 HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G85L21AA-SAMP Calc Info:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/26/2005 1:32:21 PM

Sample Preparation/Analysis

Balance Id: _____

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

Pipet #: _____

Report Due: 06/09/2005

Sep1 DT/Tm Tech: _____

Batch: 5116415 mg/L
SEQ Batch, Test: None

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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G85L21AC-MS Calc Info:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G85L21AD-MSD:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G87Q31AA-BLK:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G87Q31AC-LCS:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

4/27/2005 2:19:45 PM

Sample Preparation/Analysis

Balance Id:

384868, Pacific Northwest National Laboratories ,
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Report Due: 06/10/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 5117510 WATER

mg/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

W04622



| 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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|---------------------|--|---------------------|----------------|--|--|--|--------------------------------|----------------------|
| 1 G88DD-1-AA | | | | | | | | |
| J5D260342-1-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 06:57 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: 5.15E+02 pCi/L | Beta: 2.81E+02 pCi/L |

| | | | | | | | | |
|-----------------------|--|---------------------|----------------|--|--|--|--------------------------------|----------------------|
| 2 G88DD-1-AC-S | | | | | | | | |
| J5D260342-1-MS | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 06:57 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: 5.15E+02 pCi/L | Beta: 2.81E+02 pCi/L |

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|-----------------------|--|---------------------|----------------|--|--|--|--------------------------------|----------------------|
| 3 G88DD-1-AD-D | | | | | | | | |
| J5D260342-1-MSD | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 06:57 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: 5.15E+02 pCi/L | Beta: 2.81E+02 pCi/L |

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|-----------------------|--|---------------------|----------------|--|--|--|--------------------------------|----------------------|
| 4 G88DD-1-AE-X | | | | | | | | |
| J5D260342-1-DUP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 06:57 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: 5.15E+02 pCi/L | Beta: 2.81E+02 pCi/L |

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|---------------------|--|---------------------|----------------|--|--|--|--------------------------------|----------------------|
| 5 G88DK-1-AA | | | | | | | | |
| J5D260342-2-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 09:03 | | AmtRec: VIAL20,500P | #Containers: 2 | | | | Scr Rst: Alpha: 6.09E+02 pCi/L | Beta: 2.27E+02 pCi/L |

| | | | | | | | | |
|-----------------------|--|---------|----------------|--|--|--|-----------------|-------|
| 6 G9A50-1-AA-B | | | | | | | | |
| J5D270000-510-BLK | | | | | | | | |
| | | | | | | | | |
| 04/26/2005 06:57 | | AmtRec: | #Containers: 1 | | | | Scr Rst: Alpha: | Beta: |

4/29/2005 9:53:53 AM

Sample Preparation/Analysis

Balance Id: _____

384868, Pacific Northwest National Laboratories,
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Report Due: 06/10/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5119260 WATER mg/L

PM, Quote: BG2, 57671

Sep2 DT/Tm Tech: _____

SEQ 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: |
|--------------------------------------|-------------------|-----------------------------|------------------------|-------------------|----------------|---------------------------------|--------------------------------|----------------------|
| 7 G9CCP-1-AA | | | | | | | | |
| J5D270349-4-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/27/2005 08:00 | | AmtRec: 20ML,500P | | #Containers: 2 | | | Scr Rst: Alpha: 5.56E+02 pCi/L | Beta: 2.46E+02 pCi/L |
| 8 G9CCT-1-AA | | | | | | | | |
| J5D270349-5-SAMP | | | | | | | | |
| | | | | | | | | |
| 04/27/2005 11:40 | | AmtRec: 20ML,500P | | #Containers: 2 | | | Scr Rst: Alpha: 4.40E+02 pCi/L | Beta: 2.23E+02 pCi/L |
| 9 G9G0V-1-AA-B | | | | | | | | |
| J5D290000-260-BLK | | | | | | | | |
| | | | | | | | | |
| 04/27/2005 07:40 | | AmtRec: | | #Containers: 1 | | | Scr Rst: Alpha: | Beta: |
| 10 G9G0V-1-AC-C | | | | | | | | |
| J5D290000-260-LCS | | | | | | | | |
| | | | | | | | | |
| 04/27/2005 07:40 | | AmtRec: | | #Containers: 1 | | | Scr Rst: Alpha: | Beta: |

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratories Pacific Northwest National Lab, BG2, 57671

G9CA81AA-SAMP Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G9CA81AC-MS Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G9CA81AD-MSD:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

4/29/2005 9:53:54 AM

Sample Preparation/Analysis

Balance Id: _____

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)

Pipet #: _____

Report Due: 06/10/2005

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 5119260

mg/L

Sep2 DT/Tm Tech: _____

SEQ 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: |
|--------------------------------------|-------------------|-----------------------------|------------------------|-------------------|----------------|---------------------------------|--------------------------|-----------|
|--------------------------------------|-------------------|-----------------------------|------------------------|-------------------|----------------|---------------------------------|--------------------------|-----------|

G9G0V1AA-BLK:
HEXCHROME RDL:0.002 mg/L LCL: UCL: RPD:

G9G0V1AC-LCS:
HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

G9CA81AA-SAMP Calc Info:
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G9CA81AC-MS Calc Info:
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G9CA81AD-MSD:
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G9G0V1AA-BLK:
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

G9G0V1AC-LCS:
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____