Analytical Data Package Prepared For

Brown and Caldwell

Yerington Air Quality - Event #81

Radiochemical Analysis By

STL Richland

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

Assigned Laboratory Code: STLR

Data Package Contains _____ Pages

Report No.: 32890

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
31902		000473	J6F140270-1	H7DWT1AG	9H7DWT10	6179343
		000473	J6F140270-1	H7DWT1AA	9H7DWT10	6179344
		000473	J6F140270-1	H7DWT1AE	9H7DWT10	6179346
		000473	J6F140270-1	H7DWT1AF	9H7DWT10	6179351
		000473	J6F140270-1	H7DWT1AC	9H7DWT10	6179354
		000473	J6F140270-1	H7DWT1AD	9H7DWT10	6179357
		000474	J6F140270-2	H7DXC1AG	9H7DXC10	6167169
		000474	J6F140270-2	H7DXC1AA	9H7DXC10	6167182
		000474	J6F140270-2	H7DXC1AE	9H7DXC10	6167184
		000474	J6F140270-2	H7DXC1AF	9H7DXC10	6167185
		000474	J6F140270-2	H7DXC1AC	9H7DXC10	6167188
		000474	J6F140270-2	H7DXC1AD	9H7DXC10	6167192
		000477	J6F140270-3	H7DXD1AG	9H7DXD10	6167169
		000477	J6F140270-3	H7DXD1AA	9H7DXD10	6167182
		000477	J6F140270-3	H7DXD1AE	9H7DXD10	6167184
		000477	J6F140270-3	H7DXD1AF	9H7DXD10	6167185
		000477	J6F140270-3	H7DXD1AC	9H7DXD10	6167188
		000477	J6F140270-3	H7DXD1AD	9H7DXD10	6167192
		000478	J6F140270-4	H7DXF1AG	9H7DXF10	6167169
		000478	J6F140270-4	H7DXF1AA	9H7DXF10	6167182
		000478	J6F140270-4	H7DXF1AE	9H7DXF10	6167184
		000478	J6F140270-4	H7DXF1AF	9H7DXF10	6167185
		000478	J6F140270-4	H7DXF1AC	9H7DXF10	6167188
		000478	J6F140270-4	H7DXF1AD	9H7DXF10	6167192
		000479	J6F140270-5	H7DXH1AG	9H7DXH10	6167169
		000479	J6F140270-5	H7DXH1AA	9H7DXH10	6167182

Report No.: 32890

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
31902		000479	J6F140270-5	H7DXH1AE	9H7DXH10	6167184
		000479	J6F140270-5	H7DXH1AF	9H7DXH10	6167185
		000479	J6F140270-5	H7DXH1AC	9H7DXH10	6167188
		000479	J6F140270-5	H7DXH1AD	9H7DXH10	6167192
		P-0644	J6F140270-6	H7DXJ1AG	9H7DXJ10	6167169
		P-0644	J6F140270-6	H7DXJ1AA	9H7DXJ10	6167182
		P-0644	J6F140270-6	H7DXJ1AE	9H7DXJ10	6167184
		P-0644	J6F140270-6	H7DXJ1AF	9H7DXJ10	6167185
		P-0644	J6F140270-6	H7DXJ1AC	9H7DXJ10	6167188
		P-0644	J6F140270-6	H7DXJ1AD	9H7DXJ10	6167192
		P-0645	J6F140270-7	H7DXK1AG	9H7DXK10	6167169
		P-0645	J6F140270-7	H7DXK1AA	9H7DXK10	6167182
		P-0645	J6F140270-7	H7DXK1AE	9H7DXK10	6167184
		P-0645	J6F140270-7	H7DXK1AF	9H7DXK10	6167185
		P-0645	J6F140270-7	H7DXK1AC	9H7DXK10	6167188
		P-0645	J6F140270-7	H7DXK1AD	9H7DXK10	6167192
		P-0646	J6F140270-8	H7DXL1AG	9H7DXL10	6167169
		P-0646	J6F140270-8	H7DXL1AA	9H7DXL10	6167182
		P-0646	J6F140270-8	H7DXL1AE	9H7DXL10	6167184
		P-0646	J6F140270-8	H7DXL1AF	9H7DXL10	6167185
		P-0646	J6F140270-8	H7DXL1AC	9H7DXL10	6167188
		P-0646	J6F140270-8	H7DXL1AD	9H7DXL10	6167192
		P-0647	J6F140270-9	H7DXM1AG	9H7DXM10	6167169
		P-0647	J6F140270-9	H7DXM1AA	9H7DXM10	6167182
		P-0647	J6F140270-9	H7DXM1AE	9H7DXM10	6167184
		P-0647	J6F140270-9	H7DXM1AF	9H7DXM10	6167185
		P-0647	J6F140270-9	H7DXM1AC	9H7DXM10	6167188
		P-0647	J6F140270-9	H7DXM1AD	9H7DXM10	6167192
		P-0648	J6F140270-10	H7DXP1AG	9H7DXP10	6167169
		P-0648	J6F140270-10	H7DXP1AA	9H7DXP10	6167182
		P-0648	J6F140270-10	H7DXP1AE	9H7DXP10	6167184
		P-0648	J6F140270-10	H7DXP1AF	9H7DXP10	6167185
		P-0648	J6F140270-10	H7DXP1AC	9H7DXP10	6167188
		P-0648	J6F140270-10	H7DXP1AD	9H7DXP10	6167192
		P-0649	J6F140270-11	H7DXQ1AG	9H7DXQ10	6167169
		P-0649	J6F140270-11	H7DXQ1AA	9H7DXQ10	6167182
		P-0649	J6F140270-11	H7DXQ1AE	9H7DXQ10	6167184
		P-0649	J6F140270-11	H7DXQ1AF	9H7DXQ10	6167185
		P-0649	J6F140270-11	H7DXQ1AC	9H7DXQ10	6167188

Report No.: 32890

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
31902		P-0649	J6F140270-11	H7DXQ1AD	9H7DXQ10	6167192
		P-0651	J6F140270-12	H7DXV1AG	9H7DXV10	6167169
		P-0651	J6F140270-12	H7DXV1AA	9H7DXV10	6167182
		P-0651	J6F140270-12	H7DXV1AE	9H7DXV10	6167184
		P-0651	J6F140270-12	H7DXV1AF	9H7DXV10	6167185
		P-0651	J6F140270-12	H7DXV1AC	9H7DXV10	6167188
		P-0651	J6F140270-12	H7DXV1AD	9H7DXV10	6167192
		P-0652	J6F140270-13	H7DX01AG	9H7DX010	6167169
		P-0652	J6F140270-13	H7DX01AA	9H7DX010	6167182
		P-0652	J6F140270-13	H7DX01AE	9H7DX010	6167184
		P-0652	J6F140270-13	H7DX01AF	9H7DX010	6167185
		P-0652	J6F140270-13	H7DX01AC	9H7DX010	6167188
		P-0652	J6F140270-13	H7DX01AD	9H7DX010	6167192

SEVERN TRENT STL

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Certificate of Analysis

July 31, 2006

Brown & Caldwell
2701 Prospect Park Drive
Rancho Cordova, CA 95670

Attention: Guy Graening

Date Received at Lab	:	June 14, 2006
Project Name	:	Air Quality Monitoring Yerington Mine
Project Number	:	121243
Event Number	:	81
PO Number	:	129682.001
Sample Type	:	Thirteen (13) Filters
SDG Number	:	31902

CASE NARRATIVE

I. Introduction

On June 14, 2006, thirteen filter samples were received at the STL Richland (STLR) laboratory for radiochemical analysis. Upon receipt, the samples were assigned the STLR identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Number J6F140270.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in. On June 16, 2006, STL-Sacramento requested that we send sample 000473 back to them. We did and they returned it on June 26, 2006. The rest of the samples were started without this one. It was run with another group of samples.

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 uncertainties.

The analysis requested was:

Alpha Spectroscopy
Thorium-228, -230, -232 by method RICH-RC-5087
Uranium-234, -235, -238 by method RICH-RC-5067
Gas Proportional Counters
Gross Alpha by method STL-RICHRC5016/5014
Gross Beta by method STL-RICHRC5016/5014
Radium-228 by method STL RICH-RC-5005
Alpha Scintillation Counter

Radium-226 by method STL RICH-RC-5005

IV. Quality Control

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

V. Comments

Thorium-228, -230, -232:

The samples were processed in two batches: 6167182 and 6179344. In the first batch, the tracer yields exceeded the 115% limit due to either a counting error associated with the tracer count or Th-234 contribution from the uranium associated with the sample. Except as noted, the LCS, batch blank and sample results are within analytical requirements.

Uranium-234, -235, -238:

The LCS, batch blank and sample results are within analytical requirements.

Gross Alpha Analysis:

The samples were processed in two batches: 6167184 and 6179346. On the first count of batch 6167184 the LCS had a 73% recovery. It was recounted with an 87% recovery. Data is accepted. Except as noted, the LCS, batch blank and sample results are within analytical requirements.

Gross Beta Analysis:

In batch 6167185 samples 00474, 000477 and 000478 do not meet CRDL but their results >MDA>CRDL. In batch 6179351 the MDC on sample 000473 slightly exceeded the CRDL of 5 pCi/L. However, the sample results exceeded the CRDL by a factor of two. Except as noted, the LCS, batch blank and sample results are within acceptance limits.

Radium-228 Analysis:

The LCS, batch blank and sample results are within analytical requirements.

Radium-226 Analysis:

The LCS, batch blank and sample results are within analytical requirements.

Brown and Caldwell
July 31, 2006

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

Reviewed and approved:

Sherryl A. Adam
Project Manager

Adam, Sherryl

From: Welch, Summer
Sent: Monday, June 26, 2006 12:40 PM
To: Adam, Sherryl
Subject: RE: Brown & Caldwell

Sherryl, We received this sample back today. Do you want it re-entered into the same lot? They did not send another coc so that would be easiest. Thanks

---

From: Adam, Sherryl
Sent: Friday, June 16, 2006 1:29 PM
To: Welch, Summer
Subject: RE: Brown & Caldwell

Thank you.

From: Welch, Summer
Sent: Friday, June 16, 2006 1:27 PM
To: Adam, Sherryl
Subject: RE: Brown & Caldwell

DONE

From: Adam, Sherryl
Sent: Friday, June 16, 2006 12:35 PM
To: Welch, Summer
Subject: RE: Brown & Caldwell

OK...so can we pull this filter out and send it back to them? Or bring it to me and I will send it? I'm sure that no one will start this job before a week or so.

From: Welch, Summer
Sent: Friday, June 16, 2006 11:57 AM
To: Adam, Sherryl
Subject: RE: Brown & Caldwell

THESE SAMPLES WERE LABELED AND ON THE SHELF ON WEDNESDAY. LOT # J6F140270.

From: Adam, Sherryl
Sent: Friday, June 16, 2006 10:35 AM
To: Welch, Summer
Subject: FW: Brown & Caldwell

Summer,
Can you check into this please? And let me know? Thanks.

From: Dahl, Karen
Sent: Friday, June 16, 2006 10:15 AM
To: Adam, Sherryl
Subject: Brown & Caldwell

Hi Sherryl. Need to find out if your lab has started on G6F020219 - sample 000473. You would have received these on Wednesday. If not, can you please send this filter back to us. You can use FED-EX number 249787795

Karen Dahl
Project Manager
STL Sacramento
(916) 374-4384 Phone
(916) 372-7768 FAX

Confidentiality Notice: The information contained in this message is privileged and confidential information intended only for the use of the addressee. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone at (916) 374-4384.

Drinking Water Method Cross References

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

Uncertainty Estimation

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

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, *u_c the combined uncertainty.* The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

STL Richland STLR

Ordered by Client Sample ID, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No: 31902

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC|MDA	RER2
000473	H7DWT1AG	U-234	0.0842 +- 0.215	ND	pCi/sample	94%	0.504	
		U-235	0.00000 +- 0.258	ND	pCi/sample	94%	0.285	
		U-238	-0.0421 +- 0.0600	ND	pCi/sample	94%	0.595	
000473	H7DWT1AA	TH-228	-0.0393 +- 0.147	ND	pCi/sample	106%	0.423	
		TH-230	0.203 +- 0.188	ND	pCi/sample	106%	0.222	
		TH-232	0.00000 +- 0.0906	ND	pCi/sample	106%	0.1	
000473	H7DWT1AE	ALPHA	3.41 +- 3.16	ND	pCi/sample	100%	5.32	
000473	H7DWT1AF	BETA	12.5 +- 3.79	=	pCi/sample	100%	5.66	
000473	H7DWT1AC	RA-226	0.509 +- 0.530	ND	pCi/sample	105%	0.859	
000473	H7DWT1AD	RA-228	1.37 +- 1.13	ND	pCi/sample	95%	2.38	
000474	H7DXC1AG	U-234	0.00000 +- 0.226	ND	pCi/sample	100%	0.25	
		U-235	-0.0185 +- 0.0371	ND	pCi/sample	100%	0.442	
		U-238	0.00000 +- 0.226	ND	pCi/sample	100%	0.25	
000474	H7DXC1AA	TH-228	0.0868 +- 0.246	ND	pCi/sample	113%	0.521	
		TH-230	0.390 +- 0.272	=	pCi/sample	113%	0.246	
		TH-232	0.0410 +- 0.0824	ND	pCi/sample	113%	0.111	
000474	H7DXC1AE	ALPHA	8.23 +- 4.33	=	pCi/sample	100%	5.05	
000474	H7DXC1AF	BETA	13.1 +- 3.81	=	pCi/sample	100%	5.52	
000474	H7DXC1AC	RA-226	0.302 +- 0.571	ND	pCi/sample	87%	1.01	
000474	H7DXC1AD	RA-228	2.08 +- 1.24	ND	pCi/sample	80%	2.48	
000477	H7DXD1AG	U-234	1.16 +- 0.705	=	pCi/sample	104%	0.469	
		U-235	0.00000 +- 0.240	ND	pCi/sample	104%	0.266	
		U-238	0.568 +- 0.490	=	pCi/sample	104%	0.469	
000477	H7DXD1AA	TH-228	0.191 +- 0.281	ND	pCi/sample	87%	0.515	
		TH-230	0.928 +- 0.450	=	pCi/sample	87%	0.272	
		TH-232	0.272 +- 0.253	ND	pCi/sample	87%	0.333	
000477	H7DXD1AE	ALPHA	7.94 +- 4.32	=	pCi/sample	100%	5.15	
000477	H7DXD1AF	BETA	19.5 +- 4.58	=	pCi/sample	100%	5.57	
000477	H7DXD1AC	RA-226	0.443 +- 0.481	ND	pCi/sample	95%	0.772	
000477	H7DXD1AD	RA-228	0.820 +- 0.987	ND	pCi/sample	86%	2.18	

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

= ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary

STL Richland STLR

Ordered by Client Sample ID, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No: 31902

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC|MDA	RER2
000478	H7DXF1AG	U-234	0.178 +- 0.254	ND	pCi/sample	98%	0.242	
		U-235	0.0714 +- 0.182	ND	pCi/sample	98%	0.427	
		U-238	-0.0357 +- 0.0508	ND	pCi/sample	98%	0.504	
000478	H7DXF1AA	TH-228	0.0824 +- 0.165	ND	pCi/sample	109%	0.329	
		TH-230	0.779 +- 0.427	=	pCi/sample	109%	0.141	
		TH-232	0.104 +- 0.148	ND	pCi/sample	109%	0.141	
000478	H7DXF1AE	ALPHA	9.12 +- 4.50	=	pCi/sample	100%	5.06	
000478	H7DXF1AF	BETA	17.0 +- 4.21	=	pCi/sample	100%	5.34	
000478	H7DXF1AC	RA-226	-0.1140 +- 0.266	ND	pCi/sample	93%	0.63	
000478	H7DXF1AD	RA-228	1.16 +- 1.14	ND	pCi/sample	84%	2.47	
000479	H7DXH1AG	U-234	0.111 +- 0.223	ND	pCi/sample	88%	0.302	
		U-235	0.00000 +- 0.273	ND	pCi/sample	88%	0.302	
		U-238	-0.0223 +- 0.0447	ND	pCi/sample	88%	0.533	
000479	H7DXH1AA	TH-228	0.109 +- 0.156	ND	pCi/sample	114%	0.148	
		TH-230	0.363 +- 0.282	=	pCi/sample	114%	0.14	
		TH-232	0.00000 +- 0.127	ND	pCi/sample	114%	0.14	
000479	H7DXH1AE	ALPHA	1.77 +- 2.39	ND	pCi/sample	100%	4.51	
000479	H7DXH1AF	BETA	3.04 +- 2.66	ND	pCi/sample	100%	5.17	
000479	H7DXH1AC	RA-226	-0.1840 +- 0.384	ND	pCi/sample	96%	0.837	
000479	H7DXH1AD	RA-228	0.347 +- 0.843	ND	pCi/sample	86%	1.96	
P-0644	H7DXJ1AG	U-234	0.167 +- 0.299	ND	pCi/sample	92%	0.59	
		U-235	0.0794 +- 0.211	ND	pCi/sample	92%	0.521	
		U-238	0.142 +- 0.300	ND	pCi/sample	92%	0.672	
P-0644	H7DXJ1AA	TH-228	0.0649 +- 0.130	ND	pCi/sample	122%	0.259	
		TH-230	0.409 +- 0.268	=	pCi/sample	122%	0.111	
		TH-232	0.0205 +- 0.0915	ND	pCi/sample	122%	0.245	
P-0644	H7DXJ1AE	ALPHA	5.31 +- 3.56	=	pCi/sample	100%	4.92	
P-0644	H7DXJ1AF	BETA	14.2 +- 3.78	=	pCi/sample	100%	5.15	
P-0644	H7DXJ1AC	RA-226	0.209 +- 0.405	ND	pCi/sample	92%	0.725	
P-0644	H7DXJ1AD	RA-228	0.128 +- 0.887	ND	pCi/sample	83%	2.08	

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

= ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary

STL Richland STLR

Ordered by Client Sample ID, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No: 31902

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC|MDA	RER2
P-0645	H7DXK1AG	U-234	0.0747 +- 0.199	ND	pCi/sample	105%	0.491	
		U-235	0.0669 +- 0.199	ND	pCi/sample	105%	0.525	
		U-238	-0.0315 +- 0.0319	ND	pCi/sample	105%	0.525	
P-0645	H7DXK1AA	TH-228	0.106 +- 0.185	ND	pCi/sample	117%	0.355	
		TH-230	0.379 +- 0.264	=	pCi/sample	117%	0.24	
		TH-232	-0.0399 +- 0.0569	ND	pCi/sample	117%	0.294	
P-0645	H7DXK1AE	ALPHA	2.50 +- 2.80	ND	pCi/sample	100%	5.04	
P-0645	H7DXK1AF	BETA	14.4 +- 3.69	=	pCi/sample	100%	4.84	
P-0645	H7DXK1AC	RA-226	-0.2700 +- 0.464	ND	pCi/sample	82%	1.09	
P-0645	H7DXK1AD	RA-228	0.210 +- 0.977	ND	pCi/sample	75%	2.3	
P-0646	H7DXL1AG	U-234	-0.0432 +- 0.0393	ND	pCi/sample	96%	0.611	
		U-235	-0.0173 +- 0.0246	ND	pCi/sample	96%	0.494	
		U-238	-0.0519 +- 0.0432	ND	pCi/sample	96%	0.641	
P-0646	H7DXL1AA	TH-228	-0.0483 +- 0.0972	ND	pCi/sample	55%	0.58	
		TH-230	0.183 +- 0.261	ND	pCi/sample	55%	0.248	
		TH-232	0.0915 +- 0.184	ND	pCi/sample	55%	0.248	
P-0646	H7DXL1AE	ALPHA	-0.6310 +- 1.78	ND	pCi/sample	100%	5.13	
P-0646	H7DXL1AF	BETA	17.9 +- 4.22	=	pCi/sample	100%	5.14	
P-0646	H7DXL1AC	RA-226	0.00000 +- 0.423	ND	pCi/sample	96%	0.835	
P-0646	H7DXL1AD	RA-228	-0.2470 +- 0.671	ND	pCi/sample	86%	1.78	
P-0647	H7DXM1AG	U-234	0.328 +- 0.429	ND	pCi/sample	86%	0.654	
		U-235	-0.0196 +- 0.0279	ND	pCi/sample	86%	0.559	
		U-238	0.00000 +- 0.300	ND	pCi/sample	86%	0.332	
P-0647	H7DXM1AA	TH-228	0.104 +- 0.151	ND	pCi/sample	95%	0.25	
		TH-230	0.0197 +- 0.0881	ND	pCi/sample	95%	0.236	
		TH-232	0.00000066 +- 0.0965	ND	pCi/sample	95%	0.29	
P-0647	H7DXM1AE	ALPHA	2.95 +- 2.95	ND	pCi/sample	100%	5.14	
P-0647	H7DXM1AF	BETA	16.7 +- 4.14	=	pCi/sample	100%	5.29	
P-0647	H7DXM1AC	RA-226	0.601 +- 0.538	ND	pCi/sample	94%	0.807	
P-0647	H7DXM1AD	RA-228	0.638 +- 0.821	ND	pCi/sample	86%	1.85	

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

= ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary

STL Richland STLR

Ordered by Client Sample ID, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No: 31902

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC|MDA	RER2
P-0648	H7DXP1AG	U-234	0.224 +- 0.401	ND	pCi/sample	111%	0.792	
		U-235	0.140 +- 0.281	ND	pCi/sample	111%	0.38	
		U-238	0.00000 +- 0.343	ND	pCi/sample	111%	0.38	
P-0648	H7DXP1AA	TH-228	0.392 +- 0.328	ND	pCi/sample	112%	0.469	
		TH-230	0.350 +- 0.258	=	pCi/sample	112%	0.247	
		TH-232	0.124 +- 0.144	ND	pCi/sample	112%	0.112	
P-0648	H7DXP1AE	ALPHA	4.82 +- 3.37	=	pCi/sample	100%	4.61	
P-0648	H7DXP1AF	BETA	18.2 +- 4.54	=	pCi/sample	100%	5.19	
P-0648	H7DXP1AC	RA-226	0.248 +- 0.316	ND	pCi/sample	96%	0.519	
P-0648	H7DXP1AD	RA-228	0.307 +- 0.680	ND	pCi/sample	88%	1.61	
P-0649	H7DXQ1AG	U-234	-0.0426 +- 0.0607	ND	pCi/sample	103%	0.602	
		U-235	0.00000 +- 0.261	ND	pCi/sample	103%	0.289	
		U-238	0.00000 +- 0.261	ND	pCi/sample	103%	0.289	
P-0649	H7DXQ1AA	TH-228	0.0554 +- 0.260	ND	pCi/sample	76%	0.596	
		TH-230	1.70 +- 0.681	=	pCi/sample	76%	0.314	
		TH-232	-0.0524 +- 0.0747	ND	pCi/sample	76%	0.385	
P-0649	H7DXQ1AE	ALPHA	3.50 +- 3.38	ND	pCi/sample	100%	5.9	
P-0649	H7DXQ1AF	BETA	15.8 +- 4.25	=	pCi/sample	100%	5.13	
P-0649	H7DXQ1AC	RA-226	-0.1000 +- 0.406	ND	pCi/sample	84%	0.874	
P-0649	H7DXQ1AD	RA-228	0.365 +- 0.752	ND	pCi/sample	74%	1.77	
P-0651	H7DXV1AG	U-234	-0.0201 +- 0.0403	ND	pCi/sample	99%	0.48	
		U-235	0.00000 +- 0.245	ND	pCi/sample	99%	0.272	
		U-238	0.0601 +- 0.209	ND	pCi/sample	99%	0.566	
P-0651	H7DXV1AA	TH-228	-0.0652 +- 0.131	ND	pCi/sample	43%	0.782	
		TH-230	0.370 +- 0.434	ND	pCi/sample	43%	0.334	
		TH-232	0.00000 +- 0.302	ND	pCi/sample	43%	0.334	
P-0651	H7DXV1AE	ALPHA	-0.9350 +- 1.77	ND	pCi/sample	100%	5.27	
P-0651	H7DXV1AF	BETA	19.5 +- 4.48	=	pCi/sample	100%	5.2	
P-0651	H7DXV1AC	RA-226	-0.2010 +- 0.454	ND	pCi/sample	90%	0.944	
P-0651	H7DXV1AD	RA-228	3.36 +- 1.12	=	pCi/sample	82%	1.67	

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

= ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary

STL Richland STLR

Ordered by Client Sample ID, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No: 31902

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC|MDA	RER2
P-0652	H7DX01AG	U-234	0.00000 +- 0.231	ND	pCi/sample	100%	0.256	
		U-235	-0.0189 +- 0.0379	ND	pCi/sample	100%	0.452	
		U-238	0.00000 +- 0.231	ND	pCi/sample	100%	0.256	
P-0652	H7DX01AA	TH-228	0.169 +- 0.198	ND	pCi/sample	121%	0.153	
		TH-230	0.213 +- 0.217	ND	pCi/sample	121%	0.144	
		TH-232	0.00000 +- 0.131	ND	pCi/sample	121%	0.144	
P-0652	H7DX01AE	ALPHA	0.0755 +- 1.92	ND	pCi/sample	100%	4.87	
P-0652	H7DX01AF	BETA	3.63 +- 2.67	ND	pCi/sample	100%	5.02	
P-0652	H7DX01AC	RA-226	0.307 +- 0.324	ND	pCi/sample	94%	0.503	
P-0652	H7DX01AD	RA-228	0.171 +- 0.753	ND	pCi/sample	84%	1.82	

Number of Results: 130

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary
STL Richland STLR

Ordered by QC Type, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No.: 31902

QC Type	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
BLANK QC	H7JNL1AA	U-234	-0.00246 +- 0.00349	N	pCi/sample	101%			0.0347
		U-235	0.00000 +- 0.0150	N	pCi/sample	101%			0.0166
		U-238	-0.00246 +- 0.00349	N	pCi/sample	101%			0.0347
BLANK QC	H7JP21AA	TH-228	0.00180 +- 0.00806	N	pCi/sample	108%			0.0216
		TH-230	0.0204 +- 0.0170	=	pCi/sample	108%			0.00922
		TH-232	-0.0017 +- 0.00342	N	pCi/sample	108%			0.0204
BLANK QC	H7JP51AA	ALPHA	0.00217 +- 0.0403	N	pCi/sample	100%			0.1
BLANK QC	H7JP71AA	BETA	0.859 +- 0.278	=	pCi/sample	100%			0.433
BLANK QC	H7JQF1AA	RA-226	0.442 +- 0.205	=	pCi/sample	87%			0.219
BLANK QC	H7JQ51AA	RA-228	0.431 +- 0.208	=	pCi/sample	79%			0.363
BLANK QC	H8DM71AA	U-234	0.0327 +- 0.0368	N	pCi/sample	96%			0.0513
		U-235	0.0174 +- 0.0259	N	pCi/sample	96%			0.0365
		U-238	0.0454 +- 0.0412	=	pCi/sample	96%			0.0246
BLANK QC	H8DM81AA	TH-228	0.0113 +- 0.0134	N	pCi/sample	101%			0.0193
		TH-230	0.0276 +- 0.0190	=	pCi/sample	101%			0.00832
		TH-232	-0.00154 +- 0.00308	N	pCi/sample	101%			0.0184
BLANK QC	H8DNK1AA	ALPHA	-0.00597 +- 0.0457	N	pCi/sample	100%			0.117
BLANK QC	H8DNT1AA	BETA	0.0559 +- 0.226	N	pCi/sample	100%			0.472
BLANK QC	H8DN71AA	RA-226	-0.0325 +- 0.129	N	pCi/sample	94%			0.265
BLANK QC	H8DPD1AA	RA-228	0.114 +- 0.197	N	pCi/sample	83%			0.461
LCS	H7JNL1AC	U-234	1.05 +- 0.234	=	pCi/sample	92%	108%	0.1	0.0316
		U-235	0.0264 +- 0.0267	N	pCi/sample	92%	59%	-0.4	0.0179
		U-238	1.07 +- 0.236	=	pCi/sample	92%	104%	0.0	0.0373
LCS	H7JP21AC	TH-230	1.91 +- 0.365	=	pCi/sample	112%	104%	0.0	0.0202
LCS	H7JP52AC	ALPHA	2.07 +- 0.493	=	pCi/sample	100%	87%	-0.1	0.098
LCS	H7JP71AC	BETA	4.67 +- 0.748	=	pCi/sample	100%	102%	0.0	0.443
LCS	H7JQF1AC	RA-226	1.50 +- 0.396	=	pCi/sample	89%	107%	0.1	0.128
LCS	H7JQ51AC	RA-228	4.44 +- 0.718	=	pCi/sample	81%	87%	-0.1	0.524

Bias - (Result/Expected)-1 as defined by ANSI N13.30.

= ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary
STL Richland STLR

Ordered by QC Type, Batch No.

Date: 31-Jul-06

Report No. : 32890

SDG No.: 31902

QC Type	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
LCS	H8DM71AC	U-234	1.01 +- 0.249	=	pCi/sample	77%	105%	0.0	0.0487
		U-235	0.0517 +- 0.0430	=	pCi/sample	77%	117%	0.2	0.0234
		U-238	1.02 +- 0.249	=	pCi/sample	77%	100%	0.0	0.0234
LCS	H8DM81AC	TH-230	1.65 +- 0.315	=	pCi/sample	108%	91%	-0.1	0.0186
LCS	H8DNK1AC	ALPHA	2.32 +- 0.544	=	pCi/sample	100%	97%	0.0	0.107
LCS	H8DNT1AC	BETA	4.45 +- 0.830	=	pCi/sample	100%	97%	0.0	0.397
LCS	H8DN71AC	RA-226	1.34 +- 0.359	=	pCi/sample	95%	97%	0.0	0.145
LCS	H8DPD1AC	RA-228	3.95 +- 0.672	=	pCi/sample	87%	78%	-0.2	0.444

Number of Results: 36

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 7:40:00 AM

Lot-Sample No.: J6F140270-1 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000473 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179343	**Work Order:** H7DWT1AG			**Report DB ID:** 9H7DWT10								
U-234	**0.0842**	ND	0.21	0.22	0.504	pCi/sample	94%	*0.17*	7/18/06 06:21 p	1.0	0.06232	E908.0
						0.11	1.0	*0.78*		Sample	Sample	ALP9
U-235	**0.00000**	ND	0.0000	0.26	0.285	pCi/sample	94%	*0.*	7/18/06 06:21 p	1.0	0.06232	E908.0
							1.0	*0.*		Sample	Sample	ALP9
U-238	**-0.0421**	ND	0.060	0.060	0.595	pCi/sample	94%	*-0.07*	7/18/06 06:21 p	1.0	0.06232	E908.0
						0.155	1.0	*-(1.4)*		Sample	Sample	ALP9
								Ratio U-234/238 = -2.0				
Batch: 6179344	**Work Order:** H7DWT1AA			**Report DB ID:** 9H7DWT10								
TH-228	**-0.0393**	ND	0.15	0.15	0.423	pCi/sample	106%	*-0.09*	7/19/06 12:16 a	1.0	0.08382	ISOTH
						0.158	1.0	*-0.53*		Sample	Sample	ALP171
TH-230	**0.203**	ND	0.18	0.19	0.222	pCi/sample	106%	*0.92*	7/19/06 12:16 a	1.0	0.08382	ISOTH
						0.0608	1.0	*(2.2)*		Sample	Sample	ALP171
TH-232	**0.00000**	ND	0.0000	0.091	0.1	pCi/sample	106%	*0.*	7/19/06 12:16 a	1.0	0.08382	ISOTH
							1.0	*0.*		Sample	Sample	ALP171
Batch: 6179346	**Work Order:** H7DWT1AE			**Report DB ID:** 9H7DWT10								
ALPHA	**3.41**	ND	3.1	3.2	5.32	pCi/sample	100%	*0.64*	7/18/06 01:26 p	1.0	0.02096	E900.0
						2.17	20.0	*(2.2)*		Sample	Sample	GPC10A
Batch: 6179351	**Work Order:** H7DWT1AF			**Report DB ID:** 9H7DWT10								
BETA	**12.5**	=	3.3	3.8	5.66	pCi/sample	100%	*(2.2)*	7/18/06 01:34 p	1.0	0.08326	E900.0
						2.73	5.0	*(6.6)*		Sample	Sample	GPC26A
Batch: 6179354	**Work Order:** H7DWT1AC			**Report DB ID:** 9H7DWT10								

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V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 7:40:00 AM

Lot-Sample No.: J6F140270-1 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000473 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.509**	ND	0.52	0.53	0.859	pCi/sample	105%	*0.59*	7/21/06 04:43 p	1.0	0.25393	E903.1
						0.381	1.0	*(1.9)*		Sample	Sample	ASC1HB
Batch: 6179357	**Work Order:** H7DWT1AD			**Report DB ID:** 9H7DWT10								
RA-228	**1.37**	ND	1.1	1.1	2.38	pCi/sample	95%	*0.58*	7/25/06 06:10 a	1.0	0.25393	E904.0
						1.09	3.1	*(2.4)*		Sample	Sample	GPC7A

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 8:10:00 AM

Lot-Sample No.: J6F140270-2 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000474 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXC1AG			**Report DB ID:** 9H7DXC10								
U-234	0.00000	ND	0.0000	0.23	0.25	pCi/sample	100%	0.	7/8/06 09:30 a	1.0	0.06241	E908.0
							1.0	0.		Sample	Sample	ALP8
U-235	-0.0185	ND	0.037	0.037	0.442	pCi/sample	100%	-0.04	7/8/06 09:30 a	1.0	0.06241	E908.0
						0.0961	1.0	-1.		Sample	Sample	ALP8
U-238	0.00000	ND	0.0000	0.23	0.25	pCi/sample	100%	0.	7/8/06 09:30 a	1.0	0.06241	E908.0
							1.0	0.		Sample	Sample	ALP8
Batch: 6167182	**Work Order:** H7DXC1AA			**Report DB ID:** 9H7DXC10								
TH-228	0.0868	ND	0.25	0.25	0.521	pCi/sample	113%	0.17	7/13/06 09:45 a	1.0	0.08305	ISOTH
						0.202	1.0	0.71		Sample	Sample	ALP171
TH-230	0.390	=	0.26	0.27	0.246	pCi/sample	113%	(1.6)	7/13/06 09:45 a	1.0	0.08305	ISOTH
						0.0675	1.0	(2.9)		Sample	Sample	ALP171
TH-232	0.0410	ND	0.082	0.082	0.111	pCi/sample	113%	0.37	7/13/06 09:45 a	1.0	0.08305	ISOTH
							1.0	1.		Sample	Sample	ALP171
Batch: 6167184	**Work Order:** H7DXC1AE			**Report DB ID:** 9H7DXC10								
ALPHA	8.23	=	4.0	4.3	5.05	pCi/sample	100%	(1.6)	7/11/06 02:33 p	1.0	0.02088	E900.0
						2.04	20.0	(3.8)		Sample	Sample	GPC10B
Batch: 6167185	**Work Order:** H7DXC1AF			**Report DB ID:** 9H7DXC10								
BETA	13.1	=	3.3	3.8	5.52	pCi/sample	100%	(2.4)	7/10/06 12:24 p	1.0	0.08345	E900.0
						2.65	5.0	(6.8)		Sample	Sample	GPC26A
Batch: 6167188	**Work Order:** H7DXC1AC			**Report DB ID:** 9H7DXC10								

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 8:10:00 AM

Lot-Sample No.: J6F140270-2 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000474 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.302**	ND	0.57	0.57	1.01	pCi/sample	87%	*0.3*	7/1/06 05:23 p	1.0	0.24905	E903.1
						0.447	1.0	*(1.1)*		Sample	Sample	ASC1HB
Batch: 6167192	**Work Order:** H7DXC1AD			**Report DB ID:** 9H7DXC10								
RA-228	**2.08**	ND	1.2	1.2	2.48	pCi/sample	80%	*0.84*	7/11/06 06:13 a	1.0	0.24905	E904.0
						1.13	3.1	*(3.4)*		Sample	Sample	GPC7A

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 10:30:00 AM

Lot-Sample No.: J6F140270-3 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000477 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXD1AG			**Report DB ID:** 9H7DXD10								
U-234	1.16	=	0.68	0.70	0.469	pCi/sample	104%	*(2.5)*	7/8/06 09:30 a	1.0	0.06224	E908.0
						0.102	1.0	*(3.3)*		Sample	Sample	ALP10
U-235	0.00000	ND	0.0000	0.24	0.266	pCi/sample	104%	*0.*	7/8/06 09:30 a	1.0	0.06224	E908.0
							1.0	*0.*		Sample	Sample	ALP10
U-238	0.568	=	0.48	0.49	0.469	pCi/sample	104%	*(1.2)*	7/8/06 09:30 a	1.0	0.06224	E908.0
						0.102	1.0	*(2.3)*		Sample	Sample	ALP10
								Ratio U-234/238 = 2.0				
Batch: 6167182	**Work Order:** H7DXD1AA			**Report DB ID:** 9H7DXD10								
TH-228	0.191	ND	0.28	0.28	0.515	pCi/sample	87%	*0.37*	7/13/06 09:45 a	1.0	0.08346	ISOTH
						0.193	1.0	*(1.4)*		Sample	Sample	ALP172
TH-230	0.928	=	0.42	0.45	0.272	pCi/sample	87%	*(3.4)*	7/13/06 09:45 a	1.0	0.08346	ISOTH
						0.0745	1.0	*(4.1)*		Sample	Sample	ALP172
TH-232	0.272	ND	0.25	0.25	0.333	pCi/sample	87%	*0.82*	7/13/06 09:45 a	1.0	0.08346	ISOTH
						0.105	1.0	*(2.1)*		Sample	Sample	ALP172
Batch: 6167184	**Work Order:** H7DXD1AE			**Report DB ID:** 9H7DXD10								
ALPHA	7.94	=	4.0	4.3	5.15	pCi/sample	100%	*(1.5)*	7/11/06 02:33 p	1.0	0.0208	E900.0
						2.07	20.0	*(3.7)*		Sample	Sample	GPC10C
Batch: 6167185	**Work Order:** H7DXD1AF			**Report DB ID:** 9H7DXD10								
BETA	19.5	=	3.7	4.6	5.57	pCi/sample	100%	*(3.5)*	7/10/06 12:24 p	1.0	0.08301	E900.0
						2.67	5.0	*(8.5)*		Sample	Sample	GPC26B
Batch: 6167188	**Work Order:** H7DXD1AC			**Report DB ID:** 9H7DXD10								

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 10:30:00 AM

Lot-Sample No.: J6F140270-3 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000477 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.443**	ND	0.47	0.48	0.772	pCi/sample	95%	*0.57*	7/1/06 05:22 p	1.0	0.24889	E903.1
						0.326	1.0	*(1.8)*		Sample	Sample	ASC2RC
Batch: 6167192	**Work Order:** H7DXD1AD			**Report DB ID:** 9H7DXD10								
RA-228	**0.820**	ND	0.98	0.99	2.18	pCi/sample	86%	*0.38*	7/11/06 06:13 a	1.0	0.24889	E904.0
						0.991	3.1	*(1.7)*		Sample	Sample	GPC7B

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 11:20:00 AM

Lot-Sample No.: J6F140270-4 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000478 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXF1AG			**Report DB ID:** 9H7DXF10								
U-234	0.178	ND	0.25	0.25	0.242	pCi/sample	98%	*0.74*	7/8/06 09:30 a	1.0	0.0626	E908.0
							1.0	*(1.4)*		Sample	Sample	ALP11
U-235	0.0714	ND	0.18	0.18	0.427	pCi/sample	98%	*0.17*	7/8/06 09:30 a	1.0	0.0626	E908.0
						0.0928	1.0	*0.78*		Sample	Sample	ALP11
U-238	-0.0357	ND	0.050	0.051	0.504	pCi/sample	98%	*-0.07*	7/8/06 09:30 a	1.0	0.0626	E908.0
						0.131	1.0	*-(1.4)*		Sample	Sample	ALP11
								Ratio U-234/238 = -5.0				
Batch: 6167182	**Work Order:** H7DXF1AA			**Report DB ID:** 9H7DXF10								
TH-228	0.0824	ND	0.16	0.17	0.329	pCi/sample	109%	*0.25*	7/13/06 09:45 a	1.0	0.08337	ISOTH
						0.0903	1.0	*1.*		Sample	Sample	ALP173
TH-230	0.779	=	0.40	0.43	0.141	pCi/sample	109%	*(5.5)*	7/13/06 09:45 a	1.0	0.08337	ISOTH
							1.0	*(3.7)*		Sample	Sample	ALP173
TH-232	0.104	ND	0.15	0.15	0.141	pCi/sample	109%	*0.74*	7/13/06 09:45 a	1.0	0.08337	ISOTH
							1.0	*(1.4)*		Sample	Sample	ALP173
Batch: 6167184	**Work Order:** H7DXF1AE			**Report DB ID:** 9H7DXF10								
ALPHA	9.12	=	4.1	4.5	5.06	pCi/sample	100%	*(1.8)*	7/11/06 02:33 p	1.0	0.021	E900.0
						2.06	20.0	*(4.1)*		Sample	Sample	GPC10D
Batch: 6167185	**Work Order:** H7DXF1AF			**Report DB ID:** 9H7DXF10								
BETA	17.0	=	3.5	4.2	5.34	pCi/sample	100%	*(3.2)*	7/10/06 12:24 p	1.0	0.08369	E900.0
						2.55	5.0	*(8.1)*		Sample	Sample	GPC26C
Batch: 6167188	**Work Order:** H7DXF1AC			**Report DB ID:** 9H7DXF10								

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 11:20:00 AM

Lot-Sample No.: J6F140270-4 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000478 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	-0.1140	ND	0.26	0.27	0.63	pCi/sample	93%	*-0.18*	7/1/06 05:22 p	1.0	0.25029	E903.1
						0.257	1.0	*-0.86*		Sample	Sample	ASC3RC
Batch: 6167192	**Work Order:** H7DXF1AD			**Report DB ID:** 9H7DXF10								
RA-228	1.16	ND	1.1	1.1	2.47	pCi/sample	84%	*0.47*	7/11/06 06:13 a	1.0	0.25029	E904.0
						1.13	3.1	*(2.)*		Sample	Sample	GPC7C

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 9:15:00 AM

Lot-Sample No.: J6F140270-5 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000479 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXH1AG			**Report DB ID:** 9H7DXH10								
U-234	0.111	ND	0.22	0.22	0.302	pCi/sample	88%	*0.37*	7/8/06 09:31 a	1.0	0.06241	E908.0
							1.0	*1.*		Sample	Sample	ALP12
U-235	0.00000	ND	0.0000	0.27	0.302	pCi/sample	88%	*0.*	7/8/06 09:31 a	1.0	0.06241	E908.0
							1.0	*0.*		Sample	Sample	ALP12
U-238	-0.0223	ND	0.045	0.045	0.533	pCi/sample	88%	*-0.04*	7/8/06 09:31 a	1.0	0.06241	E908.0
						0.116	1.0	*-1.*		Sample	Sample	ALP12
								Ratio U-234/238 = -5.0				
Batch: 6167182	**Work Order:** H7DXH1AA			**Report DB ID:** 9H7DXH10								
TH-228	0.109	ND	0.15	0.16	0.148	pCi/sample	114%	*0.74*	7/13/06 09:45 a	1.0	0.0838	ISOTH
							1.0	*(1.4)*		Sample	Sample	ALP174
TH-230	0.363	=	0.27	0.28	0.14	pCi/sample	114%	*(2.6)*	7/13/06 09:45 a	1.0	0.0838	ISOTH
							1.0	*(2.6)*		Sample	Sample	ALP174
TH-232	0.00000	ND	0.0000	0.13	0.14	pCi/sample	114%	*0.*	7/13/06 09:45 a	1.0	0.0838	ISOTH
							1.0	*0.*		Sample	Sample	ALP174
Batch: 6167184	**Work Order:** H7DXH1AE			**Report DB ID:** 9H7DXH10								
ALPHA	1.77	ND	2.4	2.4	4.51	pCi/sample	100%	*0.39*	7/11/06 02:33 p	1.0	0.02111	E900.0
						1.76	20.0	*(1.5)*		Sample	Sample	GPC10E
Batch: 6167185	**Work Order:** H7DXH1AF			**Report DB ID:** 9H7DXH10								
BETA	3.04	ND	2.6	2.7	5.17	pCi/sample	100%	*0.59*	7/10/06 12:24 p	1.0	0.08367	E900.0
						2.47	5.0	*(2.3)*		Sample	Sample	GPC26D
Batch: 6167188	**Work Order:** H7DXH1AC			**Report DB ID:** 9H7DXH10								

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 9:15:00 AM

Lot-Sample No.: J6F140270-5 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: 000479 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**-0.1840**	ND	0.38	0.38	0.837	pCi/sample	96%	*-0.22*	7/1/06 05:21 p	1.0	0.24957	E903.1
						0.361	1.0	*-0.96*		Sample	Sample	ASC4UA
Batch: 6167192	**Work Order:** H7DXH1AD			**Report DB ID:** 9H7DXH10								
RA-228	**0.347**	ND	0.78	0.84	1.96	pCi/sample	86%	*0.18*	7/11/06 06:13 a	1.0	0.24957	E904.0
						0.883	3.1	*0.82*		Sample	Sample	GPC1A

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 7:30:00 AM

Lot-Sample No.: J6F140270-6 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0644 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXJ1AG			**Report DB ID:** 9H7DXJ10								
U-234	**0.167**	ND	0.30	0.30	0.59	pCi/sample	92%	*0.28*	7/8/06 09:31 a	1.0	0.06236	E908.0
						0.154	1.0	*(1.1)*		Sample	Sample	ALP69
U-235	**0.0794**	ND	0.21	0.21	0.521	pCi/sample	92%	*0.15*	7/8/06 09:31 a	1.0	0.06236	E908.0
						0.119	1.0	*0.75*		Sample	Sample	ALP69
U-238	**0.142**	ND	0.30	0.30	0.672	pCi/sample	92%	*0.21*	7/8/06 09:31 a	1.0	0.06236	E908.0
						0.194	1.0	*0.95*		Sample	Sample	ALP69
								Ratio U-234/238 = 1.2				
Batch: 6167182	**Work Order:** H7DXJ1AA			**Report DB ID:** 9H7DXJ10								
TH-228	**0.0649**	ND	0.13	0.13	0.259	pCi/sample	122%	*0.25*	7/13/06 09:45 a	1.0	0.08321	ISOTH
						0.0711	1.0	*1.*		Sample	Sample	ALP175
TH-230	**0.409**	=	0.26	0.27	0.111	pCi/sample	122%	*(3.7)*	7/13/06 09:45 a	1.0	0.08321	ISOTH
							1.0	*(3.)*		Sample	Sample	ALP175
TH-232	**0.0205**	ND	0.091	0.092	0.245	pCi/sample	122%	*0.08*	7/13/06 09:45 a	1.0	0.08321	ISOTH
						0.0673	1.0	*0.45*		Sample	Sample	ALP175
Batch: 6167184	**Work Order:** H7DXJ1AE			**Report DB ID:** 9H7DXJ10								
ALPHA	**5.31**	=	3.4	3.6	4.92	pCi/sample	100%	*(1.1)*	7/11/06 05:38 p	1.0	0.02085	E900.0
						1.97	20.0	*(3.)*		Sample	Sample	GPC10A
Batch: 6167185	**Work Order:** H7DXJ1AF			**Report DB ID:** 9H7DXJ10								
BETA	**14.2**	=	3.2	3.8	5.15	pCi/sample	100%	*(2.8)*	7/10/06 12:24 p	1.0	0.08339	E900.0
						2.47	5.0	*(7.5)*		Sample	Sample	GPC27A
Batch: 6167188	**Work Order:** H7DXJ1AC			**Report DB ID:** 9H7DXJ10								

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 7:30:00 AM

Lot-Sample No.: J6F140270-6 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0644 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.209**	ND	0.40	0.40	0.725	pCi/sample	92%	*0.29*	7/1/06 05:25 p	1.0	0.24991	E903.1
						0.304	1.0	*(1.)*		Sample	Sample	ASC7UA
Batch: 6167192	**Work Order:** H7DXJ1AD			**Report DB ID:** 9H7DXJ10								
RA-228	**0.128**	ND	0.89	0.89	2.08	pCi/sample	83%	*0.06*	7/11/06 06:13 a	1.0	0.24991	E904.0
						0.94	3.1	*0.29*		Sample	Sample	GPC1C

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 8:00:00 AM

Lot-Sample No.: J6F140270-7 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0645 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXK1AG			**Report DB ID:** 9H7DXK10								
U-234	**0.0747**	ND	0.20	0.20	0.491	pCi/sample	105%	*0.15*	7/8/06 09:31 a	1.0	0.06267	E908.0
						0.112	1.0	*0.75*		Sample	Sample	ALP71
U-235	**0.0669**	ND	0.20	0.20	0.525	pCi/sample	105%	*0.13*	7/8/06 09:31 a	1.0	0.06267	E908.0
						0.129	1.0	*0.67*		Sample	Sample	ALP71
U-238	**-0.0315**	ND	0.031	0.032	0.525	pCi/sample	105%	*-0.06*	7/8/06 09:31 a	1.0	0.06267	E908.0
						0.129	1.0	*-(2.)*		Sample	Sample	ALP71
								Ratio U-234/238 = -2.4				
Batch: 6167182	**Work Order:** H7DXK1AA			**Report DB ID:** 9H7DXK10								
TH-228	**0.106**	ND	0.18	0.19	0.355	pCi/sample	117%	*0.3*	7/13/06 09:45 a	1.0	0.08436	ISOTH
						0.12	1.0	*(1.1)*		Sample	Sample	ALP176
TH-230	**0.379**	=	0.26	0.26	0.24	pCi/sample	117%	*(1.6)*	7/13/06 09:45 a	1.0	0.08436	ISOTH
						0.0657	1.0	*(2.9)*		Sample	Sample	ALP176
TH-232	**-0.0399**	ND	0.056	0.057	0.294	pCi/sample	117%	*-0.14*	7/13/06 09:45 a	1.0	0.08436	ISOTH
						0.0929	1.0	*-(1.4)*		Sample	Sample	ALP176
Batch: 6167184	**Work Order:** H7DXK1AE			**Report DB ID:** 9H7DXK10								
ALPHA	**2.50**	ND	2.8	2.8	5.04	pCi/sample	100%	*0.5*	7/11/06 05:38 p	1.0	0.02088	E900.0
						2.04	20.0	*(1.8)*		Sample	Sample	GPC10B
Batch: 6167185	**Work Order:** H7DXK1AF			**Report DB ID:** 9H7DXK10								
BETA	**14.4**	=	3.1	3.7	4.84	pCi/sample	100%	*(3.)*	7/10/06 12:24 p	1.0	0.08332	E900.0
						2.32	5.0	*(7.8)*		Sample	Sample	GPC27C
Batch: 6167188	**Work Order:** H7DXK1AC			**Report DB ID:** 9H7DXK10								

STL Richland
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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland
SDG: 31902
Collection Date: 5/24/2006 8:00:00 AM

Lot-Sample No.: J6F140270-7
Report No. : 32890
Received Date: 6/14/2006 10:00:00 AM

Client Sample ID: P-0645
COC No. :
Matrix: FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	-0.2700	ND	0.46	0.46	1.09	pCi/sample	82%	*-0.25*	7/1/06 05:17 p	1.0	0.25065	E903.1
						0.456	1.0	*-(1.2)*		Sample	Sample	ASC8RD
Batch: 6167192	**Work Order:** H7DXK1AD			**Report DB ID:** 9H7DXK10								
RA-228	0.210	ND	0.98	0.98	2.3	pCi/sample	75%	*0.09*	7/11/06 06:13 a	1.0	0.25065	E904.0
						1.04	3.1	*0.43*		Sample	Sample	GPC1D

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 8:30:00 AM

Lot-Sample No.: J6F140270-8 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0646 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXL1AG			**Report DB ID:** 9H7DXL10								
U-234	-0.0432	ND	0.039	0.039	0.611	pCi/sample	96%	-0.07	7/8/06 09:31 a	1.0	0.06233	E908.0
						0.159	1.0	-(2.2)		Sample	Sample	ALP83
U-235	-0.0173	ND	0.024	0.025	0.494	pCi/sample	96%	-0.04	7/8/06 09:31 a	1.0	0.06233	E908.0
						0.101	1.0	-(1.4)		Sample	Sample	ALP83
U-238	-0.0519	ND	0.042	0.043	0.641	pCi/sample	96%	-0.08	7/8/06 09:31 a	1.0	0.06233	E908.0
						0.174	1.0	-(2.4)		Sample	Sample	ALP83
								Ratio U-234/238 = 0.8				
Batch: 6167182	**Work Order:** H7DXL1AA			**Report DB ID:** 9H7DXL10								
TH-228	-0.0483	ND	0.097	0.097	0.58	pCi/sample	55%	-0.08	7/13/06 09:45 a	1.0	0.08305	ISOTH
						0.159	1.0	-0.99		Sample	Sample	ALP177
TH-230	0.183	ND	0.26	0.26	0.248	pCi/sample	55%	0.74	7/13/06 09:45 a	1.0	0.08305	ISOTH
							1.0	(1.4)		Sample	Sample	ALP177
TH-232	0.0915	ND	0.18	0.18	0.248	pCi/sample	55%	0.37	7/13/06 09:45 a	1.0	0.08305	ISOTH
							1.0	0.99		Sample	Sample	ALP177
Batch: 6167184	**Work Order:** H7DXL1AE			**Report DB ID:** 9H7DXL10								
ALPHA	-0.6310	ND	1.8	1.8	5.13	pCi/sample	100%	-0.12	7/11/06 05:38 p	1.0	0.02084	E900.0
						2.06	20.0	-0.71		Sample	Sample	GPC10C
Batch: 6167185	**Work Order:** H7DXL1AF			**Report DB ID:** 9H7DXL10								
BETA	17.9	=	3.4	4.2	5.14	pCi/sample	100%	(3.5)	7/10/06 12:24 p	1.0	0.0831	E900.0
						2.46	5.0	(8.5)		Sample	Sample	GPC27D
Batch: 6167188	**Work Order:** H7DXL1AC			**Report DB ID:** 9H7DXL10								

STL Richland
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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 8:30:00 AM

Lot-Sample No.: J6F140270-8 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0646 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	0.00000	ND	0.0000	0.42	0.835	pCi/sample	96%	*0.*	7/1/06 05:57 p	1.0	0.24867	E903.1
						0.363	1.0	*0.*		Sample	Sample	ASC9RA
Batch: 6167192	**Work Order:** H7DXL1AD			**Report DB ID:** 9H7DXL10								
RA-228	-0.2470	ND	0.67	0.67	1.78	pCi/sample	86%	*-0.14*	7/11/06 06:13 a	1.0	0.24867	E904.0
						0.774	3.1	*-0.74*		Sample	Sample	GPC2B

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 9:00:00 AM

Lot-Sample No.: J6F140270-9 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0647 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXM1AG			**Report DB ID:** 9H7DXM10								
U-234	**0.328**	ND	0.43	0.43	0.654	pCi/sample	86%	*0.5*	7/8/06 09:31 a	1.0	0.0616	E908.0
						0.161	1.0	*(1.5)*		Sample	Sample	ALP84
U-235	**-0.0196**	ND	0.028	0.028	0.559	pCi/sample	86%	*-0.04*	7/8/06 09:31 a	1.0	0.0616	E908.0
						0.114	1.0	*-(1.4)*		Sample	Sample	ALP84
U-238	**0.00000**	ND	0.0000	0.30	0.332	pCi/sample	86%	*0.*	7/8/06 09:31 a	1.0	0.0616	E908.0
							1.0	*0.*		Sample	Sample	ALP84
Batch: 6167182	**Work Order:** H7DXM1AA			**Report DB ID:** 9H7DXM10								
TH-228	**0.104**	ND	0.15	0.15	0.25	pCi/sample	95%	*0.42*	7/13/06 09:45 a	1.0	0.08222	ISOTH
						0.0685	1.0	*(1.4)*		Sample	Sample	ALP178
TH-230	**0.0197**	ND	0.088	0.088	0.236	pCi/sample	95%	*0.08*	7/13/06 09:45 a	1.0	0.08222	ISOTH
						0.0648	1.0	*0.45*		Sample	Sample	ALP178
TH-232	**0.00000066**	ND	0.096	0.096	0.29	pCi/sample	95%	*0.*	7/13/06 09:45 a	1.0	0.08222	ISOTH
						0.0916	1.0	*0.*		Sample	Sample	ALP178
Batch: 6167184	**Work Order:** H7DXM1AE			**Report DB ID:** 9H7DXM10								
ALPHA	**2.95**	ND	2.9	3.0	5.14	pCi/sample	100%	*0.57*	7/11/06 05:38 p	1.0	0.02068	E900.0
						2.1	20.0	*(2.)*		Sample	Sample	GPC10D
Batch: 6167185	**Work Order:** H7DXM1AF			**Report DB ID:** 9H7DXM10								
BETA	**16.7**	=	3.4	4.1	5.29	pCi/sample	100%	*(3.2)*	7/10/06 12:24 p	1.0	0.08273	E900.0
						2.53	5.0	*(8.1)*		Sample	Sample	GPC28B
Batch: 6167188	**Work Order:** H7DXM1AC			**Report DB ID:** 9H7DXM10								

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 9:00:00 AM

Lot-Sample No.: J6F140270-9 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0647 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.601**	ND	0.52	0.54	0.807	pCi/sample	94%	*0.74*	7/1/06 05:54 p	1.0	0.24634	E903.1
						0.333	1.0	*(2.2)*		Sample	Sample	ASCDSA
Batch: 6167192	**Work Order:** H7DXM1AD			**Report DB ID:** 9H7DXM10								
RA-228	**0.638**	ND	0.79	0.82	1.85	pCi/sample	86%	*0.35*	7/11/06 06:13 a	1.0	0.24634	E904.0
						0.802	3.1	*(1.6)*		Sample	Sample	GPC2C

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 10:20:00 AM

Lot-Sample No.: J6F140270-10 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0648 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXP1AG			**Report DB ID:** 9H7DXP10								
U-234	0.224	ND	0.40	0.40	0.792	pCi/sample	111%	*0.28*	7/8/06 09:31 a	1.0	0.06211	E908.0
						0.206	1.0	*(1.1)*		Sample	Sample	ALP85
U-235	0.140	ND	0.28	0.28	0.38	pCi/sample	111%	*0.37*	7/8/06 09:31 a	1.0	0.06211	E908.0
							1.0	*1.*		Sample	Sample	ALP85
U-238	0.00000	ND	0.0000	0.34	0.38	pCi/sample	111%	*0.*	7/8/06 09:31 a	1.0	0.06211	E908.0
							1.0	*0.*		Sample	Sample	ALP85
Batch: 6167182	**Work Order:** H7DXP1AA			**Report DB ID:** 9H7DXP10								
TH-228	0.392	ND	0.32	0.33	0.469	pCi/sample	112%	*0.84*	7/13/06 06:55 p	1.0	0.08269	ISOTH
						0.176	1.0	*(2.4)*		Sample	Sample	ALP171
TH-230	0.350	=	0.25	0.26	0.247	pCi/sample	112%	*(1.4)*	7/13/06 06:55 p	1.0	0.08269	ISOTH
						0.0678	1.0	*(2.7)*		Sample	Sample	ALP171
TH-232	0.124	ND	0.14	0.14	0.112	pCi/sample	112%	*(1.1)*	7/13/06 06:55 p	1.0	0.08269	ISOTH
							1.0	*(1.7)*		Sample	Sample	ALP171
Batch: 6167184	**Work Order:** H7DXP1AE			**Report DB ID:** 9H7DXP10								
ALPHA	4.82	=	3.2	3.4	4.61	pCi/sample	100%	*(1.)*	7/11/06 05:38 p	1.0	0.02068	E900.0
						1.8	20.0	*(2.9)*		Sample	Sample	GPC10E
Batch: 6167185	**Work Order:** H7DXP1AF			**Report DB ID:** 9H7DXP10								
BETA	18.2	=	3.5	4.5	5.19	pCi/sample	100%	*(3.5)*	7/10/06 12:24 p	1.0	0.08279	E900.0
						2.49	5.0	*(8.)*		Sample	Sample	GPC28C
Batch: 6167188	**Work Order:** H7DXP1AC			**Report DB ID:** 9H7DXP10								

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 10:20:00 AM

Lot-Sample No.: J6F140270-10 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0648 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.248**	ND	0.31	0.32	0.519	pCi/sample	96%	*0.48*	7/1/06 05:58 p	1.0	0.24809	E903.1
						0.202	1.0	*(1.6)*		Sample	Sample	ASCGSA
Batch: 6167192	**Work Order:** H7DXP1AD			**Report DB ID:** 9H7DXP10								
RA-228	**0.307**	ND	0.64	0.68	1.61	pCi/sample	88%	*0.19*	7/11/06 06:13 a	1.0	0.24809	E904.0
						0.692	3.1	*0.9*		Sample	Sample	GPC2D

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 11:10:00 AM

Lot-Sample No.: J6F140270-11 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0649 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXQ1AG			**Report DB ID:** 9H7DXQ10								
U-234	-0.0426	ND	0.060	0.061	0.602	pCi/sample	103%	-0.07	7/8/06 09:31 a	1.0	0.06194	E908.0
						0.157	1.0	-(1.4)		Sample	Sample	ALP87
U-235	0.00000	ND	0.0000	0.26	0.289	pCi/sample	103%	0.	7/8/06 09:31 a	1.0	0.06194	E908.0
							1.0	0.		Sample	Sample	ALP87
U-238	0.00000	ND	0.0000	0.26	0.289	pCi/sample	103%	0.	7/8/06 09:31 a	1.0	0.06194	E908.0
							1.0	0.		Sample	Sample	ALP87
Batch: 6167182	**Work Order:** H7DXQ1AA			**Report DB ID:** 9H7DXQ10								
TH-228	0.0554	ND	0.26	0.26	0.596	pCi/sample	76%	0.09	7/13/06 06:55 p	1.0	0.08302	ISOTH
						0.223	1.0	0.43		Sample	Sample	ALP172
TH-230	1.70	=	0.60	0.68	0.314	pCi/sample	76%	(5.4)	7/13/06 06:55 p	1.0	0.08302	ISOTH
						0.0861	1.0	(5.)		Sample	Sample	ALP172
TH-232	-0.0524	ND	0.074	0.075	0.385	pCi/sample	76%	-0.14	7/13/06 06:55 p	1.0	0.08302	ISOTH
						0.122	1.0	-(1.4)		Sample	Sample	ALP172
Batch: 6167184	**Work Order:** H7DXQ1AE			**Report DB ID:** 9H7DXQ10								
ALPHA	3.50	ND	3.3	3.4	5.9	pCi/sample	100%	0.59	7/12/06 07:34 a	1.0	0.02087	E900.0
						2.46	20.0	(2.1)		Sample	Sample	GPC10A
Batch: 6167185	**Work Order:** H7DXQ1AF			**Report DB ID:** 9H7DXQ10								
BETA	15.8	=	3.3	4.2	5.13	pCi/sample	100%	(3.1)	7/10/06 12:24 p	1.0	0.0836	E900.0
						2.45	5.0	(7.4)		Sample	Sample	GPC28D
Batch: 6167188	**Work Order:** H7DXQ1AC			**Report DB ID:** 9H7DXQ10								

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FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland
SDG: 31902
Collection Date: 5/24/2006 11:10:00 AM

Lot-Sample No.: J6F140270-11
Report No. : 32890
Received Date: 6/14/2006 10:00:00 AM

Client Sample ID: P-0649
COC No. :
Matrix: FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	-0.1000	ND	0.41	0.41	0.874	pCi/sample	84%	*-0.11*	7/1/06 05:55 p	1.0	0.24805	E903.1
						0.369	1.0	*-0.49*		Sample	Sample	ASCJSB
Batch: 6167192	**Work Order:** H7DXQ1AD			**Report DB ID:** 9H7DXQ10								
RA-228	0.365	ND	0.75	0.75	1.77	pCi/sample	74%	*0.21*	7/11/06 06:13 a	1.0	0.24805	E904.0
						0.756	3.1	*0.97*		Sample	Sample	GPC3A

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 7:35:00 AM

Lot-Sample No.: J6F140270-12 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0651 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DXV1AG			**Report DB ID:** 9H7DXV10								
U-234	-0.0201	ND	0.040	0.040	0.48	pCi/sample	99%	*-0.04*	7/8/06 01:10 p	1.0	0.06227	E908.0
						0.104	1.0	*-1.*		Sample	Sample	ALP7
U-235	0.00000	ND	0.0000	0.25	0.272	pCi/sample	99%	*0.*	7/8/06 01:10 p	1.0	0.06227	E908.0
							1.0	*0.*		Sample	Sample	ALP7
U-238	0.0601	ND	0.21	0.21	0.566	pCi/sample	99%	*0.11*	7/8/06 01:10 p	1.0	0.06227	E908.0
						0.148	1.0	*0.58*		Sample	Sample	ALP7
								Ratio U-234/238 = -0.3				
Batch: 6167182	**Work Order:** H7DXV1AA			**Report DB ID:** 9H7DXV10								
TH-228	-0.0652	ND	0.13	0.13	0.782	pCi/sample	43%	*-0.08*	7/13/06 06:55 p	1.0	0.0826	ISOTH
						0.214	1.0	*-0.99*		Sample	Sample	ALP173
TH-230	0.370	ND	0.43	0.43	0.334	pCi/sample	43%	*(1.1)*	7/13/06 06:55 p	1.0	0.0826	ISOTH
							1.0	*(1.7)*		Sample	Sample	ALP173
TH-232	0.00000	ND	0.0000	0.30	0.334	pCi/sample	43%	*0.*	7/13/06 06:55 p	1.0	0.0826	ISOTH
							1.0	*0.*		Sample	Sample	ALP173
Batch: 6167184	**Work Order:** H7DXV1AE			**Report DB ID:** 9H7DXV10								
ALPHA	-0.9350	ND	1.8	1.8	5.27	pCi/sample	100%	*-0.18*	7/12/06 07:34 a	1.0	0.02077	E900.0
						2.15	20.0	*-(1.1)*		Sample	Sample	GPC10B
Batch: 6167185	**Work Order:** H7DXV1AF			**Report DB ID:** 9H7DXV10								
BETA	19.5	=	3.5	4.5	5.2	pCi/sample	100%	*(3.7)*	7/10/06 12:23 p	1.0	0.08332	E900.0
						2.49	5.0	*(8.7)*		Sample	Sample	GPC31A
Batch: 6167188	**Work Order:** H7DXV1AC			**Report DB ID:** 9H7DXV10								

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V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland
SDG: 31902
Collection Date: 5/24/2006 7:35:00 AM
Lot-Sample No.: J6F140270-12
Report No. : 32890
Received Date: 6/14/2006 10:00:00 AM
Client Sample ID: P-0651
COC No. :
Matrix: FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	-0.2010	ND	0.45	0.45	0.944	pCi/sample	90%	*-0.21*	7/1/06 05:52 p	1.0	0.24781	E903.1
						0.418	1.0	*-0.88*		Sample	Sample	ASCNMA
Batch: 6167192	**Work Order:** H7DXV1AD			**Report DB ID:** 9H7DXV10								
RA-228	3.36	=	1.0	1.1	1.67	pCi/sample	82%	*(2.)*	7/11/06 06:09 a	1.0	0.24781	E904.0
						0.723	3.1	*(6.)*		Sample	Sample	GPC3B

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland | **SDG:** 31902 | **Collection Date:** 5/24/2006 8:15:00 AM

Lot-Sample No.: J6F140270-13 | **Report No. :** 32890 | **Received Date:** 6/14/2006 10:00:00 AM

Client Sample ID: P-0652 | **COC No. :** | **Matrix:** FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7DX01AG			**Report DB ID:** 9H7DX010								
U-234	0.00000	ND	0.0000	0.23	0.256	pCi/sample	100%	*0.*	7/8/06 01:10 p	1.0	0.06116	E908.0
							1.0	*0.*		Sample	Sample	ALP8
U-235	-0.0189	ND	0.038	0.038	0.452	pCi/sample	100%	*-0.04*	7/8/06 01:10 p	1.0	0.06116	E908.0
						0.0982	1.0	*-1.*		Sample	Sample	ALP8
U-238	0.00000	ND	0.0000	0.23	0.256	pCi/sample	100%	*0.*	7/8/06 01:10 p	1.0	0.06116	E908.0
							1.0	*0.*		Sample	Sample	ALP8
Batch: 6167182	**Work Order:** H7DX01AA			**Report DB ID:** 9H7DX010								
TH-228	0.169	ND	0.20	0.20	0.153	pCi/sample	121%	*(1.1)*	7/13/06 06:55 p	1.0	0.08143	ISOTH
							1.0	*(1.7)*		Sample	Sample	ALP174
TH-230	0.213	ND	0.21	0.22	0.144	pCi/sample	121%	*(1.5)*	7/13/06 06:55 p	1.0	0.08143	ISOTH
							1.0	*(2.)*		Sample	Sample	ALP174
TH-232	0.00000	ND	0.0000	0.13	0.144	pCi/sample	121%	*0.*	7/13/06 06:55 p	1.0	0.08143	ISOTH
							1.0	*0.*		Sample	Sample	ALP174
Batch: 6167184	**Work Order:** H7DX01AE			**Report DB ID:** 9H7DX010								
ALPHA	0.0755	ND	1.9	1.9	4.87	pCi/sample	100%	*0.02*	7/12/06 07:34 a	1.0	0.02045	E900.0
						1.93	20.0	*0.08*		Sample	Sample	GPC10C
Batch: 6167185	**Work Order:** H7DX01AF			**Report DB ID:** 9H7DX010								
BETA	3.63	ND	2.6	2.7	5.02	pCi/sample	100%	*0.72*	7/10/06 12:23 p	1.0	0.08132	E900.0
						2.4	5.0	*(2.7)*		Sample	Sample	GPC31B
Batch: 6167188	**Work Order:** H7DX01AC			**Report DB ID:** 9H7DX010								

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-Jul-06

Lab Name: STL Richland
SDG: 31902
Collection Date: 5/24/2006 8:15:00 AM
Lot-Sample No.: J6F140270-13
Report No. : 32890
Received Date: 6/14/2006 10:00:00 AM
Client Sample ID: P-0652
COC No. :
Matrix: FILTER AIR

Yerington Air Quality - Event #81

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	**0.307**	ND	0.32	0.32	0.503	pCi/sample	94%	*0.61*	7/1/06 05:54 p	1.0	0.24387	E903.1
						0.199	1.0	*(1.9)*		Sample	Sample	ASCQMB
Batch: 6167192	**Work Order:** H7DX01AD			**Report DB ID:** 9H7DX010								
RA-228	**0.171**	ND	0.75	0.75	1.82	pCi/sample	84%	*0.09*	7/11/06 06:09 a	1.0	0.24387	E904.0
						0.797	3.1	*0.45*		Sample	Sample	GPC3C

Number of Results: 10

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-169 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7JNL1AA			**Report DB ID:** H7JNL1AB								
U-234	-0.00246	ND	0.0035	0.0035	0.0347	pCi/sample	101%	-0.07	7/8/06 01:10 p	1.0	1.0	E908.0
					0.00904	1.0		-(1.4)		Sample	Sample	ALP9
U-235	0.00000	ND	0.0000	0.015	0.0166	pCi/sample	101%	0.	7/8/06 01:10 p	1.0	1.0	E908.0
						1.0		0.		Sample	Sample	ALP9
U-238	-0.00246	ND	0.0035	0.0035	0.0347	pCi/sample	101%	-0.07	7/8/06 01:10 p	1.0	1.0	E908.0
					0.00904	1.0		-(1.4)		Sample	Sample	ALP9

Ratio U-234/238 = 1.0

Number of Results: 3

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-182 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167182	**Work Order:** H7JP21AA			**Report DB ID:** H7JP21AB								
TH-228	0.00180	ND	0.0080	0.0081	0.0216	pCi/sample	108%	0.08	7/13/06 06:55 p	1.0	1.0	ISOTH
					0.00592	1.0		0.45		Sample	Sample	ALP175
TH-230	0.0204	=	0.017	0.017	0.00922	pCi/sample	108%	(2.2)	7/13/06 06:55 p	1.0	1.0	ISOTH
						1.0		(2.4)		Sample	Sample	ALP175
TH-232	-0.0017	ND	0.0034	0.0034	0.0204	pCi/sample	108%	-0.08	7/13/06 06:55 p	1.0	1.0	ISOTH
					0.0056	1.0		-1.		Sample	Sample	ALP175

Number of Results: 3

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-184 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167184	**Work Order:** H7JP51AA			**Report DB ID:** H7JP51AB								
ALPHA	0.00217	ND	0.040	0.040	0.1	pCi/sample	100%	0.02	7/12/06 07:34 a	1.0	1.0	E900.0
					0.0403	20.0		0.11		Sample	Sample	GPC10D

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-185 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167185	**Work Order:** H7JP71AA			**Report DB ID:** H7JP71AB								
BETA	0.859	=	0.25	0.28	0.433	pCi/sample	100%	(2.)	7/10/06 12:23 p	1.0	1.0	E900.0
					0.208	5.0		(6.2)		Sample	Sample	GPC31C

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-188 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167188	**Work Order:** H7JQF1AA			**Report DB ID:** H7JQF1AB								
RA-226	0.442	=	0.19	0.20	0.219	pCi/sample	87%	(2.)	7/1/06 05:52 p	1.0	1.0	E903.1
					0.092	1.0		(4.3)		Sample	Sample	ASCKME

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-192 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6167192	**Work Order:**	H7JQ51AA		**Report DB ID:**	H7JQ51AB							
RA-228	0.431	=	0.20	0.21	0.363	pCi/sample	79%	(1.2)	7/11/06 06:09 a	1.0	1.0	E904.0
					0.151	3.1		(4.1)		Sample	Sample	GPC3D

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-343 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179343	**Work Order:** H8DM71AA			**Report DB ID:** H8DM71AB								
U-234	0.0327	ND	0.036	0.037	0.0513	pCi/sample	96%	0.64	7/18/06 06:26 p	1.0	1.0	E908.0
					0.0134	1.0		(1.8)		Sample	Sample	ALP85
U-235	0.0174	ND	0.026	0.026	0.0365	pCi/sample	96%	0.48	7/18/06 06:26 p	1.0	1.0	E908.0
					0.00597	1.0		(1.3)		Sample	Sample	ALP85
U-238	0.0454	=	0.041	0.041	0.0246	pCi/sample	96%	(1.8)	7/18/06 06:26 p	1.0	1.0	E908.0
						1.0		(2.2)		Sample	Sample	ALP85

Ratio U-234/238 = 0.7

Number of Results: 3

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-344 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179344	Work Order:	H8DM81AA		Report DB ID:	H8DM81AB							
TH-228	0.0113	ND	0.013	0.013	0.0193	pCi/sample	101%	0.58	7/19/06 10:14 a	1.0	1.0	ISOTH
					0.0053	1.0		(1.7)		Sample	Sample	ALP175
TH-230	0.0276	=	0.018	0.019	0.00832	pCi/sample	101%	(3.3)	7/19/06 10:14 a	1.0	1.0	ISOTH
						1.0		(2.9)		Sample	Sample	ALP175
TH-232	-0.00154	ND	0.0031	0.0031	0.0184	pCi/sample	101%	-0.08	7/19/06 10:14 a	1.0	1.0	ISOTH
					0.00505	1.0		-1.		Sample	Sample	ALP175

Number of Results: 3

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-346 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179346	**Work Order:**	H8DNK1AA		**Report DB ID:**	H8DNK1AB							
ALPHA	-0.00597	ND	0.046	0.046	0.117	pCi/sample	100%	-0.05	7/19/06 08:30 a	1.0	1.0	E900.0
					0.0485	20.0		-0.26		Sample	Sample	GPC10B

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-351 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179351	**Work Order:**	H8DNT1AA		**Report DB ID:**	H8DNT1AB							
BETA	0.0559	ND	0.23	0.23	0.472	pCi/sample	100%	0.12	7/18/06 01:34 p	1.0	1.0	E900.0
					0.227	5.0		0.49		Sample	Sample	GPC32D

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-354 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179354	**Work Order:**	H8DN71AA		**Report DB ID:**	H8DN71AB							
RA-226	-0.0325	ND	0.13	0.13	0.265	pCi/sample	94%	-0.12	7/21/06 05:28 p	1.0	1.0	E903.1
					0.116	1.0		-0.5		Sample	Sample	ASCKME

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-357 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6179357	Work Order:	H8DPD1AA		Report DB ID:	H8DPD1AB							
RA-228	0.114	ND	0.18	0.20	0.461	pCi/sample	83%	0.25	7/25/06 06:05 a	1.0	1.0	E904.0
					0.198	3.1		(1.2)		Sample	Sample	GPC4C

Number of Results: 1

Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-169 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6167169	**Work Order:** H7JNL1AC			**Report DB ID:** H7JNL1CS									
U-234	1.05	=	0.17	0.23	0.0316	pCi/sample	92.38%	0.975	0.0057	108%	7/8/06 01:10 p	1.0	E908.0
						Rec Limits:				0.1		Sample	ALP10
U-235	0.0264	ND	0.026	0.027	0.0179	pCi/sample	92.38%	0.0445	0.00026	59%	7/8/06 01:10 p	1.0	E908.0
						Rec Limits:				-0.4		Sample	ALP10
U-238	1.07	=	0.17	0.24	0.0373	pCi/sample	92.38%	1.02	0.0059	104%	7/8/06 01:10 p	1.0	E908.0
						Rec Limits:				0.0		Sample	ALP10

Number of Results: 3

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected
ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-182 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6167182	**Work Order:** H7JP21AC			**Report DB ID:** H7JP21CS									
TH-230	1.91	=	0.16	0.36	0.0202	pCi/sample	112.06%	1.84	0.061	104%	7/13/06 06:55 p	1.0	ISOTH
							Rec Limits:	70.	130.	0.0		Sample	ALP176

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-184 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6167184	**Work Order:** H7JP52AC			**Report DB ID:** H7JP52CS									
ALPHA	2.07	=	0.25	0.49	0.098	pCi/sample	100.00%	2.38	0.075	87%	7/13/06 02:58 p	1.0	E900.0
							Rec Limits:			-0.1		Sample	GPC10D

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-185 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6167185	**Work Order:** H7JP71AC			**Report DB ID:** H7JP71CS									
BETA	4.67	=	0.41	0.75	0.443	pCi/sample	100.00%	4.60	0.037	102%	7/10/06 12:23 p	1.0	E900.0
						Rec Limits:				0.0		Sample	GPC31D

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-188 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6167188	**Work Order:** H7JQF1AC			**Report DB ID:** H7JQF1CS									
RA-226	1.50	=	0.25	0.40	0.128	pCi/sample	89.47%	1.40	0.022	107%	7/1/06 05:26 p	1.0	E903.1
							Rec Limits:	70.	130.	0.1		Sample	ASCPMB

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31902

Lot-Sample No.: J6F160000-192 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6167192	**Work Order:** H7JQ51AC			**Report DB ID:** H7JQ51CS									
RA-228	4.44	=	0.51	0.72	0.524	pCi/sample	81.41%	5.09	0.021	87%	7/11/06 06:09 a	1.0	E904.0
							Rec Limits:	70.	130.	-0.1		Sample	GPC4A

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-343 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6179343	**Work Order:** H8DM71AC			**Report DB ID:** H8DM71CS									
U-234	1.01	=	0.19	0.25	0.0487	pCi/sample	76.55%	0.968	0.0056	105%	7/18/06 06:26 p	1.0	E908.0
						Rec Limits:				0.0		Sample	ALP87
U-235	0.0517	=	0.042	0.043	0.0234	pCi/sample	76.55%	0.0442	0.00026	117%	7/18/06 06:26 p	1.0	E908.0
						Rec Limits:				0.2		Sample	ALP87
U-238	1.02	=	0.19	0.25	0.0234	pCi/sample	76.55%	1.01	0.0059	100%	7/18/06 06:26 p	1.0	E908.0
						Rec Limits:				0.0		Sample	ALP87

Number of Results: 3

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-344 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6179344	**Work Order:** H8DM81AC			**Report DB ID:** H8DM81CS									
TH-230	1.65	=	0.14	0.32	0.0186	pCi/sample	108.10%	1.81	0.06	91%	7/19/06 10:14 a	1.0	ISOTH
							Rec Limits:	70.	130.	-0.1		Sample	ALP176

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-346 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6179346	**Work Order:** H8DNK1AC			**Report DB ID:** H8DNK1CS									
ALPHA	2.32	=	0.27	0.54	0.107	pCi/sample	100.00%	2.39	0.075	97%	7/19/06 08:30 a	1.0	E900.0
						Rec Limits:				0.0		Sample	GPC10C

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-351 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6179351	**Work Order:** H8DNT1AC			**Report DB ID:** H8DNT1CS									
BETA	4.45	=	0.39	0.83	0.397	pCi/sample	100.00%	4.59	0.037	97%	7/18/06 04:22 p	1.0	E900.0
						Rec Limits:				0.0		Sample	GPC31B

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-354 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6179354	**Work Order:** H8DN71AC			**Report DB ID:** H8DN71CS									
RA-226	1.34	=	0.23	0.36	0.145	pCi/sample	95.48%	1.38	0.021	97%	7/21/06 05:28 p	1.0	E903.1
							Rec Limits:	70.	130.	0.0		Sample	ASCPMA

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

LCS RESULTS

Date: 31-Jul-06

Lab Name: STL Richland **SDG:** 31999

Lot-Sample No.: J6F280000-357 **Report No. :** 32890 **Matrix:** FILTER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6179357	**Work Order:** H8DPD1AC			**Report DB ID:** H8DPD1CS									
RA-228	3.95	=	0.50	0.67	0.444	pCi/sample	86.61%	5.07	0.021	78%	7/25/06 06:05 a	1.0	E904.0
							Rec Limits:	70.	130.	-0.2		Sample	GPC4D

Number of Results: 1

Comments:

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

BROWN AND CALDWELL J6F140270 31902

CHAIN OF CUSTODY RECORD

COC No._____

☐ 3264 Goni Road / Suite 153
Carson City, NV 89706
775-883-4118 / FAX 775-883-5108

☐ 4425 W. Spring Mountain Road / Suite 225
Las Vegas, NV 89102
702-938-4080 / FAX 702-938-4082

☐ 201 East Washington Street / Suite 500
Phoenix, AZ 85004
602-567-4000 / FAX 602-567-4001

Due 7.12.06

PROJECT NAME: [illegible] Air Quality

PROJECT NUMBER: [illegible]

LABORATORY NAME & ADDRESS: WESTERN TRUST LABS, WEST SACRAMENTO

1/6 OF THE EXPOSED FILTER WAS UTILIZED FOR THE METALS ANALYSIS

SACRAMENTO LOT # 06F020219

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC – REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	111473	[illegible]	1740	[illegible]	1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DWT			—		----	
02	111474		0310		1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXC			—		----	
03	111477		1030		1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXD			—		----	
04	111478		1120		1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXF			—		----	
05	111479		0915		1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXH			—		----	
06					1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List)			—		----	
07					1	8x10 Filter	NONE	A	TSP, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List)			—		----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY: [illegible]	DATE [illegible]	TIME	COOLER I.D.:			COMMENTS (see note on back):
RECEIVED BY: [illegible]	DATE 6/12/06	TIME 10:55	RELINQUISHED BY: Steve Valmas	DATE 6/13/06	TIME kw	RECEIVED IN GOOD CONDITION UNDER C.O.C. JUN - 2 2006 INIT.
S. Welch	6.14.06	10:00				
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER: [illegible]			SHIPPING NUMBER: [illegible]			

DISTRIBUTION: WHITE – PROJECT FILE • CANARY – LAB RECEIPT • PINK – DATA MANAGEMENT • GOLDENROD – FIELD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK.

BROWN AND CALDWELL J6F140270 31900

CHAIN OF CUSTODY RECORD

COC No._____

☐ 3264 Goni Road / Suite 153
Carson City, NV 89706
775-883-4118 / FAX 775-883-5108

☐ 4425 W. Spring Mountain Road / Suite 225
Las Vegas, NV 89102
702-938-4080 / FAX 702-938-4082

☐ 201 East Washington Street / Suite 500
Phoenix, AZ 85004
602-567-4000 / FAX 602-567-4001

Due 9 12 06

PROJECT NAME: [illegible]

PROJECT NUMBER: 121243

LABORATORY NAME & ADDRESS: SEVERN TRENT LABS, WEST SACRAMENTO

1/6 OF THE EXPOSED FILTER WAS UTILIZED FOR THE METALS ANALYSIS. SACRAMENTO LOT # G6F020219

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC – REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	P-0644	5/24/06	0730	MS	1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXJ			—		----	
02	P-0645		0800		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXK			—		----	
03	P-0646		0830		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXL			—		----	
04	P-0647		0900		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXM			—		----	
05	P-0648		1020		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXP			—		----	
06	P-0649		11:10		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXQ			—		----	
07	P-0651		0735		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXV			—		----	
08	P-0652		0815		1	8x10 Filter	NONE	A	PM-10, Gross Alpha/Beta, Th(228,230,232), Ra(226,228), U (234,235,238), Metals(Client List) H7DXO			—		----	
09														----	
10														----	

COLLECTED & RELEASED BY:	DATE	TIME	COOLER I.D.:	DATE	TIME	COMMENTS (see note on back):
[illegible]	6/12/06	1600				
RECEIVED BY: Chang Vue	6/12/06	10:55	RELINQUISHED BY: Steve Ochmira	6/13/06	1600	RECEIVED IN GOOD CONDITION UNDER COC
S. Welch	6-14-06	10:00				JUN - 2 2006
RECORD RETURNED BY:	DATE / /	TIME :				INI:
COURIER: [illegible]			SHIPPING NUMBER: [illegible]			

DISTRIBUTION: WHITE – PROJECT FILE • CANARY – LAB RECEIPT • PINK – DATA MANAGEMENT • GOLDENROD – FIELD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK.

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 6-14-06 10:00

Client: BNC SDG #: 31902 NA [ ] SAF #: _____ NA [ ]

Work Order Number: J6F140270 Chain of Custody # _____

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: 13
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? FLT NA [✓] pH<2 [ ] pH>2 [ ] adjusted pH [ ]
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Wehl Date: 6-14-06 10:00

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 12/05, Rev. 6

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/18/2006 3:37:54 PM

Lot No., Due Date: J6F140270; 07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6167182; RTHISO Thlso by ALP

SDG, Matrix: 31902; FILTER

1.0 COC

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

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?		✓	

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

Samples with tracer yields greater than 115%.

First Level Review [signature] **Date** 7/19/06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 616718L

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: See NCM

Second Level Review: Sheryl R Adam Date: 7-19-06

7/18/2006 3:36:04 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot uncert	Sample Date / Mda	Units	Expected	Yield	Volumes
31902	**9H7DX010**			**J6F14027013**	P-0652	FILTER	6/14/2006 10:00:00	5/24/2006 8:15:00 AM				
ALPHA	BAS7		0	7/12/2006 7:34:00 AM	**7.5545E-02**	9.586E-01	9.586E-01	4.872E+00	PCI/SA	1.0	1.0E+0	2.045E-2
BETA	BDS8		0	7/10/2006 12:23:56 PM	**3.6338E+00**	1.297E+00	1.334E+00	5.02E+00	PCI/SA	1.0	1.0E+0	8.132E-2
RA-226	BXTE		0	7/1/2006 5:54:02 PM	**3.0674E-01**	1.589E-01	1.619E-01	5.026E-01	PCI/SA	0.94	1.0E+0	2.439E-1
RA-228	BXTF		0	7/11/2006 6:09:05 AM	**1.7118E-01**	3.763E-01	3.767E-01	1.822E+00	PCI/SA	0.842	1.0E+0	2.439E-1
TH-228	9NS1		0	7/13/2006 6:55:42 PM	**1.6909E-01**	9.763E-02	9.881E-02	1.527E-01	PCI/SA	1.213	1.0E+0	8.143E-2
TH-230	9NS1		0	7/13/2006 6:55:42 PM	**2.1317E-01**	1.066E-01	1.083E-01	1.444E-01	PCI/SA	1.213	1.0E+0	8.143E-2
TH-232	9NS1		0	7/13/2006 6:55:42 PM	**0.0E+00**	0.0E+00	6.527E-02	1.444E-01	PCI/SA	1.213	1.0E+0	8.143E-2
U-234	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	6.116E-2
U-235	7YSR		0	7/8/2006 1:10:33 PM	**-1.8891E-02**	1.889E-02	1.895E-02	4.522E-01	PCI/SA	0.998	1.0E+0	6.116E-2
U-238	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	6.116E-2
31902	**9H7DXC10**			**J6F1402702**	000474	FILTER	6/14/2006 10:00:00	5/24/2006 8:10:00 AM				
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**8.2313E+00**	1.986E+00	2.163E+00	5.046E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.3057E+01**	1.65E+00	1.907E+00	5.517E+00	PCI/SA	1.0	1.0E+0	8.345E-2
RA-226	BXTE		0	7/1/2006 5:23:00 PM	**3.0178E-01**	2.836E-01	2.853E-01	1.008E+00	PCI/SA	0.867	1.0E+0	2.49E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**2.0785E+00**	6.079E-01	6.183E-01	2.483E+00	PCI/SA	0.799	1.0E+0	2.49E-1
TH-228	9NS1		0	7/13/2006 9:45:36 AM	**8.6794E-02**	1.227E-01	1.23E-01	5.212E-01	PCI/SA	1.133	1.0E+0	8.305E-2
TH-230	9NS1		0	7/13/2006 9:45:36 AM	**3.8994E-01**	1.314E-01	1.359E-01	2.462E-01	PCI/SA	1.133	1.0E+0	8.305E-2
TH-232	9NS1		0	7/13/2006 9:45:36 AM	**4.1046E-02**	4.105E-02	4.121E-02	1.112E-01	PCI/SA	1.133	1.0E+0	8.305E-2
U-234	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	6.241E-2
U-235	7YSR		0	7/8/2006 9:30:33 AM	**-1.848E-02**	1.848E-02	1.854E-02	4.425E-01	PCI/SA	1.004	1.0E+0	6.241E-2
U-238	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	6.241E-2
31902	**9H7DXD10**			**J6F1402703**	000477	FILTER	6/14/2006 10:00:00	5/24/2006 10:30:00 AM				
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**7.9411E+00**	1.998E+00	2.162E+00	5.149E+00	PCI/SA	1.0	1.0E+0	2.08E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.951E+01**	1.827E+00	2.288E+00	5.565E+00	PCI/SA	1.0	1.0E+0	8.301E-2
RA-226	BXTE		0	7/1/2006 5:22:00 PM	**4.4327E-01**	2.36E-01	2.404E-01	7.719E-01	PCI/SA	0.95	1.0E+0	2.489E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**8.1955E-01**	4.891E-01	4.935E-01	2.178E+00	PCI/SA	0.862	1.0E+0	2.489E-1
TH-228	9NS1		0	7/13/2006 9:45:36 AM	**1.9141E-01**	1.395E-01	1.406E-01	5.151E-01	PCI/SA	0.872	1.0E+0	8.346E-2
TH-230	9NS1		0	7/13/2006 9:45:36 AM	**9.2796E-01**	2.087E-01	2.251E-01	2.715E-01	PCI/SA	0.872	1.0E+0	8.346E-2
TH-232	9NS1		0	7/13/2006 9:45:36 AM	**2.716E-01**	1.24E-01	1.264E-01	3.332E-01	PCI/SA	0.872	1.0E+0	8.346E-2
U-234	7YSR		0	7/8/2006 9:30:37 AM	**1.1566E+00**	3.401E-01	3.525E-01	4.694E-01	PCI/SA	1.039	1.0E+0	6.224E-2
U-235	7YSR		0	7/8/2006 9:30:37 AM	**0.0E+00**	0.0E+00	1.2E-01	2.656E-01	PCI/SA	1.039	1.0E+0	6.224E-2
U-238	7YSR		0	7/8/2006 9:30:37 AM	**5.6848E-01**	2.409E-01	2.451E-01	4.694E-01	PCI/SA	1.039	1.0E+0	6.224E-2
31902	**9H7DXF10**			**J6F1402704**	000478	FILTER	6/14/2006 10:00:00	5/24/2006 11:20:00 AM				
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**9.1197E+00**	2.043E+00	2.248E+00	5.063E+00	PCI/SA	1.0	1.0E+0	2.1E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.7034E+01**	1.741E+00	2.104E+00	5.336E+00	PCI/SA	1.0	1.0E+0	8.369E-2
RA-226	BXTE		0	7/1/2006 5:22:01 PM	**-1.1411E-01**	1.323E-01	1.328E-01	6.297E-01	PCI/SA	0.93	1.0E+0	2.503E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**1.1615E+00**	5.476E-01	5.684E-01	2.469E+00	PCI/SA	0.836	1.0E+0	2.503E-1
TH-228	9NS1		0	7/13/2006 9:45:36 AM	**8.2352E-02**	8.235E-02	8.269E-02	3.293E-01	PCI/SA	1.091	1.0E+0	8.337E-2
TH-230	9NS1		0	7/13/2006 9:45:36 AM	**7.7903E-01**	2.011E-01	2.134E-01	1.407E-01	PCI/SA	1.091	1.0E+0	8.337E-2
TH-232	9NS1		0	7/13/2006 9:45:36 AM	**1.0387E-01**	7.345E-02	7.406E-02	1.407E-01	PCI/SA	1.091	1.0E+0	8.337E-2
U-234	7YSR		0	7/8/2006 9:30:47 AM	**1.7843E-01**	1.262E-01	1.27E-01	2.418E-01	PCI/SA	0.984	1.0E+0	6.26E-2
U-235	7YSR		0	7/8/2006 9:30:47 AM	**7.1362E-02**	9.098E-02	9.116E-02	4.273E-01	PCI/SA	0.984	1.0E+0	6.26E-2
U-238	7YSR		0	7/8/2006 9:30:47 AM	**-3.5705E-02**	2.525E-02	2.541E-02	5.042E-01	PCI/SA	0.984	1.0E+0	6.26E-2
31902	**9H7DXH10**			**J6F1402705**	000479	FILTER	6/14/2006 10:00:00	5/24/2006 9:15:00 AM				
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**1.7697E+00**	1.181E+00	1.195E+00	4.512E+00	PCI/SA	1.0	1.0E+0	2.111E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**3.0363E+00**	1.314E+00	1.33E+00	5.173E+00	PCI/SA	1.0	1.0E+0	8.367E-2
RA-226	BXTE		0	7/1/2006 5:21:00 PM	**-1.8428E-01**	1.907E-01	1.918E-01	8.373E-01	PCI/SA	0.964	1.0E+0	2.496E-1
RA-228	BXTF		0	7/11/2006 6:13:38 AM	**3.4659E-01**	3.918E-01	4.213E-01	1.96E+00	PCI/SA	0.858	1.0E+0	2.496E-1
TH-228	9NS1		0	7/13/2006 9:45:36 AM	**1.095E-01**	7.743E-02	7.806E-02	1.484E-01	PCI/SA	1.137	1.0E+0	8.38E-2
TH-230	9NS1		0	7/13/2006 9:45:36 AM	**3.6251E-01**	1.37E-01	1.409E-01	1.403E-01	PCI/SA	1.137	1.0E+0	8.38E-2
TH-232	9NS1		0	7/13/2006 9:45:36 AM	**0.0E+00**	0.0E+00	6.343E-02	1.403E-01	PCI/SA	1.137	1.0E+0	8.38E-2

6167182, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 40 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JP21AA=> , mat:FILTER | Air *wo:H7JP21AA=> , mat:FILTER | Air *wo:H7JP21AA=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot uncert	Sample Date / mda	Units	Expected	Yield	Volumes	
U-234	7YSR	0		7/8/2006 9:31:00 AM	**1.1133E-01**	1.113E-01	1.117E-01	3.017E-01	PCI/SA	0.882	1.0E+0	6.241E-2	
U-235	7YSR	0		7/8/2006 9:31:00 AM	**0.0E+00**	0.0E+00	1.364E-01	3.017E-01	PCI/SA	0.882	1.0E+0	6.241E-2	
U-238	7YSR	0		7/8/2006 9:31:00 AM	**-2.2288E-02**	2.229E-02	2.236E-02	5.333E-01	PCI/SA	0.882	1.0E+0	6.241E-2	
31902	**9H7DXJ10**			**J6F1402706**	P-0644	FILTER	6/14/2006 10:00:00	5/24/2006 7:30:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**5.3127E+00**	1.692E+00	1.78E+00	4.918E+00	PCI/SA	1.0	1.0E+0	2.085E-2	
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.4236E+01**	1.619E+00	1.89E+00	5.15E+00	PCI/SA	1.0	1.0E+0	8.339E-2	
RA-226	BXTE	0		7/1/2006 5:25:00 PM	**2.0883E-01**	2.01E-01	2.023E-01	7.254E-01	PCI/SA	0.92	1.0E+0	2.499E-1	
RA-228	BXTF	0		7/11/2006 6:13:38 AM	**1.2818E-01**	4.435E-01	4.435E-01	2.083E+00	PCI/SA	0.832	1.0E+0	2.499E-1	
TH-228	9NS1	0		7/13/2006 9:45:36 AM	**6.4872E-02**	6.487E-02	6.512E-02	2.594E-01	PCI/SA	1.225	1.0E+0	8.321E-2	
TH-230	9NS1	0		7/13/2006 9:45:36 AM	**4.0905E-01**	1.294E-01	1.342E-01	1.109E-01	PCI/SA	1.225	1.0E+0	8.321E-2	
TH-232	9NS1	0		7/13/2006 9:45:36 AM	**2.0453E-02**	4.573E-02	4.577E-02	2.453E-01	PCI/SA	1.225	1.0E+0	8.321E-2	
U-234	7YSR	0		7/8/2006 9:31:05 AM	**1.6712E-01**	1.489E-01	1.495E-01	5.905E-01	PCI/SA	0.923	1.0E+0	6.236E-2	
U-235	7YSR	0		7/8/2006 9:31:05 AM	**7.9377E-02**	1.055E-01	1.057E-01	5.212E-01	PCI/SA	0.923	1.0E+0	6.236E-2	
U-238	7YSR	0		7/8/2006 9:31:05 AM	**1.4203E-01**	1.496E-01	1.501E-01	6.719E-01	PCI/SA	0.923	1.0E+0	6.236E-2	
31902	**9H7DXK10**			**J6F1402707**	P-0645	FILTER	6/14/2006 10:00:00	5/24/2006 8:00:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**2.503E+00**	1.376E+00	1.4E+00	5.042E+00	PCI/SA	1.0	1.0E+0	2.088E-2	
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.4378E+01**	1.561E+00	1.846E+00	4.845E+00	PCI/SA	1.0	1.0E+0	8.332E-2	
RA-226	BXTE	0		7/1/2006 5:17:00 PM	**-2.6994E-01**	2.303E-01	2.32E-01	1.088E+00	PCI/SA	0.824	1.0E+0	2.507E-1	
RA-228	BXTF	0		7/11/2006 6:13:38 AM	**2.0953E-01**	4.885E-01	4.885E-01	2.296E+00	PCI/SA	0.745	1.0E+0	2.507E-1	
TH-228	9NS1	0		7/13/2006 9:45:36 AM	**1.0557E-01**	9.204E-02	9.25E-02	3.549E-01	PCI/SA	1.167	1.0E+0	8.436E-2	
TH-230	9NS1	0		7/13/2006 9:45:36 AM	**3.7945E-01**	1.279E-01	1.322E-01	2.396E-01	PCI/SA	1.167	1.0E+0	8.436E-2	
TH-232	9NS1	0		7/13/2006 9:45:36 AM	**-3.9941E-02**	2.824E-02	2.846E-02	2.94E-01	PCI/SA	1.167	1.0E+0	8.436E-2	
U-234	7YSR	0		7/8/2006 9:31:08 AM	**7.473E-02**	9.928E-02	9.946E-02	4.905E-01	PCI/SA	1.047	1.0E+0	6.267E-2	
U-235	7YSR	0		7/8/2006 9:31:08 AM	**6.6861E-02**	9.959E-02	9.973E-02	5.252E-01	PCI/SA	1.047	1.0E+0	6.267E-2	
U-238	7YSR	0		7/8/2006 9:31:08 AM	**-3.1475E-02**	1.574E-02	1.594E-02	5.252E-01	PCI/SA	1.047	1.0E+0	6.267E-2	
31902	**9H7DXL10**			**J6F1402708**	P-0646	FILTER	6/14/2006 10:00:00	5/24/2006 8:30:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**-6.313E-01**	8.874E-01	8.898E-01	5.129E+00	PCI/SA	1.0	1.0E+0	2.084E-2	
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.7896E+01**	1.704E+00	2.11E+00	5.143E+00	PCI/SA	1.0	1.0E+0	8.31E-2	
RA-226	BXTE	0		7/1/2006 5:57:00 PM	**0.0E+00**	0.0E+00	2.114E-01	8.351E-01	PCI/SA	0.962	1.0E+0	2.487E-1	
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**-2.4722E-01**	3.353E-01	3.353E-01	1.779E+00	PCI/SA	0.861	1.0E+0	2.487E-1	
TH-228	9NS1	0		7/13/2006 9:45:36 AM	**-4.8342E-02**	4.834E-02	4.859E-02	5.799E-01	PCI/SA	0.547	1.0E+0	8.305E-2	
TH-230	9NS1	0		7/13/2006 9:45:36 AM	**1.829E-01**	1.293E-01	1.307E-01	2.478E-01	PCI/SA	0.547	1.0E+0	8.305E-2	
TH-232	9NS1	0		7/13/2006 9:45:36 AM	**9.1451E-02**	9.145E-02	9.192E-02	2.478E-01	PCI/SA	0.547	1.0E+0	8.305E-2	
U-234	7YSR	0		7/8/2006 9:31:19 AM	**-4.3242E-02**	1.934E-02	1.965E-02	6.105E-01	PCI/SA	0.961	1.0E+0	6.233E-2	
U-235	7YSR	0		7/8/2006 9:31:19 AM	**-1.7297E-02**	1.223E-02	1.231E-02	4.937E-01	PCI/SA	0.961	1.0E+0	6.233E-2	
U-238	7YSR	0		7/8/2006 9:31:19 AM	**-5.189E-02**	2.118E-02	2.16E-02	6.409E-01	PCI/SA	0.961	1.0E+0	6.233E-2	
31902	**9H7DXM10**			**J6F1402709**	P-0647	FILTER	6/14/2006 10:00:00	5/24/2006 9:00:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**2.945E+00**	1.445E+00	1.476E+00	5.138E+00	PCI/SA	1.0	1.0E+0	2.068E-2	
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.6693E+01**	1.712E+00	2.068E+00	5.289E+00	PCI/SA	1.0	1.0E+0	8.273E-2	
RA-226	BXTE	0		7/1/2006 5:54:00 PM	**6.0055E-01**	2.624E-01	2.692E-01	8.065E-01	PCI/SA	0.941	1.0E+0	2.463E-1	
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**6.3834E-01**	3.959E-01	4.103E-01	1.845E+00	PCI/SA	0.859	1.0E+0	2.463E-1	
TH-228	9NS1	0		7/13/2006 9:45:36 AM	**1.0411E-01**	7.507E-02	7.565E-02	2.498E-01	PCI/SA	0.952	1.0E+0	8.222E-2	
TH-230	9NS1	0		7/13/2006 9:45:36 AM	**1.9695E-02**	4.404E-02	4.407E-02	2.363E-01	PCI/SA	0.952	1.0E+0	8.222E-2	
TH-232	9NS1	0		7/13/2006 9:45:36 AM	**6.5719E-07**	4.824E-02	4.824E-02	2.899E-01	PCI/SA	0.952	1.0E+0	8.222E-2	
U-234	7YSR	0		7/8/2006 9:31:21 AM	**3.2796E-01**	2.129E-01	2.146E-01	6.537E-01	PCI/SA	0.857	1.0E+0	6.16E-2	
U-235	7YSR	0		7/8/2006 9:31:21 AM	**-1.9591E-02**	1.385E-02	1.395E-02	5.593E-01	PCI/SA	0.857	1.0E+0	6.16E-2	
U-238	7YSR	0		7/8/2006 9:31:21 AM	**0.0E+00**	0.0E+00	1.499E-01	3.317E-01	PCI/SA	0.857	1.0E+0	6.16E-2	
31902	**9H7DXP10**			**J6F14027010**	P-0648	FILTER	6/14/2006 10:00:00	5/24/2006 10:20:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**4.8204E+00**	1.609E+00	1.684E+00	4.609E+00	PCI/SA	1.0	1.0E+0	2.068E-2	
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.8178E+01**	1.726E+00	2.271E+00	5.191E+00	PCI/SA	1.0	1.0E+0	8.279E-2	
RA-226	BXTE	0		7/1/2006 5:58:00 PM	**2.4791E-01**	1.56E-01	1.581E-01	5.186E-01	PCI/SA	0.957	1.0E+0	2.481E-1	
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**3.0722E-01**	3.198E-01	3.399E-01	1.615E+00	PCI/SA	0.879	1.0E+0	2.481E-1	
TH-228	9NS1	0		7/13/2006 6:55:42 PM	**3.9239E-01**	1.602E-01	1.639E-01	4.693E-01	PCI/SA	1.116	1.0E+0	8.269E-2	
TH-230	9NS1	0		7/13/2006 6:55:42 PM	**3.5042E-01**	1.254E-01	1.292E-01	2.473E-01	PCI/SA	1.116	1.0E+0	8.269E-2	

6167182, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 40 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JP21AA=> , mat:FILTER | Air *wo:H7JP21AA=> , mat:FILTER | Air *wo:H7JP21AA=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
TH-232	9NS1	0		7/13/2006 6:55:42 PM	**1.2368E-01**	7.141E-02	7.224E-02	1.117E-01	PCI/SA	1.116	1.0E+0	8.269E-2	
U-234	7YSR	0		7/8/2006 9:31:31 AM	**2.2422E-01**	1.998E-01	2.007E-01	7.923E-01	PCI/SA	1.112	1.0E+0	6.211E-2	
U-235	7YSR	0		7/8/2006 9:31:31 AM	**1.4018E-01**	1.402E-01	1.407E-01	3.799E-01	PCI/SA	1.112	1.0E+0	6.211E-2	
U-238	7YSR	0		7/8/2006 9:31:31 AM	**0.0E+00**	0.0E+00	1.717E-01	3.799E-01	PCI/SA	1.112	1.0E+0	6.211E-2	
31902	**9H7DXQ10**			**J6F14027011**	P-0649	FILTER	6/14/2006 10:00:00	5/24/2006 11:10:00 AM					
ALPHA	BAS7	0		7/12/2006 7:34:00 AM	**3.4966E+00**	1.65E+00	1.69E+00	5.896E+00	PCI/SA	1.0	1.0E+0	2.087E-2	
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.5805E+01**	1.667E+00	2.124E+00	5.126E+00	PCI/SA	1.0	1.0E+0	8.36E-2	
RA-226	BXTE	0		7/1/2006 5:55:00 PM	**-1.0043E-01**	2.029E-01	2.032E-01	8.745E-01	PCI/SA	0.836	1.0E+0	2.48E-1	
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**3.6453E-01**	3.761E-01	3.761E-01	1.768E+00	PCI/SA	0.745	1.0E+0	2.48E-1	
TH-228	9NS1	0		7/13/2006 6:55:42 PM	**5.5381E-02**	1.299E-01	1.3E-01	5.961E-01	PCI/SA	0.758	1.0E+0	8.302E-2	
TH-230	9NS1	0		7/13/2006 6:55:42 PM	**1.7019E+00**	3.02E-01	3.406E-01	3.141E-01	PCI/SA	0.758	1.0E+0	8.302E-2	
TH-232	9NS1	0		7/13/2006 6:55:42 PM	**-5.2365E-02**	3.703E-02	3.734E-02	3.854E-01	PCI/SA	0.758	1.0E+0	8.302E-2	
U-234	7YSR	0		7/8/2006 9:31:32 AM	**-4.2646E-02**	3.016E-02	3.035E-02	6.021E-01	PCI/SA	1.031	1.0E+0	6.194E-2	
U-235	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA	1.031	1.0E+0	6.194E-2	
U-238	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA	1.031	1.0E+0	6.194E-2	
31902	**9H7DXV10**			**J6F14027012**	P-0651	FILTER	6/14/2006 10:00:00	5/24/2006 7:35:00 AM					
ALPHA	BAS7	0		7/12/2006 7:34:00 AM	**-9.3467E-01**	8.791E-01	8.845E-01	5.269E+00	PCI/SA	1.0	1.0E+0	2.077E-2	
BETA	BDS8	0		7/10/2006 12:23:56 PM	**1.9498E+01**	1.757E+00	2.239E+00	5.204E+00	PCI/SA	1.0	1.0E+0	8.332E-2	
RA-226	BXTE	0		7/1/2006 5:52:00 PM	**-2.0083E-01**	2.26E-01	2.27E-01	9.441E-01	PCI/SA	0.898	1.0E+0	2.478E-1	
RA-228	BXTF	0		7/11/2006 6:09:05 AM	**3.3638E+00**	5.198E-01	5.584E-01	1.672E+00	PCI/SA	0.82	1.0E+0	2.478E-1	
TH-228	9NS1	0		7/13/2006 6:55:42 PM	**-6.5183E-02**	6.518E-02	6.557E-02	7.82E-01	PCI/SA	0.425	1.0E+0	8.26E-2	
TH-230	9NS1	0		7/13/2006 6:55:42 PM	**3.6978E-01**	2.135E-01	2.172E-01	3.34E-01	PCI/SA	0.425	1.0E+0	8.26E-2	
TH-232	9NS1	0		7/13/2006 6:55:42 PM	**0.0E+00**	0.0E+00	1.51E-01	3.34E-01	PCI/SA	0.425	1.0E+0	8.26E-2	
U-234	7YSR	0		7/8/2006 1:10:30 PM	**-2.0063E-02**	2.006E-02	2.013E-02	4.801E-01	PCI/SA	0.992	1.0E+0	6.227E-2	
U-235	7YSR	0		7/8/2006 1:10:30 PM	**0.0E+00**	0.0E+00	1.227E-01	2.716E-01	PCI/SA	0.992	1.0E+0	6.227E-2	
U-238	7YSR	0		7/8/2006 1:10:30 PM	**6.0099E-02**	1.042E-01	1.043E-01	5.665E-01	PCI/SA	0.992	1.0E+0	6.227E-2	
31902	**H7JP21AB**			**J6F160000182**	INTRA-LAB BLANK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
TH-228	9NS1	0	B	7/13/2006 6:55:42 PM	**1.8E-03**	4.025E-03	4.028E-03	2.159E-02	PCI/SA	1.082	1.0E+0	1.0E+0	
TH-230	9NS1	0	B	7/13/2006 6:55:42 PM	**2.0422E-02**	8.337E-03	8.52E-03	9.224E-03	PCI/SA	1.082	1.0E+0	1.0E+0	
TH-232	9NS1	0	B	7/13/2006 6:55:42 PM	**-1.7018E-03**	1.702E-03	1.708E-03	2.042E-02	PCI/SA	1.082	1.0E+0	1.0E+0	
31902	**H7JP21CS**			**J6F160000182**	INTRA-LAB CHECK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
TH-230	9NS1	0	S	7/13/2006 6:55:42 PM	**1.9087E+00**	8.025E-02	1.823E-01	2.021E-02	PCI/SA	1.8365E+00	1.121	1.0E+0	1.0E+0

6167182, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 40 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JP21AA=> , mat:FILTER | Air *wo:H7JP21AA=> , mat:FILTER | Air *wo:H7JP21AA=> , mat:FILTER | Air.

7/18/2006 3:36:08 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/18/2005, 7/23/2006, Batch: '6167182', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6167182						
AC		**CalcC**	**HansenM**	6/26/2006 8:41:47		
SC			wagarr	IsBatched	6/16/2006 4:55:22 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	6/26/2006 8:41:47 AM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	6/26/2006 8:42:17 AM	RICH-RC-5016 REVISION 5
SC			AndersonE	Sep1C	7/11/2006 9:14:39 AM	RICH-RC-5087 REV0
SC			FABREM	Sep2C	7/12/2006 3:31:44 PM	RICH-RC-5039 REV 6
SC			DAWKINSO	InCnt1	7/12/2006 7:53:12 PM	RICH-RD-0008 REVISION 4
SC			DAWKINSO	CalcC	7/14/2006 2:01:43 PM	RICH-RD-0008 REVISION 4
AC			**HansenM**	6/26/2006 8:42:17		
AC			**AndersonE**	7/11/2006 9:14:39		
AC			**FABREM**	7/12/2006 3:31:44 PM		
AC			**DAWKINSO**	7/12/2006 7:53:12 PM		
AC			**DAWKINSO**	7/14/2006 2:01:43 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.18

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-08348**
NCM Initiated By: Steven Wheland
Date Opened: 07/18/2006
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Thlso by ALP
Lot #'s (Sample #'s): J6F140270 (13,6,7),
QC Batches: 6167182

Nonconformance: Tracer yield out of limits
Subcategory: Unknown

Problem Description / Root Cause

Name	Date	Description
Steven Wheland	07/18/2006	Tracer yields exceeded the 115% limit. Uncertain how this occurred. Either counting error associated with the tracer count or Th-234 contribution from the uranium associated with the sample.

Corrective Action

Name	Date	Corrective Action
Steven Wheland	07/18/2006	report data

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

6/23/2006 4:55:55 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

9N Thiso PrpRc5016, SepRC5084(5003)
S1 Thorium-228,230,232 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167182 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: None

Sep2 DT/Tm Tech: 7-12-06 mf

Prep Tech: HansenM

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 H7DWT-1-AA J6F140270-1-SAMP 05/24/2006 07:40	0.833g	~~505.76g~~ mf 6-23-06		0.00E00g AmtRec: FILTER #Containers: 1		300		Scr:	Alpha:	Beta:
2 H7DXC-1-AA J6F140270-2-SAMP 05/24/2006 08:10	0.833sa,g	501.98sa,g	50.05g,in	0.0831g AmtRec: FILTER #Containers: 1	THTF0653 06/23/06,pd 10/04/04,r			Scr:	Alpha:	Beta:
3 H7DXD-1-AA J6F140270-3-SAMP 05/24/2006 10:30	0.833sa,g	502.56sa,g	50.35g,in	0.0835g AmtRec: FILTER #Containers: 1	THTF0654 06/23/06,pd 10/04/04,r			Scr:	Alpha:	Beta:
4 H7DXF-1-AA J6F140270-4-SAMP 05/24/2006 11:20	0.833sa,g	500.58sa,g	50.10g,in	0.0834g AmtRec: FILTER #Containers: 1	THTF0655 06/23/06,pd 10/04/04,r			Scr:	Alpha:	Beta:
5 H7DXH-1-AA J6F140270-5-SAMP 05/24/2006 09:15	0.833sa,g	501.49sa,g	50.45g,in	0.0838g AmtRec: FILTER #Containers: 1	THTF0656 06/23/06,pd 10/04/04,r			Scr:	Alpha:	Beta:
6 H7DXJ-1-AA J6F140270-6-SAMP 05/24/2006 07:30	0.833sa,g	500.55sa,g	50.00g,in	0.0832g AmtRec: FILTER #Containers: 1	THTF0657 06/23/06,pd 10/04/04,r			Scr:	Alpha:	Beta:
7 H7DXK-1-AA J6F140270-7-SAMP 05/24/2006 08:00	0.833sa,g	500.16sa,g	50.65g,in	0.0844g AmtRec: FILTER #Containers: 1	THTF0658 06/23/06,pd 10/04/04,r			Scr:	Alpha:	Beta:

6/23/2006 4:55:56 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

9N Thiso PrpRc5016, SepRC5084(5003)
S1 Thorium-228,230,232 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167182 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
177 **8 H7DXL-1-AA** J6F140270-8-SAMP 05/24/2006 08:30	0.833sa,g	504.49sa,g	50.30g,in	0.0831g	THTF0659 06/23/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
178 **9 H7DXM-1-AA** J6F140270-9-SAMP 05/24/2006 09:00	0.833sa,g	507.47sa,g	50.09g,in	0.0822g	THTF0660 06/23/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
179 **10H7DXP-1-AA** J6F140270-10-SAMP 05/24/2006 10:20	0.833sa,g	506.00sa,g	50.23g,in	0.0827g	THTF0661 06/23/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
180 **11H7DXQ-1-AA** J6F140270-11-SAMP 05/24/2006 11:10	0.833sa	505.01sa	50.33g,in	0.083g	THTF0662 06/23/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
181 **12H7DXV-1-AA** J6F140270-12-SAMP 05/24/2006 07:35	0.833sa,g	504.85sa,g	50.06g,in	0.0826g	THTF0663 06/23/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
182 **13H7DX0-1-AA** J6F140270-13-SAMP 05/24/2006 08:15	0.833sa,g	512.80sa,g	50.13g,in	0.0814g	THTF0664 06/23/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
183 **14H7JP2-1-AA-B** J6F160000-182-BLK 05/24/2006 07:40			1.00sa,in	1.00sa	THTF0665 06/23/06,pd 10/04/04,r					
			AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:

Batch Nbr: 6167182

Alpha Spec, Thlso by ALP , Results

Summary Report

7/14/2006 2:00:56 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Thlso by ALP				Richland Standard Alplso Wo Blk Subt.										
Calc	S1	FILTER	H7DXC1AA	TH-228	8.68E-02	(1.23E-01)	U4	PCI/SA	R	2.02E-01	5.21E-01		113%	
Calc	S1	FILTER	H7DXC1AA	TH-230	3.90E-01	(1.36E-01)		PCI/SA	R	6.75E-02	2.46E-01		113%	
Calc	S1	FILTER	H7DXC1AA	TH-232	4.10E-02	(4.12E-02)	U4	PCI/SA	R		1.11E-01		113%	
Calc	S1	FILTER	H7DXD1AA	TH-228	1.91E-01	(1.41E-01)	U4	PCI/SA	R	1.93E-01	5.15E-01		87%	
Calc	S1	FILTER	H7DXD1AA	TH-230	9.28E-01	(2.25E-01)		PCI/SA	R	7.45E-02	2.72E-01		87%	
Calc	S1	FILTER	H7DXD1AA	TH-232	2.72E-01	(1.26E-01)		PCI/SA	R	1.05E-01	3.33E-01		87%	
Calc	S1	FILTER	H7DXF1AA	TH-228	8.24E-02	(8.27E-02)	U4	PCI/SA	R	9.03E-02	3.29E-01		109%	
Calc	S1	FILTER	H7DXF1AA	TH-230	7.79E-01	(2.13E-01)		PCI/SA	R		1.41E-01		109%	
Calc	S1	FILTER	H7DXF1AA	TH-232	1.04E-01	(7.41E-02)	U4	PCI/SA	R		1.41E-01		109%	
Calc	S1	FILTER	H7DXH1AA	TH-228	1.09E-01	(7.81E-02)	U4	PCI/SA	R		1.48E-01		114%	
Calc	S1	FILTER	H7DXH1AA	TH-230	3.63E-01	(1.41E-01)		PCI/SA	R		1.40E-01		114%	
Calc	S1	FILTER	H7DXH1AA	TH-232	0.00E+00	(6.34E-02)	U4	PCI/SA	R		1.40E-01		114%	
Calc	S1	FILTER	H7DXJ1AA	TH-228	6.49E-02	(6.51E-02)	U4	PCI/SA	R	7.11E-02	2.59E-01		122%	
Calc	S1	FILTER	H7DXJ1AA	TH-230	4.09E-01	(1.34E-01)		PCI/SA	R		1.11E-01		122%	
Calc	S1	FILTER	H7DXJ1AA	TH-232	2.05E-02	(4.58E-02)	U4	PCI/SA	R	6.73E-02	2.45E-01		122%	
Calc	S1	FILTER	H7DXK1AA	TH-228	1.06E-01	(9.25E-02)	U4	PCI/SA	R	1.20E-01	3.55E-01		117%	
Calc	S1	FILTER	H7DXK1AA	TH-230	3.79E-01	(1.32E-01)		PCI/SA	R	6.57E-02	2.40E-01		117%	
Calc	S1	FILTER	H7DXK1AA	TH-232	-3.99E-02	(2.85E-02)	U4	PCI/SA	R	9.29E-02	2.94E-01		117%	
Calc	S1	FILTER	H7DXL1AA	TH-228	-4.83E-02	(4.86E-02)	U4	PCI/SA	R	1.59E-01	5.80E-01		55%	
Calc	S1	FILTER	H7DXL1AA	TH-230	1.83E-01	(1.31E-01)	U4	PCI/SA	R		2.48E-01		55%	
Calc	S1	FILTER	H7DXL1AA	TH-232	9.15E-02	(9.19E-02)	U4	PCI/SA	R		2.48E-01		55%	
Calc	S1	FILTER	H7DXM1AA	TH-228	1.04E-01	(7.56E-02)	U4	PCI/SA	R	6.85E-02	2.50E-01		95%	
Calc	S1	FILTER	H7DXM1AA	TH-230	1.97E-02	(4.41E-02)	U4	PCI/SA	R	6.48E-02	2.36E-01		95%	
Calc	S1	FILTER	H7DXM1AA	TH-232	6.57E-07	(4.82E-02)	U4	PCI/SA	R	9.16E-02	2.90E-01		95%	
Calc	S1	FILTER	H7DXP1AA	TH-228	3.92E-01	(1.64E-01)		PCI/SA	R	1.76E-01	4.69E-01		112%	
Calc	S1	FILTER	H7DXP1AA	TH-230	3.50E-01	(1.29E-01)		PCI/SA	R	6.78E-02	2.47E-01		112%	
Calc	S1	FILTER	H7DXP1AA	TH-232	1.24E-01	(7.22E-02)		PCI/SA	R		1.12E-01		112%	
Calc	S1	FILTER	H7DXQ1AA	TH-228	5.54E-02	(1.30E-01)	U4	PCI/SA	R	2.23E-01	5.96E-01		76%	
Calc	S1	FILTER	H7DXQ1AA	TH-230	1.70E+00	(3.41E-01)		PCI/SA	R	8.61E-02	3.14E-01		76%	
Calc	S1	FILTER	H7DXQ1AA	TH-232	-5.24E-02	(3.73E-02)	U4	PCI/SA	R	1.22E-01	3.85E-01		76%	
Calc	S1	FILTER	H7DXV1AA	TH-228	-6.52E-02	(6.56E-02)	U4	PCI/SA	R	2.14E-01	7.82E-01		43%	
Calc	S1	FILTER	H7DXV1AA	TH-230	3.70E-01	(2.17E-01)		PCI/SA	R		3.34E-01		43%	
Calc	S1	FILTER	H7DXV1AA	TH-232	0.00E+00	(1.51E-01)	U4	PCI/SA	R		3.34E-01		43%	
Calc	S1	FILTER	H7DX01AA	TH-228	1.69E-01	(9.88E-02)		PCI/SA	R		1.53E-01		121%	
Calc	S1	FILTER	H7DX01AA	TH-230	2.13E-01	(1.08E-01)		PCI/SA	R		1.44E-01		121%	
Calc	S1	FILTER	H7DX01AA	TH-232	0.00E+00	(6.53E-02)	U4	PCI/SA	R		1.44E-01		121%	
Calc	S1	FILTER	H7JP21AA	TH-228	1.80E-03	(4.03E-03)	U4	PCI/SA	R	5.92E-03	2.16E-02	B	108%	

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:51
RADCALC v4.8.18
STL Richland

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	S1	FILTER	**H7JP21AA**	TH-230	**2.04E-02**	**(8.52E-03)**		PCI/SA	R		9.22E-03	**B**	108%	
Calc	S1	FILTER	**H7JP21AA**	TH-232	**-1.70E-03**	**(1.71E-03)**	**U4**	PCI/SA	R	5.60E-03	2.04E-02	**B**	108%	
Calc	S1	FILTER	**H7JP21AC**	TH-230	**1.91E+00**	**(1.82E-01)**		PCI/SA	R	5.54E-03	2.02E-02	**S**	112%	104%

GE 7/14/06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:54
RADCALC v4.8.18
STL Richland

Batch Nbr: 6167182

Alpha Spec, Thlso by ALP , Calculated Results

7/14/2006 2:00:57 PM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXC1AA**	**PCI/SA**		05/24/06 08:10	07/13/06 09:45			1	1.00 Sa	
536403,000474					,J6F140270-2 v4.8.18		FILTER					THTF0653 Alq		0.083054 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	6	8	ALP171	COP	N	N	2.6455E-01		N	113%	N		1.0000E+00	4.5045E-01	1.0509E+00	
			499.4666666	998.95			Y		(7.937E-03)			7%			(0.000E+00)	12.040301		
1	07/13/06 05:35	TH-229	605	4	ALP171	COP	Y	N	2.6455E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.937E-03)						(0.000E+00)	12.040301		
2	07/13/06 05:35	TH-230	10	1	ALP171	COP	N	N	2.6455E-01		N	113%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.937E-03)			7%			(0.000E+00)	12.040301		
3	07/13/06 05:35	TH-232	1	0	ALP171	COP	N	N	2.6455E-01		N	113%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.937E-03)			7%			(0.000E+00)	12.040301		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.086794**	U4	4.00440E-03	0.015228	0.015228	1.00 Sa	113%		0.521176		
				(0.122981)		(5.6629E-03)	(0.021559)	(0.021559)	(0.028284)			0.201907		
	07/14/06	TH-229	R	**24.750647**		1.20729E+00	4.563548	4.563548	1.00 Sa	113%				
				(1.895748)		(4.9287E-02)	(0.231198)	(0.231198)	(0.028284)					
	07/14/06	TH-230	R	**0.389936**		1.90203E-02	0.071897	0.071897	1.00 Sa	113%		0.246194		
				(0.135879)		(6.4100E-03)	(0.024711)	(0.024711)	(0.028284)			0.06752		
	07/14/06	TH-232	R	**0.041046**	U4	2.00214E-03	0.007568	0.007568	1.00 Sa	113%		0.111234		
				(0.041207)		(2.0021E-03)	(0.007585)	(0.007585)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXD1AA**	**PCI/SA**		05/24/06 10:30	07/13/06 09:45			1	1.00 Sa	
536403,000477					,J6F140270-3 v4.8.18		FILTER					THTF0654 Alq		0.083456 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	7	6	ALP172	COP	N	N	2.7367E-01		N	87%	N		1.0000E+00	4.5045E-01	1.0508E+00	
			499.4666666	998.95			Y		(8.210E-03)			6%			(0.000E+00)	11.98239		
1	07/13/06 05:35	TH-229	489	7	ALP172	COP	Y	N	2.7367E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.210E-03)						(0.000E+00)	11.98239		
2	07/13/06 05:35	TH-230	21	1	ALP172	COP	N	N	2.7367E-01		N	87%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.210E-03)			6%			(0.000E+00)	11.98239		
3	07/13/06 05:35	TH-232	7	2	ALP172	COP	N	N	2.7367E-01		N	87%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.210E-03)			6%			(0.000E+00)	11.98239		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.18

STL Richland

Batch Nbr: 6167182 Alpha Spec, ThIso by ALP , Calculated Results 7/14/2006 2:00:57 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.191415**	U4	8.00864E-03	0.033749	0.033749	1.00 Sa	87%		0.515089		
				(0.140596)		(5.8372E-03)	(0.024713)	(0.024713)	(0.028284)			0.192818		
	07/14/06	TH-229	R	**19.170849**		9.72037E-01	3.551823	3.551823	1.00 Sa	87%				
				(1.519464)		(4.4353E-02)	(0.193957)	(0.193957)	(0.028284)					
	07/14/06	TH-230	R	**0.927963**		4.10438E-02	0.171926	0.171926	1.00 Sa	87%		0.271509		
				(0.225088)		(9.2294E-03)	(0.040516)	(0.040516)	(0.028284)			0.074463		
	07/14/06	TH-232	R	**0.2716**		1.20128E-02	0.05032	0.05032	1.00 Sa	87%		0.333159		
				(0.126404)		(5.4831E-03)	(0.02324)	(0.02324)	(0.028284)			0.105306		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXF1AA**	**PCI/SA**		05/24/06 11:20	07/13/06 09:45			1	1.00 Sa	
536403,000478					,J6F140270-4 v4.8.18		FILTER					THTF0655 Alq		0.08337 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	2	1	ALP173	COP	N	N	2.0829E-01		N	109%	N		1.0000E+00	4.5045E-01	1.0508E+00	
			499.4666666	998.95			Y		(6.249E-03)			7%			(0.000E+00)	11.994738		
1	07/13/06 05:35	TH-229	463	2	ALP173	COP	Y	N	2.0829E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.249E-03)						(0.000E+00)	11.994738		
2	07/13/06 05:35	TH-230	15	0	ALP173	COP	N	N	2.0829E-01		N	109%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.249E-03)			7%			(0.000E+00)	11.994738		
3	07/13/06 05:35	TH-232	2	0	ALP173	COP	N	N	2.0829E-01		N	109%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.249E-03)			7%			(0.000E+00)	11.994738		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.082352**	U4	3.00322E-03	0.014505	0.014505	1.00 Sa	109%		0.329298		
				(0.082695)		(3.0032E-03)	(0.014542)	(0.014542)	(0.028284)			0.090312		
	07/14/06	TH-229	R	**23.994104**		9.24987E-01	4.440861	4.440861	1.00 Sa	109%				
				(1.915254)		(4.3104E-02)	(0.246119)	(0.246119)	(0.028284)					
	07/14/06	TH-230	R	**0.779029**		3.00320E-02	0.144184	0.144184	1.00 Sa	109%		0.140745		
				(0.213385)		(7.7542E-03)	(0.038615)	(0.038615)	(0.028284)					
	07/14/06	TH-232	R	**0.103871**	U4	4.00427E-03	0.019225	0.019225	1.00 Sa	109%		0.140745		
				(0.074059)		(2.8314E-03)	(0.013662)	(0.013662)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXH1AA**	**PCI/SA**		05/24/06 09:15	07/13/06 09:45			1	1.00 Sa	
536403,000479					,J6F140270-5 v4.8.18		FILTER					THTF0656 Alq		0.0838 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	2	0	ALP174	COP	N	N	2.0781E-01		N	114%	N		1.0000E+00	4.5045E-01	1.0509E+00	
			499.4666666	998.95			Y		(6.234E-03)			7%			(0.000E+00)	11.933178		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4 RADCALC v4.8.18 STL Richland

Batch Nbr: 6167182 Alpha Spec, Thiso by ALP , Calculated Results 7/14/2006 2:00:57 PM

1	07/13/06 05:35	TH-229	484	3	ALP174	COP	Y	N	2.0781E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(6.234E-03)				(0.000E+00)	11.933178	
2	07/13/06 05:35	TH-230	7	0	ALP174	COP	N	N	2.0781E-01	N	114%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(6.234E-03)		7%		(0.000E+00)	11.933178	
3	07/13/06 05:35	TH-232	0	0	ALP174	COP	N	N	2.0781E-01	N	114%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(6.234E-03)		7%		(0.000E+00)	11.933178	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.109498**	U4	4.00427E-03	0.019385	0.019385	1.00 Sa	114%		0.14837		
				(0.078065)		(2.8314E-03)	(0.013775)	(0.013775)	(0.028284)					
	07/14/06	TH-229	R	**24.987289**		9.66030E-01	4.648539	4.648539	1.00 Sa	114%				
				(1.980501)		(4.4081E-02)	(0.253855)	(0.253855)	(0.028284)					
	07/14/06	TH-230	R	**0.36251**		1.40149E-02	0.06744	0.06744	1.00 Sa	114%		0.140343		
				(0.140927)		(5.2972E-03)	(0.02593)	(0.02593)	(0.028284)					
	07/14/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	114%		0.140343		
				(0.063426)		(0.0000E+00)	(0.0118)	(0.0118)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXJ1AA**	**PCI/SA**		05/24/06 07:30	07/13/06 09:45			1	1.00 Sa	
536403,P-0644					,J6F140270-6 v4.8.18		FILTER					THTF0657 Alq		0.083208 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	2	1	ALP175	COP	N	N	2.6497E-01		N	122%	N		1.0000E+00	4.5045E-01	1.0509E+00	
			499.4666666	998.95			Y		(7.949E-03)			7%			(0.000E+00)	12.018007		
1	07/13/06 05:35	TH-229	662	2	ALP175	COP	Y	N	2.6497E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.949E-03)						(0.000E+00)	12.018007		
2	07/13/06 05:35	TH-230	10	0	ALP175	COP	N	N	2.6497E-01		N	122%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.949E-03)			7%			(0.000E+00)	12.018007		
3	07/13/06 05:35	TH-232	1	1	ALP175	COP	N	N	2.6497E-01		N	122%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.949E-03)			7%			(0.000E+00)	12.018007		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.064872**	U4	3.00322E-03	0.011403	0.011403	1.00 Sa	122%		0.2594		
				(0.065121)		(3.0032E-03)	(0.011428)	(0.011428)	(0.028284)			0.071142		
	07/14/06	TH-229	R	**27.038084**		1.32341E+00	4.994556	4.994556	1.00 Sa	122%				
				(2.044246)		(5.1533E-02)	(0.245511)	(0.245511)	(0.028284)					
	07/14/06	TH-230	R	**0.409048**		2.00214E-02	0.075561	0.075561	1.00 Sa	122%		0.110852		
				(0.134243)		(6.3313E-03)	(0.024415)	(0.024415)	(0.028284)					
	07/14/06	TH-232	R	**0.020453**	U4	1.00108E-03	0.003778	0.003778	1.00 Sa	122%		0.245348		
				(0.045768)		(2.2384E-03)	(0.008452)	(0.008452)	(0.028284)			0.067288		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:6 RADCALC v4.8.18

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Batch Nbr: 6167182 Alpha Spec, ThIso by ALP , Calculated Results 7/14/2006 2:00:58 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXK1AA**	**PCI/SA**		05/24/06 08:00	07/13/06 09:45			1	1.00 Sa	
536403,P-0645					,J6F140270-7 v4.8.18		FILTER					THTF0658 Alq		0.084356 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	4	3	ALP176	COP	N	N	2.6767E-01		N	117%	N		1.0000E+00	4.5045E-01	1.0509E+00	
			499.4666666	998.95			Y		(8.030E-03)			7%			(0.000E+00)	11.854535		
1	07/13/06 05:35	TH-229	636	2	ALP176	COP	Y	N	2.6767E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.030E-03)						(0.000E+00)	11.854535		
2	07/13/06 05:35	TH-230	10	1	ALP176	COP	N	N	2.6767E-01		N	117%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.030E-03)			7%			(0.000E+00)	11.854535		
3	07/13/06 05:35	TH-232	0	2	ALP176	COP	N	N	2.6767E-01		N	117%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.030E-03)			7%			(0.000E+00)	11.854535		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.105573**	U4	5.00539E-03	0.018813	0.018813	1.00 Sa	117%		0.354934		
				(0.092505)		(4.3635E-03)	(0.016449)	(0.016449)	(0.028284)			0.120319		
	07/14/06	TH-229	R	**25.363267**		1.27136E+00	4.749787	4.749787	1.00 Sa	117%				
				(1.928029)		(5.0512E-02)	(0.236467)	(0.236467)	(0.028284)					
	07/14/06	TH-230	R	**0.379451**		1.90203E-02	0.07106	0.07106	1.00 Sa	117%		0.239574		
				(0.132178)		(6.4100E-03)	(0.024414)	(0.024414)	(0.028284)			0.065704		
	07/14/06	TH-232	R	**-0.039941**	U4	-2.00210E-03	-0.00748	-0.00748	1.00 Sa	117%		0.293973		
				(0.028461)		(1.4157E-03)	(0.005313)	(0.005313)	(0.028284)			0.09292		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXL1AA**	**PCI/SA**		05/24/06 08:30	07/13/06 09:45			1	1.00 Sa	
536403,P-0646					,J6F140270-8 v4.8.18		FILTER					THTF0659 Alq		0.083054 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	0	1	ALP177	COP	N	N	2.1725E-01		N	55%	N		1.0000E+00	4.5045E-01	1.0509E+00	
			499.4666666	998.95			Y		(6.517E-03)			4%			(0.000E+00)	12.040363		
1	07/13/06 05:35	TH-229	243	0	ALP177	COP	Y	N	2.1725E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.517E-03)						(0.000E+00)	12.040363		
2	07/13/06 05:35	TH-230	2	0	ALP177	COP	N	N	2.1725E-01		N	55%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.517E-03)			4%			(0.000E+00)	12.040363		
3	07/13/06 05:35	TH-232	1	0	ALP177	COP	N	N	2.1725E-01		N	55%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.517E-03)			4%			(0.000E+00)	12.040363		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:7 RADCALC v4.8.18
STL Richland

Batch Nbr: 6167182 Alpha Spec, ThIso by ALP , Calculated Results 7/14/2006 2:00:58 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**-0.048342**	U4	-1.00105E-03	-0.008482	-0.008482	1.00 Sa	55%		0.579918		
				(0.04859)		(1.0011E-03)	(0.008511)	(0.008511)	(0.028284)			0.159045		
	07/14/06	TH-229	R	**12.145822**		4.86519E-01	2.239447	2.239447	1.00 Sa	55%				
				(1.107552)		(3.1210E-02)	(0.158594)	(0.158594)	(0.028284)					
	07/14/06	TH-230	R	**0.182903**	U4	4.00427E-03	0.033724	0.033724	1.00 Sa	55%		0.247833		
				(0.130658)		(2.8314E-03)	(0.024013)	(0.024013)	(0.028284)					
	07/14/06	TH-232	R	**0.091451**	U4	2.00214E-03	0.016862	0.016862	1.00 Sa	55%		0.247833		
				(0.091921)		(2.0021E-03)	(0.016921)	(0.016921)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXM1AA**	**PCI/SA**		05/24/06 09:00	07/13/06 09:45			1	1.00 Sa	
536403,P-0647					,J6F140270-9 v4.8.18		FILTER					THTF0660 Alq		0.082222 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 05:35	TH-228	3	1	ALP178	COP	N	N	2.9265E-01		N	95%	N		1.0000E+00	4.5045E-01	1.0509E+00	
			499.4666666	998.95			Y		(8.780E-03)			6%			(0.000E+00)	12.162262		
1	07/13/06 05:35	TH-229	568	1	ALP178	COP	Y	N	2.9265E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.780E-03)						(0.000E+00)	12.162262		
2	07/13/06 05:35	TH-230	1	1	ALP178	COP	N	N	2.9265E-01		N	95%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.780E-03)			6%			(0.000E+00)	12.162262		
3	07/13/06 05:35	TH-232	1	2	ALP178	COP	N	N	2.9265E-01		N	95%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.780E-03)			6%			(0.000E+00)	12.162262		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.104108**	U4	5.00536E-03	0.018083	0.018083	1.00 Sa	95%		0.249777		
				(0.075645)		(3.6094E-03)	(0.013098)	(0.013098)	(0.028284)			0.068503		
	07/14/06	TH-229	R	**21.269891**		1.13621E+00	3.882436	3.882436	1.00 Sa	95%				
				(1.64267)		(4.7727E-02)	(0.200405)	(0.200405)	(0.028284)					
	07/14/06	TH-230	R	**0.019695**	U4	1.00108E-03	0.003595	0.003595	1.00 Sa	95%		0.236261		
				(0.044074)		(2.2384E-03)	(0.008042)	(0.008042)	(0.028284)			0.064796		
	07/14/06	TH-232	R	**6.5719E-07**	U4	3.34040E-08	1.1996E-07	1.1996E-07	1.00 Sa	95%		0.289908		
				(0.048242)		(2.4521E-03)	(0.008806)	(0.008806)	(0.028284)			0.091635		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXP1AA**	**PCI/SA**		05/24/06 10:20	07/13/06 18:55			1	1.00 Sa	
536403,P-0648					,J6F140270-10 v4.8.18		FILTER					THTF0661 Alq		0.082691 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 14:45	TH-228	12	6	ALP171	COP	N	N	2.6455E-01		N	112%	N		1.0000E+00	4.5045E-01	1.0512E+00	
			499.4666666	998.95			Y		(7.937E-03)			7%			(0.000E+00)	12.093231		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:9 RADCALC v4.8.18 STL Richland

1	07/13/06 14:45	TH-229	604	4	ALP171	COP	Y	N	2.6455E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(7.937E-03)				(0.000E+00)	12.093231	
2	07/13/06 14:45	TH-230	9	1	ALP171	COP	N	N	2.6455E-01	N	112%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(7.937E-03)		7%		(0.000E+00)	12.093231	
3	07/13/06 14:45	TH-232	3	0	ALP171	COP	N	N	2.6455E-01	N	112%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(7.937E-03)		7%		(0.000E+00)	12.093231	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.392392**		1.80193E-02	0.068524	0.068524	1.00 Sa	112%		0.469297		
				(0.163925)		(7.3563E-03)	(0.028355)	(0.028355)	(0.028284)			0.175676		
	07/14/06	TH-229	R	**24.818226**		1.20529E+00	4.55598	4.55598	1.00 Sa	112%				
				(1.901375)		(4.9246E-02)	(0.23094)	(0.23094)	(0.028284)					
	07/14/06	TH-230	R	**0.350424**		1.70182E-02	0.064329	0.064329	1.00 Sa	112%		0.247276		
				(0.129176)		(6.0893E-03)	(0.023424)	(0.023424)	(0.028284)			0.067817		
	07/14/06	TH-232	R	**0.123679**		6.00641E-03	0.022704	0.022704	1.00 Sa	112%		0.111723		
				(0.072243)		(3.4678E-03)	(0.013198)	(0.013198)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXQ1AA**	**PCI/SA**		05/24/06 11:10	07/13/06 18:55			1	1.00 Sa	
536403,P-0649					,J6F140270-11 v4.8.18		FILTER					THTF0662 Alq		0.083018 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 14:45	TH-228	4	6	ALP172	COP	N	N	2.7367E-01		N	76%	N		1.0000E+00	4.5045E-01	1.0512E+00	
			499.4666666	998.95			Y		(8.210E-03)			5%			(0.000E+00)	12.045589		
1	07/13/06 14:45	TH-229	426	6	ALP172	COP	Y	N	2.7367E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.210E-03)						(0.000E+00)	12.045589		
2	07/13/06 14:45	TH-230	33	1	ALP172	COP	N	N	2.7367E-01		N	76%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.210E-03)			5%			(0.000E+00)	12.045589		
3	07/13/06 14:45	TH-232	0	2	ALP172	COP	N	N	2.7367E-01		N	76%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.210E-03)			5%			(0.000E+00)	12.045589		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.055381**	U4	2.00224E-03	0.00971	0.00971	1.00 Sa	76%		0.596087		
				(0.129974)		(4.6954E-03)	(0.022781)	(0.022781)	(0.028284)			0.223139		
	07/14/06	TH-229	R	**16.79102**		8.46903E-01	3.094585	3.094585	1.00 Sa	76%				
				(1.362994)		(4.1396E-02)	(0.17748)	(0.17748)	(0.028284)					
	07/14/06	TH-230	R	**1.701903**		6.50694E-02	0.313661	0.313661	1.00 Sa	76%		0.314094		
				(0.340625)		(1.1545E-02)	(0.060136)	(0.060136)	(0.028284)			0.086142		
	07/14/06	TH-232	R	**-0.052365**	U4	-2.00210E-03	-0.009651	-0.009651	1.00 Sa	76%		0.385413		
				(0.037344)		(1.4157E-03)	(0.00686)	(0.00686)	(0.028284)			0.121823		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:11 RADCALC v4.8.18

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

STL Richland

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6167182 Alpha Spec, Thlso by ALP , Calculated Results 7/14/2006 2:00:58 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DXV1AA**	**PCI/SA**		05/24/06 07:35	07/13/06 18:55			1	1.00 Sa	
536403,P-0651					,J6F140270-12 v4.8.18		FILTER					THTF0663 Alq		0.082599 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 14:45	TH-228	0	1	ALP173	COP	N	N	2.0829E-01		N	43%	N		1.0000E+00	4.5045E-01	1.0513E+00	
			499.4666666	998.95			Y		(6.249E-03)			4%			(0.000E+00)	12.10672		
1	07/13/06 14:45	TH-229	182	2	ALP173	COP	Y	N	2.0829E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.249E-03)						(0.000E+00)	12.10672		
2	07/13/06 14:45	TH-230	3	0	ALP173	COP	N	N	2.0829E-01		N	43%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.249E-03)			4%			(0.000E+00)	12.10672		
3	07/13/06 14:45	TH-232	0	0	ALP173	COP	N	N	2.0829E-01		N	43%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.249E-03)			4%			(0.000E+00)	12.10672		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**-0.065183**	U4	-1.00105E-03	-0.011369	-0.011369	1.00 Sa	43%		0.781953		
				(0.065565)		(1.0011E-03)	(0.011417)	(0.011417)	(0.028284)			0.214454		
	07/14/06	TH-229	R	**9.488049**		3.62387E-01	1.739818	1.739818	1.00 Sa	43%				
				(0.937861)		(2.7047E-02)	(0.139952)	(0.139952)	(0.028284)					
	07/14/06	TH-230	R	**0.36978**		6.00641E-03	0.067806	0.067806	1.00 Sa	43%		0.334035		
				(0.217226)		(3.4678E-03)	(0.039642)	(0.039642)	(0.028284)					
	07/14/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	43%		0.334035		
				(0.150962)		(0.0000E+00)	(0.027682)	(0.027682)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7DX01AA**	**PCI/SA**		05/24/06 08:15	07/13/06 18:55			1	1.00 Sa	
536403,P-0652					,J6F140270-13 v4.8.18		FILTER					THTF0664 Alq		0.081432 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 14:45	TH-228	3	0	ALP174	COP	N	N	2.0781E-01		N	121%	N		1.0000E+00	4.5045E-01	1.0513E+00	
			499.4666666	998.95			Y		(6.234E-03)			8%			(0.000E+00)	12.280196		
1	07/13/06 14:45	TH-229	520	3	ALP174	COP	Y	N	2.0781E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.234E-03)						(0.000E+00)	12.280196		
2	07/13/06 14:45	TH-230	4	0	ALP174	COP	N	N	2.0781E-01		N	121%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.234E-03)			8%			(0.000E+00)	12.280196		
3	07/13/06 14:45	TH-232	0	0	ALP174	COP	N	N	2.0781E-01		N	121%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(6.234E-03)			8%			(0.000E+00)	12.280196		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:12 RADCALC v4.8.18

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.169095**		6.00641E-03	0.029077	0.029077	1.00 Sa	121%		0.152749		
				(0.09881)		(3.4678E-03)	(0.016909)	(0.016909)	(0.028284)					
	07/14/06	TH-229	R	**27.632475**		1.03811E+00	4.995373	4.995373	1.00 Sa	121%				
				(2.164702)		(4.5689E-02)	(0.266071)	(0.266071)	(0.028284)					
	07/14/06	TH-230	R	**0.213172**		8.00854E-03	0.038537	0.038537	1.00 Sa	121%		0.144424		
				(0.108305)		(4.0043E-03)	(0.019454)	(0.019454)	(0.028284)					
	07/14/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	121%		0.144424		
				(0.06527)		(0.0000E+00)	(0.0118)	(0.0118)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7JP21AA**	**PCI/SA**	**B**	05/24/06 07:40	07/13/06 18:55			1	1.00 Sa	
0,INTRA-LAB BLANK					,J6F160000-182		FILTER					THTF0665 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 14:45	TH-228	1	1	ALP175	COP	N	N	2.6497E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0513E+00	
			499.4666666	998.95			Y		(7.949E-03)			7%			(0.000E+00)	1.00		
1	07/13/06 14:45	TH-229	590	2	ALP175	COP	Y	N	2.6497E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.949E-03)						(0.000E+00)	1.00		
2	07/13/06 14:45	TH-230	6	0	ALP175	COP	N	N	2.6497E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.949E-03)			7%			(0.000E+00)	1.00		
3	07/13/06 14:45	TH-232	0	1	ALP175	COP	N	N	2.6497E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.949E-03)			7%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-228	R	**0.0018**	U4	1.00108E-03	0.003801	0.003801	1.00 Sa	108%		0.021592		
				(0.004028)		(2.2384E-03)	(0.008503)	(0.008503)	(0.017321)			0.005922		
	07/14/06	TH-229	R	**2.004736**		1.17926E+00	4.450519	4.450519	1.00 Sa	108%				
				(0.147346)		(4.8652E-02)	(0.227025)	(0.227025)	(0.017321)					
	07/14/06	TH-230	R	**0.020422**		1.20128E-02	0.045336	0.045336	1.00 Sa	108%		0.009224		
				(0.00852)		(4.9042E-03)	(0.018762)	(0.018762)	(0.017321)					
	07/14/06	TH-232	R	**-0.001702**	U4	-1.00105E-03	-0.003778	-0.003778	1.00 Sa	108%		0.020415		
				(0.001708)		(1.0011E-03)	(0.003787)	(0.003787)	(0.017321)			0.005599		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H7JP21AC**	**PCI/SA**	**S**	05/24/06 07:40	07/13/06 18:55		THSO0081	1	1.00 Sa	
0,INTRA-LAB CHECK					,J6F160000-182		FILTER					THSO0081 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/13/06 14:45	TH-229	602	2	ALP176	COP	Y	N	2.6767E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.030E-03)						(0.000E+00)	1.00		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:14 RADCALC v4.8.18

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

2	07/13/06 14:45	TH-230	567	1	ALP176	COP	N	N	2.6767E-01	N	112%	N		1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(8.030E-03)		7%			(0.000E+00)	1.00	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	07/14/06	TH-229	R	**2.024983**		1.20328E+00	4.495467	4.495467	1.00 Sa	112%				
				(0.148364)		(4.9144E-02)	(0.227812)	(0.227812)	(0.017321)					
	07/14/06	TH-230	R	**1.90874**		1.13421E+00	4.237408	4.237408	1.00 Sa	112%	104%	0.020209		
				(0.182328)		(4.7685E-02)	(0.33699)	(0.33699)	(0.017321)			0.005543		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.18

STL Richland

SEVERN TRENT **STL**

THORIUM ISOTOPIC COUNTING REQUEST

1355

C.R. Technician: CB
Date Counted: 7/13/06

C.R. Analyst: CD
Date Analyzed: 7/13/06

Counting Time
Sample: 500 Minutes

Background: See Alpha Analysis Report
BRC 5/24/2006

SOP's
Operating: RICHRD008
Review: RICHRD0016
6167182

WorkOrder #	Th-229 (4845 KeV) Tracer from Th-234 Beta Count (7)				TOTAL COUNTS			Det #	Comment
					Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)		
H7DXC1AA		10		0	See Alpha Analysis Report for ROI Information			171	
H7DXD1AA		10		0	See Alpha Analysis Report for ROI Information			172	
H7DXF1AA		10		0	See Alpha Analysis Report for ROI Information			173	
H7DXH1AA		10		0	See Alpha Analysis Report for ROI Information			174	
H7DXJ1AA		10		0	See Alpha Analysis Report for ROI Information			175	
H7DXK1AA		10		0	See Alpha Analysis Report for ROI Information			176	
H7DXL1AA		10		0	See Alpha Analysis Report for ROI Information			177	
H7DXM1AA		10		0	See Alpha Analysis Report for ROI Information			178	
		10		0	See Alpha Analysis Report for ROI Information				

Comments:

Form No: RC-012, 10/02, Rev 9

Approved by: CD

Date: 7/13/06

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXC1AA

Detector: ALP171 1
Report Date: 13-Jul-06 02:50 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	6	8	0.004	5423.2	139.7	315	339
TH-229	605	4	1.207	4845.3	349.0	217	277
TH-230	10	1	0.019	4687.7	151.2	188	214
TH-232	1	0	0.002	4013.0	116.2	74	94

End of Alpha Region Report
(Produced by ANAL Report)

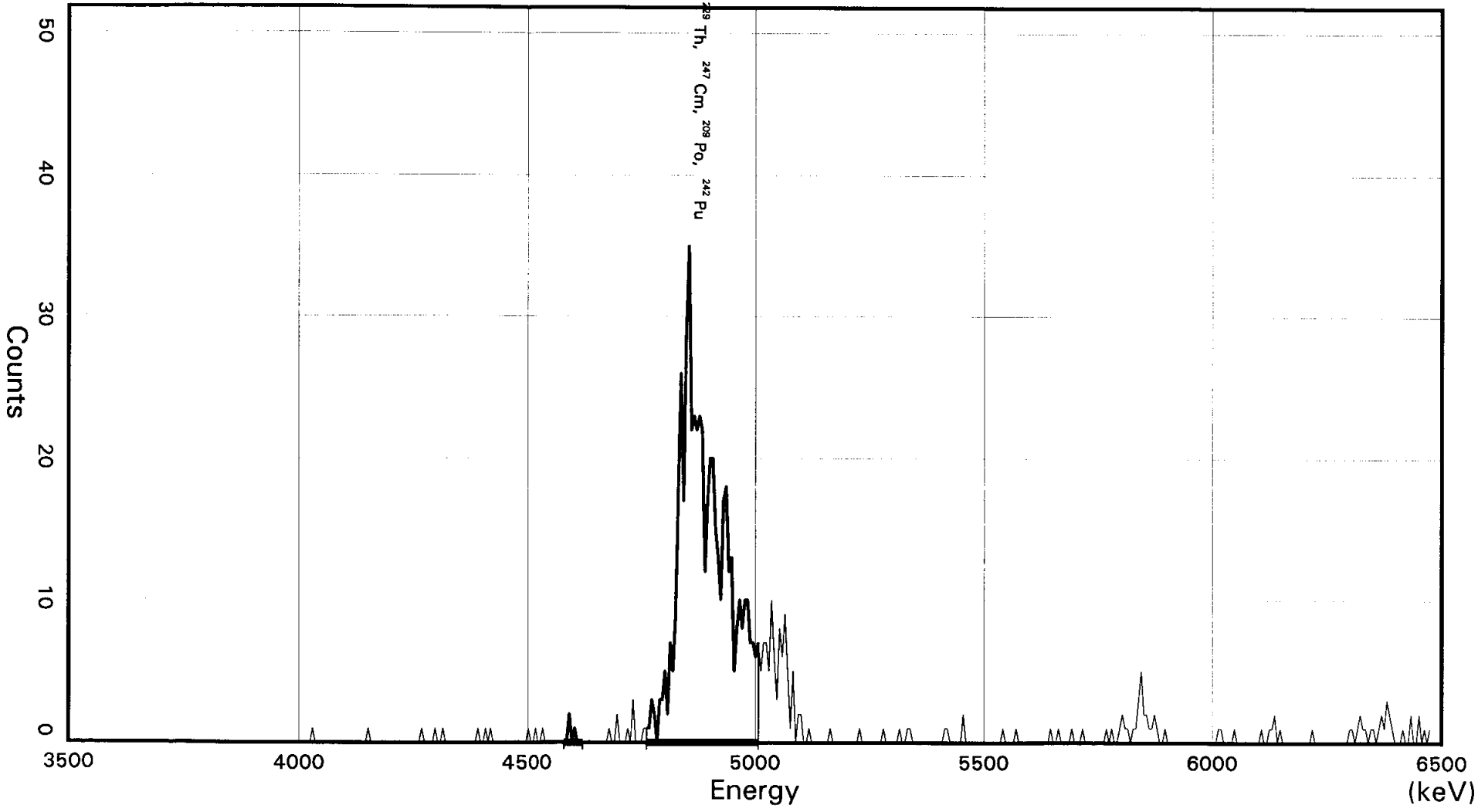
STL Richland WA.

TH BRC

Sample ID: H7DXC1AA

Detector ID: ALP171 1

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.49560E+03

Slope: 5.80529E+00

Quadrature: 2.24502E-05

SAMPLE IDENTIITY: H7DXC1AA

TITLE : TH BRC

DETECTOR : ALP171 1
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXC1AA_130760535A.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:08:58

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3495.60 keV CONSTANT FWHM : 8.83333 Channels
SLOPE : 5.80529 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 2.245020E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXC1AA

Detector: ALP171 1
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5148.7	244.4	264	306	0.00	0.00	M
PO-209	519	4	0	1.035	4917.0	244.3	218	260	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5338.2	244.4	297	339	0.00	0.00	M
AC-227	-9999	-9999	0	-10.010	6071.8	244.7	423	465	0.00	0.00	M
TH-227	-9999	-9999	0	-10.010	6071.8	244.7	423	465	0.00	0.00	M
TH-228	-9999	-9999	0	-10.010	5457.0	244.5	317	359	0.00	0.00	M
TH-229	519	4	0	1.035	4879.1	244.3	218	260	0.00	0.00	P
TH-230	-9999	-9999	0	-10.010	4721.5	244.2	191	233	0.00	0.00	M I
TH-232	2	1	1	0.002	4046.8	244.0	75	117	0.00	0.00	S
U-232	-9999	-9999	0	-10.010	5353.9	244.4	300	342	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4808.4	244.3	206	248	0.00	0.00	M I
U-235	7	2	1	0.011	4431.6	244.1	141	183	0.00	0.00	S
PU-236	16	46	27	-0.015	5801.4	238.7	377	418	0.00	0.00	S
NP-237	-9999	-9999	0	-10.010	4821.8	244.3	208	250	0.00	0.00	M I
PU-238	-9999	-9999	0	-10.010	5532.8	244.5	330	372	0.00	0.00	M
U-238	-9999	-9999	0	-10.010	4231.8	244.1	107	149	0.00	0.00	M
PU-239	-9999	-9999	0	-10.010	5190.4	244.4	272	314	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5519.4	244.5	328	370	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5240.6	244.4	280	322	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6146.5	244.7	436	478	0.00	0.00	M
PU-242	519	4	0	1.035	4934.3	244.3	218	260	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5309.1	244.4	292	334	0.00	0.00	M
CM-244	-9999	-9999	0	-10.010	5838.6	244.6	383	425	0.00	0.00	M
CM-246	-9999	-9999	0	-10.010	5420.3	244.4	311	353	0.00	0.00	M
CM-247	519	4	0	1.035	4904.2	244.3	218	260	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5112.4	244.3	258	300	0.00	0.00	M I

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXC1AA
Detector: ALP171 1
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	+	101	0	+	151	0	+	201	5	@	251	0	@	301	0	@	351	1	@	401
		2	0		52	0	+	102	0	+	152	0	+	202	8	@	252	0	@	302	1	@	352	1	@	402
0		3	0		53	0	+	103	0	+	153	0	+	203	10	@	253	0	@	303	0	@	353	3	@	403
0		4	0		54	0	+	104	1	+	154	1	+	204	8	@	254	0	@	304	0	@	354	5	@	404
0		5	0		55	0	+	105	0	+	155	0	+	205	10	@	255	0	@	305	0	@	355	2	@	405
0		6	0		56	0	+	106	0	+	156	0	@	206	10	@	256	0	@	306	0	@	356	2	@	406
0		7	0		57	0	@	107	1	+	157	2	@	207	7	@	257	1	@	307	1	@	357	1	@	407
0		8	0		58	0	@	108	0	+	158	0	-	208	7	-	258	0	@	308	0	@	358	1	@	408
0		9	0		59	0	@	109	1	+	159	0	@	209	6	@	259	0	@	309	0	@	359	2	@	409
0		10	0		60	0	@	110	0	+	160	0	@	210	7	-	260	0	@	310	0	@	360	1	@	410
0		11	0		61	0	@	111	0	+	161	1	@	211	5	-	261	0	-	311	0	@	361	0	@	411
0		12	0		62	0	@	112	0	+	162	0	@	212	7	-	262	0	@	312	0	@	362	0	@	412
0		13	0		63	1	@	113	0	+	163	3	@	213	7	-	263	1	@	313	0	@	363	1	@	413
0		14	0		64	0	@	114	0	+	164	0	@	214	5	@	264	0	@	314	0	@	364	0	@	414
0		15	0		65	0	@	115	0	+	165	0	@	215	10	@	265	0	@	315	0	@	365	0	@	415
0		16	0		66	0	@	116	0	+	166	0	@	216	6	@	266	1	@	316	0	@	366	0	@	416
0		17	0		67	0	@	117	0	+	167	1	@	217	3	@	267	1	@	317	0	@	367	0	@	417
0		18	0		68	0	-	118	0	+	168	1	@	218	8	@	268	0	@	318	0	@	368	0	@	418
0		19	0		69	0	-	119	0	+	169	1	@	219	6	@	269	0	@	319	0	@	369	0	-	419
0		20	0		70	0	-	120	0	+	170	3	@	220	9	@	270	0	@	320	1	@	370	0	-	420
0		21	0		71	0	-	121	0	+	171	2	@	221	5	@	271	0	@	321	0	+	371	0	-	421
0		22	0		72	0	-	122	0	+	172	0	@	222	1	@	272	0	@	322	0	+	372	0	-	422
0		23	0		73	0	-	123	1	+	173	3	@	223	5	@	273	0	@	323	1		373	0	@	423
0		24	0		74	0	-	124	0	+	174	3	@	224	0	@	274	0	@	324	0		374	0	@	424
0		25	0	+	75	0	-	125	0	+	175	5	@	225	2	@	275	0	@	325	0		375	0	@	425
0		26	0	+	76	0	-	126	1	+	176	2	@	226	2	@	276	0	@	326	0		376	0	@	426
0		27	0	+	77	0	-	127	0	+	177	7	@	227	0	@	277	0	@	327	0	+	377	0	@	427
0		28	0	+	78	0	-	128	0	+	178	5	@	228	0	@	278	0	@	328	1	+	378	0	@	428
0		29	0	+	79	0	-	129	1	+	179	9	@	229	1	@	279	0	@	329	0	+	379	0	@	429
0		30	0	+	80	0	-	130	0	+	180	18	@	230	0	@	280	1	@	330	0	+	380	0	@	430
0		31	0	+	81	0	-	131	0	+	181	26	@	231	0	@	281	1	@	331	0	+	381	0	@	431
0		32	0	+	82	0	-	132	0	+	182	17	@	232	0	@	282	0	@	332	1	+	382	0	@	432
0		33	0	+	83	1	-	133	0	+	183	29	@	233	0	@	283	0	@	333	0	@	383	1	@	433
0		34	0	+	84	0	-	134	0		184	35	@	234	0	@	284	0	@	334	0	@	384	1	@	434
0		35	0	+	85	0	-	135	0		185	22	@	235	0	@	285	0	@	335	0	@	385	0	@	435
0		36	0	+	86	0	-	136	0		186	23	@	236	0	@	286	0	@	336	0	@	386	0	-	436
0		37	0	+	87	0	-	137	0		187	22	@	237	1	@	287	2	@	337	0	@	387	0	@	437
0		38	0	+	88	1	-	138	0		188	23	@	238	0	@	288	0	@	338	0	@	388	0	@	438
0		39	0	+	89	0	-	139	2		189	22	@	239	0	@	289	0	@	339	0	@	389	1	@	439
0		40	0	+	90	0	-	140	0		190	12	@	240	0	@	290	0	@	340	0	@	390	0	@	440
0		41	0	+	91	1	@	141	1	+	191	17	@	241	0	@	291	0	@	341	1	@	391	0	@	441
0		42	1	+	92	0	@	142	0	+	192	20	@	242	0	@	292	0	@	342	0	@	392	0	@	442
0		43	0	+	93	0	@	143	0	+	193	20	@	243	0	@	293	0	@	343	1	@	393	0	@	443
0		44	0	+	94	0	@	144	0	+	194	15	@	244	0	@	294	0	@	344	0	@	394	0	@	444
0		45	0	+	95	0	@	145	0	+	195	13	@	245	0	@	295	0	@	345	0	@	395	0	@	445
0		46	0	+	96	0	@	146	0	+	196	10	@	246	0	@	296	0	@	346	1	@	396	0	@	446
0		47	0	+	97	0	@	147	0	+	197	17	@	247	0	@	297	0	@	347	2	@	397	0	@	447
0		48	0	+	98	0	@	148	0	+	198	18	@	248	1	@	298	0	@	348	1	@	398	0	@	448
0		49	0	+	99	0	@	149	0	+	199	12	@	249	0	@	299	0	@	349	1	@	399	1	@	449
0		50	0	+	100	0	+	150	0	+	200	13	@	250	0	@	300	0	@	350	0	@	400	0	@	450

Cnt	F	Chn
0		501
1		502
0		503
0		504
2		505
0		506
0		507
2		508
0		509
1		510
0		511
1		512

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:56:24

Configuration : $DISK1:[ALP171.SAMPLE]H7DXC1AA_130760535A.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXC1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3513.01 keV End energy : 6473.79 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4596.51	4	0	23.22	189.50	187	7	1.33E-04	50.0	
2	0	4879.08	519	0	110.30	238.09	218	42	1.73E-02	4.4	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:56:28

Configuration : $DISK1:[ALP171.SAMPLE]H7DXC1AA_130760535A.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXC1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXC1AA_130760535A.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4596.50	187	194	4	3	0.50		
4879.07	218	260	519	523	-0.18		

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXD1AA

Detector: ALP171 2
Report Date: 13-Jul-06 02:52 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	7	6	0.008	5423.2	124.1	320	342
TH-229	489	7	0.972	4845.3	395.1	213	283
TH-230	21	1	0.041	4687.7	124.2	188	210
TH-232	7	2	0.012	4013.0	113.1	70	90

End of Alpha Region Report
(Produced by ANAL Report)

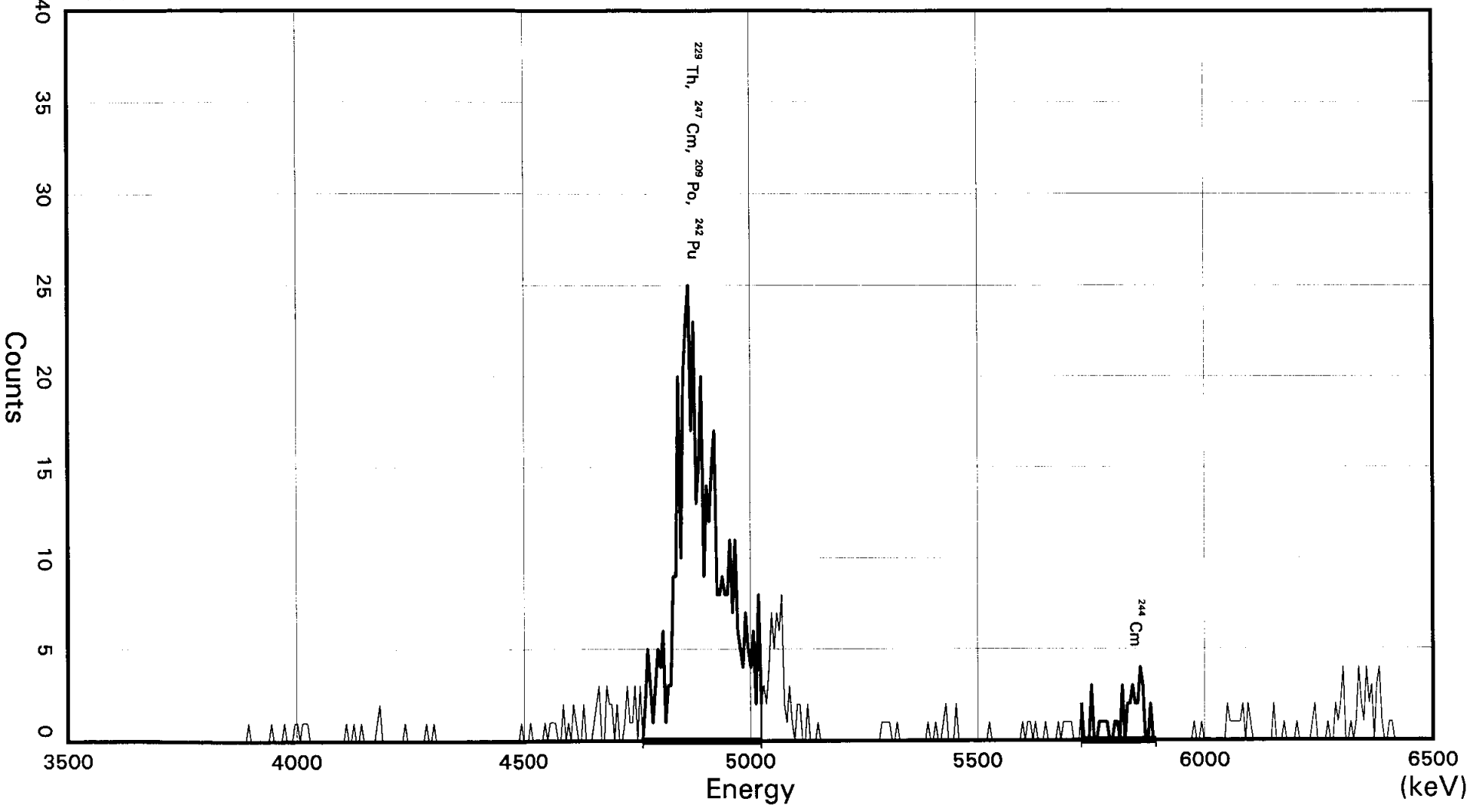
STL Richland WA.

TH BRC

Sample ID: H7DXD1AA

Detector ID: ALP171 2

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.53196E+03

Slope: 5.65669E+00

Quadrature: -2.57851E-05

SAMPLE IDENTIITY: H7DXD1AA

TITLE : TH BRC

DETECTOR : ALP171 2
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXD1AA_130760535B.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:09:12

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3531.96 keV CONSTANT FWHM : 10.16670 Channels
SLOPE : 5.65669 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.257851E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXD1AA

Detector: ALP171 2
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5149.1	259.5	266	312	0.00	0.00	M
PO-209	455	5	0	0.906	4917.4	259.6	218	264	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5338.5	259.4	299	345	0.00	0.00	M
AC-227	10	3	16	0.017	6072.2	264.8	429	476	0.00	0.00	S
TH-227	10	3	16	0.017	6072.2	264.8	429	476	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5457.4	259.4	320	366	0.00	0.00	M
TH-229	455	5	0	0.906	4879.5	259.6	218	264	0.00	0.00	P
TH-230	-9999	-9999	0	-10.010	4721.9	259.7	190	236	0.00	0.00	M I
TH-232	11	2	5	0.019	4047.2	260.0	71	117	0.00	0.00	S
U-232	-9999	-9999	0	-10.010	5354.3	259.4	302	348	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4808.8	259.7	205	251	0.00	0.00	M I
U-235	6	1	0	0.011	4432.0	259.8	139	185	0.00	0.00	S
PU-236	-9999	-9999	0	-10.010	5801.8	259.2	382	428	0.00	0.00	I
NP-237	-9999	-9999	0	-10.010	4822.2	259.7	208	254	0.00	0.00	M I
PU-238	-9999	-9999	0	-10.010	5533.2	259.4	334	380	0.00	0.00	M
U-238	-9999	-9999	0	-10.010	4232.2	259.9	103	149	0.00	0.00	M
PU-239	-9999	-9999	0	-10.010	5190.8	259.5	273	319	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5519.8	265.0	331	378	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5241.0	259.5	282	328	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6146.9	259.1	443	489	0.00	0.00	M
PU-242	455	5	0	0.906	4934.7	259.6	218	264	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5309.5	259.5	294	340	0.00	0.00	M
CM-244	6	68	0	-0.056	5839.0	163.4	389	418	0.00	0.00	P
CM-246	-9999	-9999	0	-10.010	5420.7	259.4	314	360	0.00	0.00	M
CM-247	455	5	0	0.906	4904.6	259.6	218	264	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5112.8	259.5	259	305	0.00	0.00	M I

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXD1AA
Detector: ALP171 2
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	+	101	0	+	151	3	+	201	8	@	251	0	@	301	0	@	351	0	@	401
		2	0		52	1	+	102	0	+	152	0	+	202	11	@	252	0	@	302	0	@	352	1	@	402
0		3	0		53	0	@	103	0	+	153	0	+	203	7	@	253	0	@	303	1	@	353	1	@	403
0		4	0		54	0	@	104	0	+	154	3	+	204	11	@	254	0	@	304	0	@	354	0	@	404
0		5	0		55	1	@	105	0	+	155	2	@	205	6	@	255	0	@	305	0	@	355	3	@	405
0		6	0		56	0	@	106	0	+	156	2	@	206	5	@	256	0	@	306	0	@	356	0	@	406
0		7	0		57	0	@	107	0	+	157	0	@	207	4	@	257	0	@	307	0	@	357	2	@	407
0		8	0		58	1	@	108	0	+	158	2	-	208	7	@	258	0	@	308	0	@	358	2	@	408
0		9	0		59	0	@	109	0	+	159	0	@	209	5	-	259	0	@	309	0	@	359	3	@	409
0		10	0		60	0	@	110	0	+	160	0	@	210	4	@	260	0	@	310	0	@	360	2	@	410
0		11	0		61	0	@	111	0	+	161	1	@	211	6	@	261	1	@	311	0	@	361	2	@	411
0		12	0		62	0	@	112	0	+	162	3	@	212	2	@	262	1	@	312	0	@	362	4	@	412
0		13	0		63	0	@	113	0	+	163	1	@	213	8	@	263	1	@	313	0	@	363	3	@	413
0		14	1		64	1	@	114	0	+	164	1	@	214	2	-	264	1	-	314	0	@	364	0	@	414
0		15	0		65	2	@	115	0	+	165	3	@	215	3	-	265	0	@	315	0	@	365	0	@	415
0		16	0		66	0	@	116	0	+	166	0	@	216	2	@	266	0	@	316	1	@	366	2	@	416
0		17	0		67	0	@	117	0	+	167	3	@	217	4	@	267	1	@	317	0	@	367	0	@	417
0		18	0		68	0	-	118	0	+	168	0	@	218	7	@	268	0	@	318	1	@	368	0	+	418
0		19	0		69	0	-	119	0	+	169	2	@	219	5	@	269	0	@	319	1	@	369	0	+	419
0		20	0		70	0	-	120	1	+	170	5	@	220	7	@	270	0	@	320	0	@	370	0	+	420
0		21	0	+	71	0	-	121	0	+	171	3	@	221	6	@	271	0	@	321	1	@	371	0	+	421
0		22	0	+	72	0	-	122	0	+	172	1	@	222	8	@	272	0	@	322	0	@	372	0	+	422
0		23	1	+	73	0	-	123	0	+	173	3	@	223	2	@	273	0	@	323	0	@	373	0	+	423
0		24	0	+	74	0	-	124	1	+	174	5	@	224	1	@	274	0	@	324	0	@	374	0	+	424
0		25	0	+	75	1	-	125	0	+	175	4	@	225	3	@	275	0	@	325	1	@	375	0	+	425
0		26	0	+	76	0	-	126	0	+	176	6	@	226	1	@	276	0	@	326	0	@	376	0	+	426
0		27	0	+	77	0	-	127	0	+	177	1	@	227	0	@	277	0	@	327	0	@	377	0	+	427
0		28	1	+	78	0	-	128	0	+	178	3	@	228	2	@	278	0	@	328	0	@	378	0	+	428
0		29	0	+	79	0	-	129	0	+	179	3	@	229	2	@	279	1	@	329	0	+	379	0	@	429
0		30	0	+	80	0	-	130	1	+	180	9	@	230	0	@	280	0	@	330	1	+	380	0	@	430
0		31	0	+	81	0	-	131	0	+	181	9	@	231	0	@	281	0	@	331	0		381	0	@	431
0		32	1	+	82	0	-	132	1	+	182	20	@	232	2	@	282	1	@	332	1	+	382	0	@	432
0		33	1	+	83	1	-	133	1	+	183	10	@	233	0	@	283	0	@	333	1	+	383	1	@	433
0		34	0	+	84	0	-	134	1	+	184	20	@	234	0	@	284	0	@	334	1	+	384	0	@	434
0		35	1	+	85	0	-	135	0	+	185	23	@	235	0	@	285	1	@	335	1	+	385	0	@	435
0		36	1	+	86	1	-	136	0		186	25	@	236	1	@	286	2	@	336	0	+	386	1	@	436
0		37	1	+	87	0	-	137	2		187	17	@	237	0	@	287	0	@	337	0	+	387	0	@	437
0		38	0	+	88	0	-	138	0		188	23	@	238	0	@	288	0	@	338	0	+	388	0	@	438
0		39	0	+	89	0	@	139	1		189	13	@	239	0	@	289	0	@	339	2	@	389	0	@	439
0		40	0	+	90	0	@	140	0	+	190	15	@	240	0	@	290	2	@	340	0	@	390	0	@	440
0		41	0	+	91	0	@	141	2	+	191	20	@	241	0	@	291	0	@	341	0	@	391	0	@	441
0		42	0	+	92	0	@	142	1	+	192	9	@	242	0	@	292	0	@	342	0	@	392	0	@	442
0		43	0	+	93	0	@	143	0	+	193	14	@	243	0	@	293	0	@	343	3	@	393	0	-	443
0		44	0	+	94	0	@	144	0	+	194	12	@	244	0	@	294	0	@	344	0	@	394	0	@	444
0		45	0	+	95	0	@	145	2	+	195	15	@	245	0	@	295	0	@	345	0	@	395	0	@	445
0		46	0	+	96	0	@	146	0	+	196	17	@	246	0	@	296	0	@	346	1	@	396	2	@	446
0		47	0	+	97	0	@	147	0	+	197	8	@	247	0	@	297	0	@	347	1	@	397	1	@	447
0		48	0	+	98	0	@	148	0	+	198	8	@	248	0	@	298	0	@	348	1	@	398	1	@	448
0		49	0	+	99	0	@	149	1	+	199	9	@	249	0	@	299	0	@	349	1	@	399	1	@	449
0		50	0	+	100	0	+	150	2	+	200	8	@	250	0	@	300	0	@	350	0	@	400	1	@	450

Cnt	F	Chn
		2
		3
		0
		3
		4
		1
		0
		0
		1
		1
		0
		0
		0
		4
		2
		0
		0
		1
		4
		2
		1
		0
		0
		2
		4
		0
		0
		1
		0
		1
		4
		2
		1
		4

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:56:32

Configuration : $DISK1:[ALP171.SAMPLE]H7DXD1AA_130760535B.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXD1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3548.93 keV End energy : 6421.43 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4879.47	455	0	84.85	238.47	218	46	1.52E-02	4.7	
2	0	5849.69	6	0	45.25	410.50	389	29	2.00E-04	40.8	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:56:36

Configuration : $DISK1:[ALP171.SAMPLE]H7DXD1AA_130760535B.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXD1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 2
Number of unidentified lines 0
Number of lines tentatively identified by NID 2 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-244	18.10Y	1.01	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXD1AA_130760535B.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4879.46	218	264	455	426	1.36		
5849.68	389	418	6	34	-11.43		

***** WARNING: Possible PEAK/ALPHA Error *****
Review Spectrum on Screen

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXF1AA

Detector: ALP171 3
Report Date: 13-Jul-06 02:54 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	2	1	0.003	5423.2	119.3	309	329
TH-229	463	2	0.925	4845.3	370.0	209	271
TH-230	15	0	0.030	4687.7	137.3	182	205
TH-232	2	0	0.004	4013.0	119.5	72	92

End of Alpha Region Report
(Produced by ANAL Report)

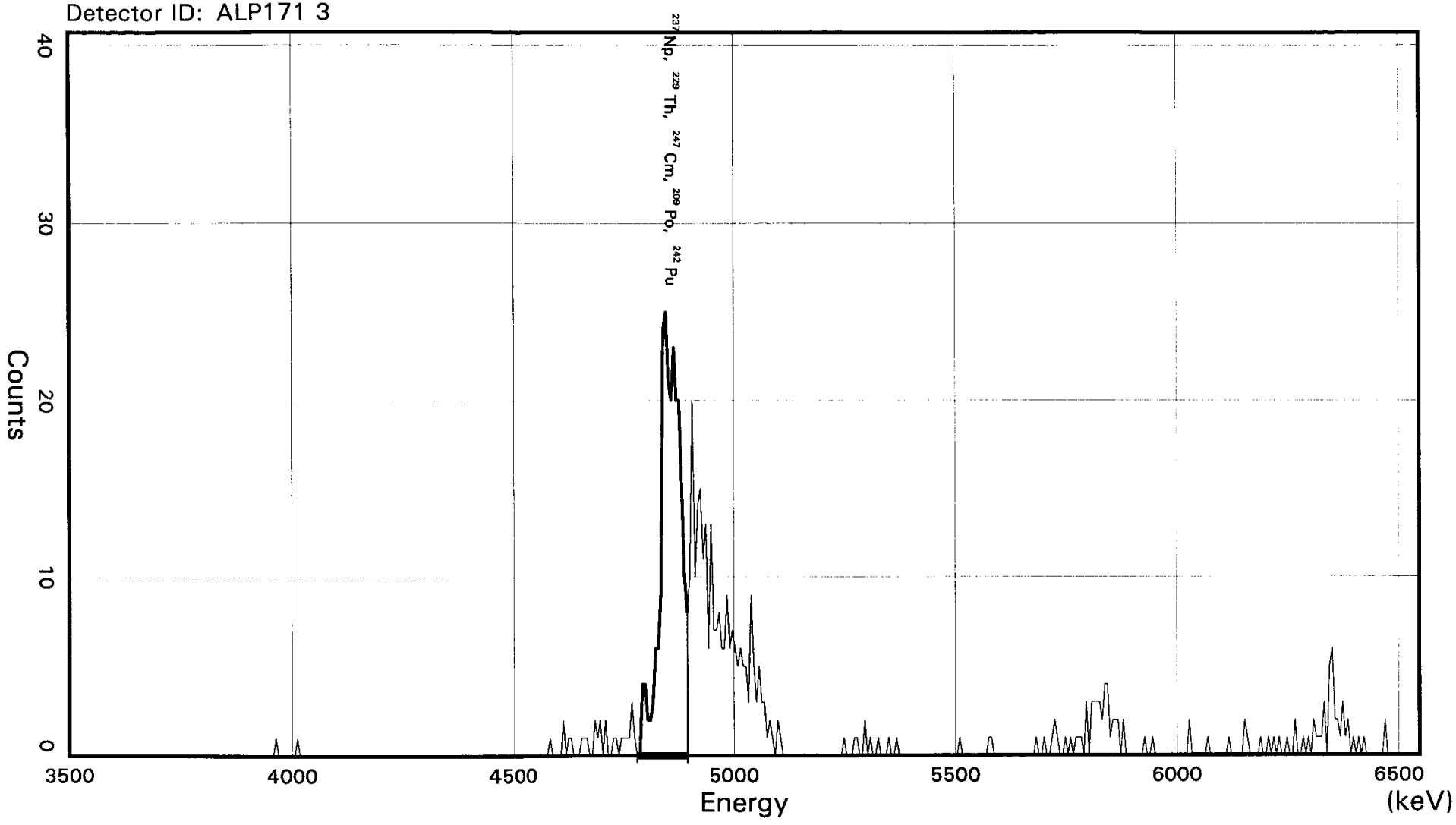
STL Richland WA.

TH BRC

Sample ID: H7DXF1AA

Detector ID: ALP171 3

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.49135E+03

Slope: 5.98005E+00

Quadrature: -2.72507E-05

SAMPLE IDENTIITY: H7DXF1AA

TITLE : TH BRC

DETECTOR : ALP171 3
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXF1AA_130760535C.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:09:29

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3491.35 keV CONSTANT FWHM : 8.83333 Channels
SLOPE : 5.98005 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.272507E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXF1AA

Detector: ALP171 3
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5130.8	113.3	261	280	0.00	0.00	M
PO-209	223	1	0	0.445	4899.1	113.4	216	235	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5320.2	113.3	293	312	0.00	0.00	M
AC-227	3	1	1	0.004	6053.9	113.2	416	435	0.00	0.00	S
TH-227	3	1	1	0.004	6053.9	113.2	416	435	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5439.1	113.3	313	332	0.00	0.00	M
TH-229	223	1	0	0.445	4861.2	113.4	216	235	0.00	0.00	P
TH-230	12	0	4	0.024	4703.6	113.4	190	209	0.00	0.00	S
TH-232	2	1	0	0.003	4028.9	113.5	77	96	0.00	0.00	
U-232	-9999	-9999	0	-10.010	5336.0	113.3	296	315	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4790.5	113.4	204	223	0.00	0.00	S I
U-235	0	1	0	-0.001	4413.7	113.5	141	160	0.00	0.00	
PU-236	13	14	17	0.011	5783.5	113.2	371	390	0.00	0.00	S
NP-237	223	1	0	0.445	4803.9	113.4	216	235	0.00	0.00	P
PU-238	-9999	-9999	0	-10.010	5514.9	113.3	326	345	0.00	0.00	M
U-238	0	1	0	-0.001	4213.9	113.5	108	127	0.00	0.00	
PU-239	-9999	-9999	0	-10.010	5172.5	113.3	268	287	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5501.5	113.3	323	342	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5222.7	113.3	277	296	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6128.6	113.2	429	448	0.00	0.00	M
PU-242	223	1	0	0.445	4916.4	113.4	216	235	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5291.2	113.3	288	307	0.00	0.00	M
CM-244	25	41	17	0.008	5820.7	113.2	377	396	0.00	0.00	S
CM-246	-9999	-9999	0	-10.010	5402.4	113.3	307	326	0.00	0.00	M
CM-247	223	1	0	0.445	4886.3	113.4	216	235	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5094.5	113.3	255	274	0.00	0.00	M

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXF1AA
Detector: ALP171 3
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1		0	51		0	101		0+	151		1+	201		6	251		0@	301		0	351		0	401		0	451		0	501
		2		0	52		0	102		0+	152		2+	202		7	252		2@	302		0	352		0	402		1	452		0	502
	0	3		0	53		0	103		0+	153		0+	203		6	253		0@	303		0	353		0	403		0	453		0	503
	0	4		0	54		0	104		0+	154		2@	204		5	254		1@	304		0	354		0	404		0	454		0	504
	0	5		0	55		0	105		0+	155		0@	205		6+	255		0@	305		0	355		0	405		1	455		0	505
	0	6		0	56		0	106		0+	156		0@	206		5+	256		0@	306		0	356		0	406		0	456		0	506
	0	7		0	57		0	107		0+	157		1@	207		5+	257		1-	307		0	357		0	407		1	457		0	507
	0	8		0	58		0+	108		0+	158		1@	208		3+	258		0@	308		0	358		1	408		0	458		0	508
	0	9		0	59		0+	109		0+	159		0@	209		9+	259		0@	309		0	359		0	409		1	459		0	509
	0	10		0	60		0+	110		0+	160		1-	210		5+	260		0@	310		0	360		0	410		0	460		0	510
	0	11		0	61		0+	111		0	161		1-	211		3@	261		1@	311		0	361		1	411		0	461		0	511
	0	12		0	62		0+	112		0	162		1-	212		5@	262		0@	312		0	362		0	412		1	462		0	512
	0	13		0	63		0+	113		0	163		1-	213		3@	263		0@	313		0	363		0	413		0	463			
	0	14		0	64		0+	114		0	164		3-	214		3@	264		1@	314		0	364		0	414		0	464			
	0	15		0	65		0+	115		0	165		1-	215		1@	265		0@	315		0	365		0	415		2	465			
	0	16		0	66		0+	116		0	166		0-	216		2@	266		0@	316		0	366		0@	416		0	466			
	0	17		0	67		0+	117		0	167		0@	217		1@	267		0@	317		1	367		0@	417		0	467			
	0	18		0	68		0+	118		0	168		4@	218		0@	268		0@	318		0	368		0@	418		1	468			
	0	19		0	69		0+	119		0	169		4@	219		2@	269		0@	319		0	369		0@	419		0	469			
	0	20		0	70		0+	120		0	170		2@	220		1@	270		0@	320		1	370		0@	420		1	470			
	0	21		0	71		0+	121		0	171		2@	221		0@	271		0@	321		0+	371		0@	421		0	471			
	0	22		0	72		0+	122		0	172		3@	222		0@	272		0@	322		0+	372		0@	422		2	472			
	0	23		0	73		0+	123		0	173		6@	223		0@	273		0@	323		1+	373		0@	423		1	473			
	0	24		0	74		0+	124		0	174		6@	224		0@	274		0@	324		2+	374		0@	424		1	474			
	0	25		0	75		0+	125		0	175		9@	225		0@	275		0@	325		1+	375		2@	425		1	475			
	0	26		0	76		0+	126		0	176		24@	226		0@	276		0@	326		0+	376		0@	426		3	476			
	0	27		0+	77		0+	127		0	177		25@	227		0-	277		0@	327		0@	377		0@	427		0	477			
	0	28		0+	78		0	128		0	178		21@	228		0@	278		0@	328		1@	378		0@	428		5	478			
	0	29		1+	79		0	129		0	179		20@	229		0@	279		0@	329		0@	379		0-	429		6	479			
	0	30		0+	80		0	130		0	180		23@	230		0@	280		0@	330		1@	380		0@	430		2	480			
	0	31		0+	81		0	131		0	181		20@	231		0@	281		0@	331		0@	381		0@	431		2	481			
	0	32		0+	82		0	132		0	182		20@	232		0@	282		0@	332		1@	382		1@	432		1	482			
	0	33		0+	83		0	133		1	183		15@	233		0@	283		0@	333		1@	383		0@	433		3	483			
	0	34		0+	84		0	134		0	184		10@	234		0@	284		0@	334		1@	384		0@	434		1	484			
	0	35		0+	85		0	135		0	185		8	235		0@	285		0@	335		0@	385		0@	435		2	485			
	0	36		0+	86		0	136		0	186		10	236		0@	286		0@	336		3@	386		0-	436		0	486			
	0	37		1+	87		0	137		0	187		20	237		0@	287		0@	337		0@	387		0-	437		1	487			
	0	38		0+	88		0	138		2	188		10	238		0@	288		1@	338		3@	388		0-	438		0	488			
	0	39		0+	89		0	139		0	189		14	239		0@	289		0@	339		3@	389		0-	439		1	489			
	0	40		0+	90		0	140		1+	190		15	240		0@	290		0@	340		3@	390		1-	440		0	490			
	0	41		0+	91		0+	141		1+	191		11	241		0@	291		0@	341		3-	391		0-	441		1	491			
	0	42		0+	92		0+	142		0+	192		13	242		0@	292		0@	342		2-	392		0-	442		0	492			
	0	43		0+	93		0+	143		0+	193		6	243		0@	293		0+	343		4-	393		0-	443		0	493			
	0	44		0+	94		0+	144		0+	194		13	244		1@	294		0+	344		4-	394		0-	444		0	494			
	0	45		0+	95		0+	145		1+	195		7	245		0@	295		0+	345		1-	395		0-	445		0	495			
	0	46		0+	96		0+	146		1+	196		7	246		0@	296		0	346		2-	396		2-	446		0	496			
	0	47		0	97		0+	147		1+	197		8	247		0@	297		0	347		2	397		1-	447		0	497			
	0	48		0	98		0+	148		0+	198		6	248		1@	298		0	348		2	398		0-	448		0	498			
	0	49		0	99		0+	149		0+	199		6	249		1@	299		1	349		0	399		0	449		2	499			
	0	50		0	100		0+	150		2+	200		9	250		0@	300		1	350		2	400		0	450		0	500			

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:56:40

Configuration : $DISK1:[ALP171.SAMPLE]H7DXF1AA_130760535C.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXF1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3509.29 keV End energy : 6545.99 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4861.17	223	0	59.80	229.30	216	19	7.44E-03	6.7	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:56:42

```
Configuration     : $DISK1:[ALP171.SAMPLE]H7DXF1AA_130760535C.CNF;1
Analyses by       : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title      : TH BRC
Sample date       : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID         : H7DXF1AA             Sample quantity  : 0.00000E+00 SAMPLE
Sample type       : disk                 Sample geometry  :
Detector name     : ALP171 1             Detector geometry:
Elapsed live time: 0 08:19:28.00         Elapsed real time: 0 08:19:28.00   0.0%
Energy tolerance :    80.00 keV          Half life ratio  :     1.00
Errors propagated: No                    Systematic Error :     0.00 %
Efficiency type  : Spline                Efficiencies at  : Peak Energy
Abundance limit  :    70.00
```

Summary of Nuclide Activity

```
 Total number of lines in spectrum                1
 Number of unidentified lines                     0
 Number of lines tentatively identified by NID    1      100.00%
```

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
NP-237	2.14E+06Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity :	0.000E+00	0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXF1AA_130760535C.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4861.16	216	235	223	222	0.07		

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXH1AA

Detector: ALP171 4
Report Date: 13-Jul-06 02:54 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	2	0	0.004	5423.2	111.2	307	327
TH-229	484	3	0.966	4845.3	349.8	203	266
TH-230	7	0	0.014	4687.7	110.9	175	195
TH-232	0	0	0.000	4013.0	110.6	53	73

End of Alpha Region Report
(Produced by ANAL Report)

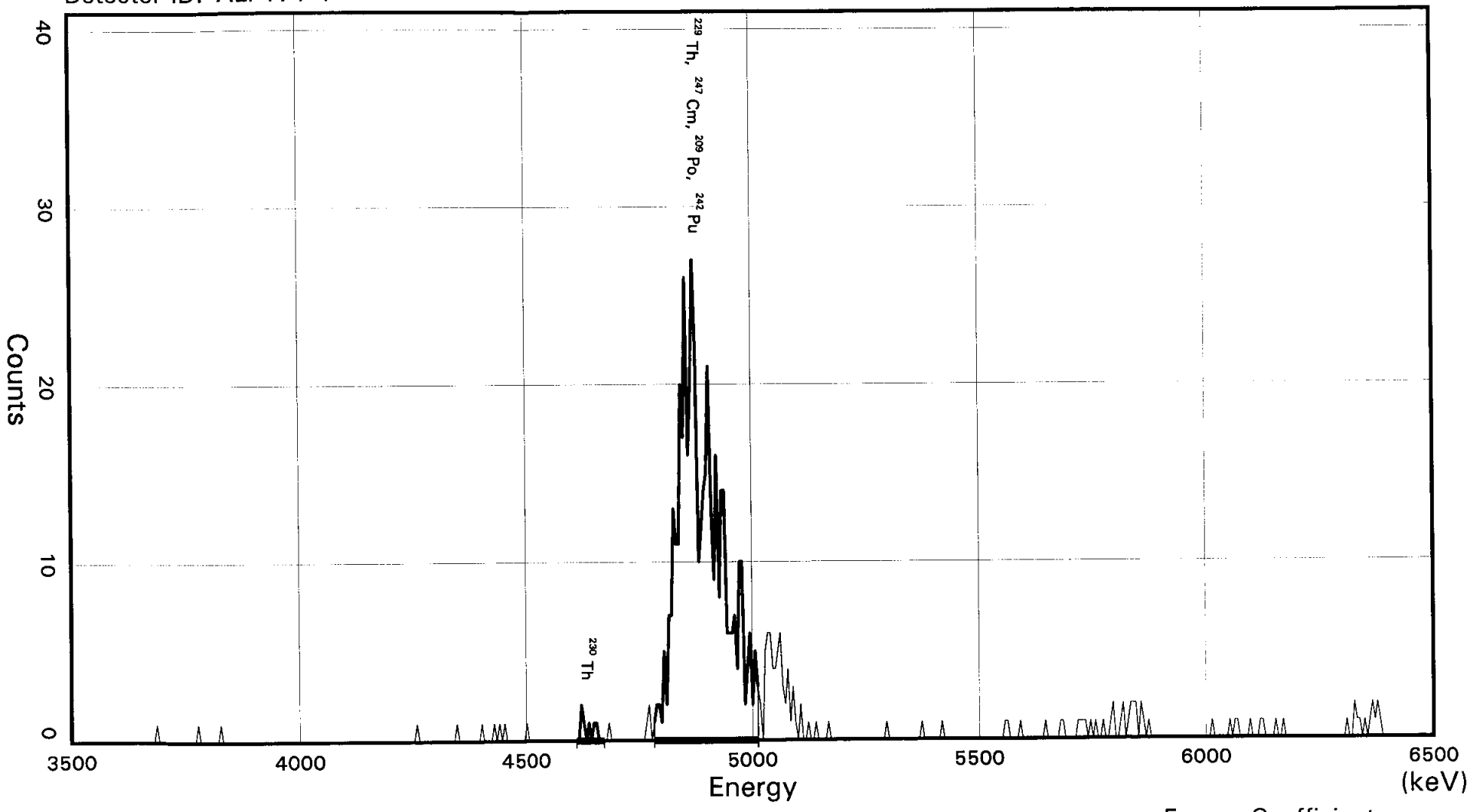
STL Richland WA.

TH BRC

Sample ID: H7DXH1AA

Detector ID: ALP171 4

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.63808E+03

Slope: 5.52501E+00

Quadrature: 5.83550E-05

SAMPLE IDENTIITY: H7DXH1AA

TITLE : TH BRC

DETECTOR : ALP171 4
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXH1AA_130760535D.CN
F;1
ACQUIRE DATE of BACKGROUND: 08-JUL-2006 07:53:15

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:09:39

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3638.08 keV CONSTANT FWHM : 11.00000 Channels
SLOPE : 5.52501 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 5.835500E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXH1AA

Detector: ALP171 4
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5150.6	227.8	256	297	0.00	0.00	M
PO-209	427	1	0	0.854	4918.9	227.6	207	248	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5340.1	228.0	290	331	0.00	0.00	M
AC-227	5	7	8	0.003	6073.7	228.6	421	462	0.00	0.00	S
TH-227	5	7	8	0.003	6073.7	228.6	421	462	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5458.9	228.1	311	352	0.00	0.00	M
TH-229	427	1	0	0.854	4881.0	227.6	207	248	0.00	0.00	P
TH-230	8	0	0	0.016	4723.4	61.0	176	187	0.00	0.00	P
TH-232	0	0	0	0.000	4048.7	226.9	57	98	0.00	0.00	S
U-232	-9999	-9999	0	-10.010	5355.8	228.0	292	333	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4810.3	227.6	194	235	0.00	0.00	S I
U-235	6	3	1	0.008	4433.5	227.2	126	167	0.00	0.00	S
PU-236	14	33	20	-0.005	5803.3	228.4	373	414	0.00	0.00	S
NP-237	-9999	-9999	0	-10.010	4823.7	227.6	197	238	0.00	0.00	S I
PU-238	-9999	-9999	0	-10.010	5534.7	228.2	325	366	0.00	0.00	M
U-238	-9999	-9999	0	-10.010	4233.7	227.1	90	131	0.00	0.00	M
PU-239	-9999	-9999	0	-10.010	5192.3	227.9	263	304	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5521.3	228.2	322	363	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5242.5	227.9	272	313	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6148.4	228.7	435	476	0.00	0.00	M
PU-242	427	1	0	0.854	4936.2	227.6	207	248	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5311.0	228.0	284	325	0.00	0.00	M
CM-244	10	29	20	-0.009	5840.5	222.9	380	420	0.00	0.00	S
CM-246	-9999	-9999	0	-10.010	5422.2	228.1	304	345	0.00	0.00	M
CM-247	427	1	0	0.854	4906.1	227.6	207	248	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5114.3	227.8	249	290	0.00	0.00	M

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXH1AA
Detector: ALP171 4
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	-	101	0	+	151	0	@	201	5	+	251	0	@	301	0	@	351	1	@	401	0	@	451
		2	0		52	0	-	102	0	+	152	0	@	202	6	+	252	0	@	302	1	@	352	0	@	402	0	@	452
0		3	0		53	0	-	103	0	+	153	0	@	203	6	+	253	0	@	303	0	@	353	1	@	403	1	@	453
0		4	0		54	0	-	104	0	+	154	1	@	204	4	+	254	0	-	304	0	@	354	0	@	404	0	@	454
0		5	0		55	0	-	105	0	+	155	2	@	205	4	+	255	0	@	305	0	@	355	0	@	405	0	@	455
0		6	0		56	0	-	106	1	+	156	0	@	206	5	@	256	0	@	306	0	@	356	0	@	406	1	@	456
0		7	0	+	57	0	-	107	0	+	157	1	@	207	6	@	257	0	@	307	0	@	357	0	@	407	0	@	457
0		8	0	+	58	0	-	108	0	+	158	2	@	208	3	@	258	0	@	308	0	@	358	0	@	408	0	@	458
1		9	0	+	59	0	-	109	0	+	159	2	@	209	2	@	259	0	@	309	0	@	359	0	@	409	0	@	459
0		10	0	+	60	0	-	110	0	+	160	1	@	210	4	@	260	0	@	310	0	@	360	0	@	410	0	@	460
0		11	0	+	61	0	-	111	0	+	161	5	@	211	1	@	261	0	@	311	0	@	361	0	@	411	0	@	461
0		12	0	+	62	1	-	112	0	+	162	2	@	212	3	@	262	0	@	312	1	@	362	0	@	412	0	@	462
0		13	0	+	63	0	-	113	0	+	163	7	@	213	1	@	263	1	@	313	0	@	363	0	@	413	0	-	463
0		14	0	+	64	0	-	114	0	+	164	7	@	214	0	@	264	0	@	314	0	+	364	0	@	414	0	-	464
0		15	0	+	65	0	-	115	0	+	165	13	@	215	2	@	265	0	@	315	0	+	365	0	-	415	0	-	465
0		16	0	+	66	0	-	116	0	+	166	11	@	216	0	@	266	0	@	316	0	+	366	0	-	416	0	-	466
0		17	0	+	67	0	-	117	0	+	167	11	@	217	0	@	267	0	@	317	0		367	0	-	417	0	-	467
0		18	0	+	68	0	-	118	0		168	20	@	218	1	@	268	0	@	318	1		368	0	-	418	0	-	468
0		19	0	+	69	0	-	119	0		169	17	@	219	0	@	269	0	@	319	1		369	0	-	419	0	-	469
0		20	0	+	70	0	-	120	0		170	26	@	220	0	@	270	0	@	320	0		370	0	-	420	0	-	470
0		21	0	+	71	0	-	121	0		171	16	@	221	1	@	271	1	@	321	0		371	0	@	421	0	-	471
0		22	0	+	72	0	-	122	0		172	20	@	222	0	@	272	0	@	322	0		372	0	@	422	0	-	472
0		23	0	+	73	0	-	123	0		173	27	@	223	0	@	273	0	@	323	0	+	373	0	@	423	0	-	473
0		24	0	+	74	0	-	124	0		174	22	@	224	0	@	274	0	@	324	0	+	374	0	@	424	0	-	474
1		25	0	+	75	0	-	125	0		175	10	@	225	0	@	275	0	@	325	1	+	375	0	@	425	0	-	475
0		26	0	+	76	0	@	126	0	+	176	12	@	226	1	@	276	0	@	326	1	+	376	0	@	426	0	-	476
0		27	0	+	77	0	@	127	0	+	177	14	@	227	0	@	277	0	@	327	1	+	377	0	@	427	0		477
0		28	0	+	78	1	@	128	2	+	178	15	@	228	0	@	278	0	@	328	1	+	378	1	@	428	0		478
0		29	0	+	79	0	@	129	1	+	179	21	@	229	0	@	279	0	@	329	0	+	379	0	@	429	0		479
0		30	0	+	80	0	@	130	0	+	180	13	@	230	0	@	280	0	@	330	1	@	380	0	@	430	0		480
0		31	0	+	81	0	@	131	1	+	181	9	@	231	0	@	281	0	@	331	0	@	381	0	@	431	1		481
0		32	0	+	82	0	+	132	0	+	182	16	@	232	0	@	282	0	@	332	1	@	382	0	@	432	0		482
0		33	0	+	83	0	+	133	1	+	183	8	@	233	0	@	283	0	@	333	0	@	383	0	@	433	0		483
1		34	0	+	84	0	+	134	1	+	184	14	@	234	0	@	284	0	@	334	0	@	384	0	@	434	2		484
0		35	0	+	85	0	+	135	0	+	185	14	@	235	0	@	285	0	@	335	1	@	385	1	-	435	1		485
0		36	0	+	86	0	+	136	0	+	186	6	@	236	0	@	286	0	@	336	0	@	386	0	@	436	1		486
0		37	0	+	87	0	+	137	0		187	6	@	237	0	@	287	0	@	337	0	@	387	1	@	437	0		487
0		38	0	+	88	1	+	138	0		188	6	@	238	0	@	288	0	@	338	1	@	388	1	@	438	1		488
0		39	0	+	89	0	+	139	1		189	7	@	239	0	@	289	0	@	339	2	@	389	0	@	439	0		489
0		40	0	@	90	0	+	140	0		190	4	@	240	0	@	290	0	@	340	0	@	390	0	@	440	1		490
0		41	0	@	91	0	+	141	0		191	10	@	241	0	@	291	0	@	341	0	@	391	0	@	441	2		491
0		42	0	@	92	0	+	142	0		192	10	@	242	0	@	292	0	@	342	1	@	392	0	@	442	1		492
0		43	0	@	93	1	+	143	0		193	2	@	243	0	@	293	0	@	343	2	@	393	1	@	443	2		493
0		44	0	@	94	0	+	144	0	+	194	4	@	244	0	@	294	0	@	344	0	@	394	0	@	444	1		494
0		45	0	@	95	1	+	145	0	+	195	6	@	245	0	@	295	0	@	345	1	@	395	0	@	445	0		495
0		46	0	@	96	0	+	146	0	+	196	2	@	246	0	@	296	1	@	346	2	@	396	0	@	446	0		496
0		47	0	@	97	1	+	147	0	@	197	5	@	247	0	@	297	1	@	347	2	@	397	1	@	447	0		497
0		48	0	@	98	0	+	148	0	@	198	3		248	0	@	298	0	@	348	2	@	398	1	@	448	0		498
0		49	0	-	99	0	+	149	0	@	199	2	+	249	1	@	299	0	@	349	0	@	399	0	@	449	0		499
0		50	0	-	100	0	+	150	0	@	200	0	+	250	0	@	300	0	@	350	2	@	400	0	@	450	0		500

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:56:45

Configuration : $DISK1:[ALP171.SAMPLE]H7DXH1AA_130760535D.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXH1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3654.66 keV End energy : 6482.19 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4637.25	8	0	44.20	180.50	176	11	2.67E-04	35.4	
2	0	4880.97	427	0	104.98	224.42	207	41	1.42E-02	4.8	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:56:47

Configuration : $DISK1:[ALP171.SAMPLE]H7DXH1AA_130760535D.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXH1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 2
Number of unidentified lines 0
Number of lines tentatively identified by NID 2 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
TH-230	7.54E+04Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXH1AA_130760535D.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4637.25	176	187	8	6	0.71		
4880.97	207	248	427	427	0.00		

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXJ1AA

Detector: ALP171 5
Report Date: 13-Jul-06 02:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	2	1	0.003	5423.2	118.0	301	321
TH-229	662	2	1.323	4845.3	360.3	202	263
TH-230	10	0	0.020	4687.7	136.0	178	201
TH-232	1	1	0.001	4013.0	118.4	62	82

End of Alpha Region Report
(Produced by ANAL Report)

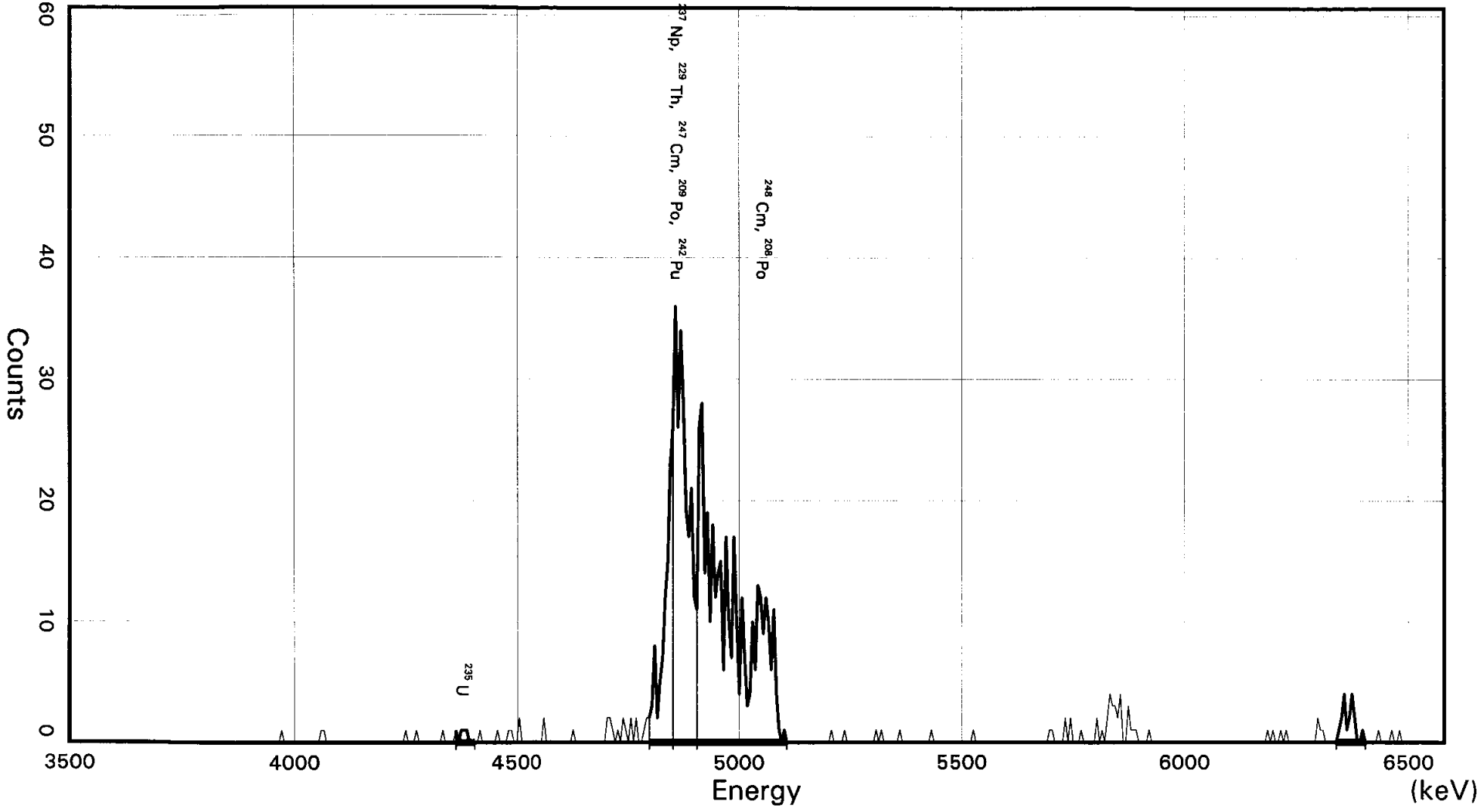
STL Richland WA.

TH BRC

Sample ID: H7DXJ1AA

Detector ID: ALP171 5

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.55643E+03

Slope: 5.92919E+00

Quadrature: -4.83406E-05

SAMPLE IDENTIITY: H7DXJ1AA

TITLE : TH BRC

DETECTOR : ALP171 5
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXJ1AA_130760535E.CN
F;1
ACQUIRE DATE of BACKGROUND: 08-JUL-2006 07:53:15

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 08-JUL-2006 00:27:11

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3556.43 keV CONSTANT FWHM : 8.00000 Channels
SLOPE : 5.92919 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.483406E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXJ1AA

Detector: ALP171 5
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	154	2	0	0.306	5131.2	254.0	219	262	0.00	0.00	P
PO-209	503	0	0	1.007	4899.5	106.3	210	228	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5320.7	106.2	288	306	0.00	0.00	M
AC-227	0	2	0	-0.002	6054.3	106.0	412	430	0.00	0.00	S
TH-227	0	2	0	-0.002	6054.3	106.0	412	430	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5439.5	106.2	308	326	0.00	0.00	M
TH-229	503	0	0	1.007	4861.6	106.3	210	228	0.00	0.00	P
TH-230	7	0	4	0.014	4704.0	106.4	183	201	0.00	0.00	S
TH-232	3	1	0	0.005	4029.3	106.6	69	87	0.00	0.00	
U-232	-9999	-9999	0	-10.010	5336.4	106.2	290	308	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4790.9	106.4	198	216	0.00	0.00	S I
U-235	4	0	0	0.008	4414.1	41.4	136	143	0.00	0.00	P
PU-236	7	13	6	0.001	5783.9	106.1	366	384	0.00	0.00	S
NP-237	503	0	0	1.007	4804.3	106.3	210	228	0.00	0.00	P
PU-238	-9999	-9999	0	-10.010	5515.3	106.2	321	339	0.00	0.00	M
U-238	1	0	0	0.002	4214.3	106.5	101	119	0.00	0.00	
PU-239	1	0	1	0.001	5172.9	106.3	263	281	0.00	0.00	S
AM-241	-9999	-9999	0	-10.010	5501.9	106.2	318	336	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5223.1	106.2	271	289	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6129.0	106.0	425	443	0.00	0.00	M
PU-242	503	0	0	1.007	4916.8	106.3	210	228	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5291.6	106.2	283	301	0.00	0.00	M
CM-244	19	41	6	-0.003	5821.1	106.1	373	391	0.00	0.00	S
CM-246	-9999	-9999	0	-10.010	5402.8	106.2	302	320	0.00	0.00	M
CM-247	503	0	0	1.007	4886.7	106.3	210	228	0.00	0.00	P
CM-248	154	2	0	0.306	5094.9	254.0	219	262	0.00	0.00	P

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXJ1AA
Detector: ALP171 5
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	+	101	0		151	1	@	201	13	@	251	0	@	301	0		351	0		401	0		451	0		501
		2	0		52	0	+	102	1		152	0	-	202	12	@	252	0	+	302	0		352	0		402	1		452	0		502
0		3	0		53	0	+	103	0		153	2	-	203	9	@	253	0	@	303	0		353	0		403	0		453	0		503
0		4	0		54	0	+	104	0		154	0	-	204	12	@	254	0	@	304	0		354	0		404	0		454	0		504
0		5	0		55	0	+	105	0		155	2	-	205	10	@	255	1	@	305	0		355	0		405	0		455	0		505
0		6	0		56	0	+	106	1		156	0	-	206	6	@	256	0	@	306	0		356	0		406	0		456	0		506
0		7	0		57	0	+	107	1		157	0	-	207	11	@	257	0	@	307	0		357	0		407	0		457	0		507
0		8	0		58	0	+	108	0		158	1	-	208	4	@	258	0	@	308	0		358	0		408	0		458	0		508
0		9	0		59	0	+	109	0		159	2	-	209	1	@	259	0	@	309	0		359	0		409	0		459	0		509
0		10	0		60	0	+	110	2		160	2	-	210	0	@	260	0	@	310	0		360	0		410	0		460	0		510
0		11	0		61	0	+	111	0		161	3	@	211	1	@	261	0	@	311	0		361	0		411	0		461	0		511
0		12	0		62	0	+	112	0		162	8	@	212	0		262	0	@	312	1		362	0	@	412	0		462	0		512
0		13	0		63	0	+	113	0		163	2	@	213	0	+	263	0	@	313	1		363	0	@	413	0		463			
0		14	0		64	0	+	114	0		164	5	@	214	0	+	264	0	@	314	0		364	0	@	414	2		464			
0		15	0		65	0	+	115	0		165	7	@	215	0	+	265	0	@	315	0		365	0	@	415	1		465			
0		16	0		66	0	+	116	0		166	12	@	216	0	+	266	0	@	316	0	+	366	0	@	416	1		466			
0		17	0		67	1	+	117	0		167	15	@	217	0	+	267	1	@	317	0	+	367	0	@	417	0		467			
0		18	0		68	0	+	118	0		168	23	@	218	0	+	268	0	@	318	2	+	368	0	@	418	0		468			
0		19	0	+	69	0	+	119	0		169	26	-	219	0	+	269	0	@	319	0	+	369	0	@	419	0		469			
0		20	1	+	70	0		120	2		170	36	@	220	0	+	270	0	@	320	2	+	370	0	@	420	0		470			
0		21	0	+	71	1		121	0		171	26	@	221	0	@	271	0	@	321	0	+	371	0	@	421	0		471			
0		22	0	+	72	0		122	0		172	34	@	222	0	@	272	0	@	322	0	+	372	0	@	422	1		472			
0		23	0	+	73	0		123	0		173	28	@	223	0	@	273	0	@	323	0	@	373	0	@	423	2		473			
0		24	0	+	74	0		124	0		174	19	@	224	0	@	274	0	@	324	1	@	374	0	@	424	4		474			
0		25	0	+	75	0		125	0		175	17	@	225	0	@	275	0	@	325	0	@	375	0	-	425	1		475			
0		26	0	+	76	0		126	0		176	21	@	226	0	@	276	0	@	326	0	@	376	0	@	426	2		476			
0		27	0	+	77	0		127	0		177	12	@	227	0	@	277	0	@	327	0	@	377	0	@	427	4		477			
0		28	0	+	78	0		128	0		178	11	@	228	0	@	278	0	@	328	0	@	378	0	@	428	2		478			
0		29	0	+	79	0		129	0		179	26	@	229	1	@	279	0	@	329	0	@	379	0	@	429	0		479			
0		30	0	+	80	0		130	0		180	28	@	230	0	@	280	0	@	330	2	@	380	0	@	430	0		480			
0		31	0	+	81	1		131	1		181	14	@	231	0	@	281	0	@	331	0	@	381	0	-	431	1		481			
0		32	0	+	82	0		132	0		182	19	@	232	0	-	282	0	@	332	1	@	382	0	-	432	0		482			
0		33	0	+	83	0		133	0	+	183	10	@	233	0	@	283	1	@	333	0	@	383	0	-	433	0		483			
0		34	0	+	84	0		134	0	+	184	18	@	234	1	@	284	0	@	334	2	@	384	0	-	434	0		484			
0		35	1	+	85	0		135	0	+	185	12	@	235	0	@	285	0	@	335	4	-	385	0	-	435	0		485			
0		36	1	+	86	1	+	136	0	+	186	14	@	236	0	@	286	0	@	336	3	-	386	0	-	436	0		486			
0		37	0	+	87	0	+	137	0	+	187	15	@	237	0	@	287	0	+	337	3	-	387	0	-	437	1		487			
0		38	0		88	1	+	138	0	+	188	6	@	238	0	@	288	0	+	338	2	-	388	0	-	438	0		488			
0		39	0		89	1	+	139	0	+	189	17	@	239	0	@	289	0	+	339	4	-	389	0	-	439	0		489			
0		40	0		90	1	+	140	0	+	190	10	@	240	0	@	290	0		340	0	-	390	0	-	440	0		490			
0		41	0		91	0	+	141	0	+	191	7	@	241	0	@	291	0		341	0	-	391	0	-	441	0		491			
0		42	0		92	0	+	142	0	+	192	17	@	242	0	@	292	0		342	3		392	0	-	442	1		492			
0		43	0		93	0		143	0	+	193	10	@	243	0	@	293	0		343	1		393	0	-	443	0		493			
0		44	0		94	0		144	2	+	194	4	@	244	0	@	294	0		344	1		394	0		444	0		494			
0		45	0		95	1		145	2	+	195	12	@	245	0	@	295	0		345	1		395	1		445	1		495			
0		46	0		96	0		146	1	+	196	7	@	246	1	@	296	0		346	0		396	0		446	0		496			
0		47	0		97	0		147	0	+	197	3	@	247	0	@	297	0		347	0		397	1		447	0		497			
0		48	0		98	0		148	1	@	198	4	@	248	1	@	298	0		348	0		398	0		448	0		498			
0		49	0		99	0		149	0	@	199	10	@	249	0	@	299	0		349	0		399	0		449	0		499			
0		50	0		100	0		150	2	@	200	6	@	250	0	@	300	0		350	1		400	1		450	0		500			

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:56:50

Configuration : $DISK1:[ALP171.SAMPLE]H7DXJ1AA_130760535E.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXJ1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3574.21 keV End energy : 6579.50 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4376.69	4	0	23.72	138.50	136	7	1.33E-04	50.0	
2	0	4861.57	503	0	47.43	220.52	210	18	1.68E-02	4.5	
3	0	5053.01	154	0	53.36	252.93	219	43	5.14E-03	8.1	
4	0	6364.83	16	0	35.58	475.50	471	11	5.34E-04	25.0	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:56:53

```
Configuration     : $DISK1:[ALP171.SAMPLE]H7DXJ1AA_130760535E.CNF;1
Analyses by       : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title      : TH BRC
Sample date       : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID         : H7DXJ1AA             Sample quantity  : 0.00000E+00 SAMPLE
Sample type       : disk                 Sample geometry  :
Detector name     : ALP171 1             Detector geometry:
Elapsed live time: 0 08:19:28.00         Elapsed real time: 0 08:19:28.00   0.0%
Energy tolerance :    80.00 keV          Half life ratio  :     1.00
Errors propagated: No                    Systematic Error :     0.00 %
Efficiency type  : Spline                Efficiencies at  : Peak Energy
Abundance limit  :    70.00
```

Summary of Nuclide Activity

Total number of lines in spectrum	4	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	3	75.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-208	2.90Y	1.03	0.000E+00	0.000E+00	0.000E+00	0.00	
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
U-235	7.08E+08Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
NP-237	2.14E+06Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-248	3.39E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXJ1AA_130760535E.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4376.69	136	143	4	4	0.00		
4861.57	210	228	503	307	8.74		
5053.01	219	262	154	578	-34.17	230	0.08
6364.82	471	482	16	17	-0.25		

***** WARNING: Possible PEAK/ALPHA Error *****
Review Spectrum on Screen

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXK1AA

Detector: ALP171 6
Report Date: 13-Jul-06 02:57 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	4	3	0.005	5423.2	138.9	319	342
TH-229	636	2	1.271	4845.3	350.7	225	283
TH-230	10	1	0.019	4687.7	133.1	200	222
TH-232	0	2	-0.002	4013.0	121.2	89	109

End of Alpha Region Report
(Produced by ANAL Report)

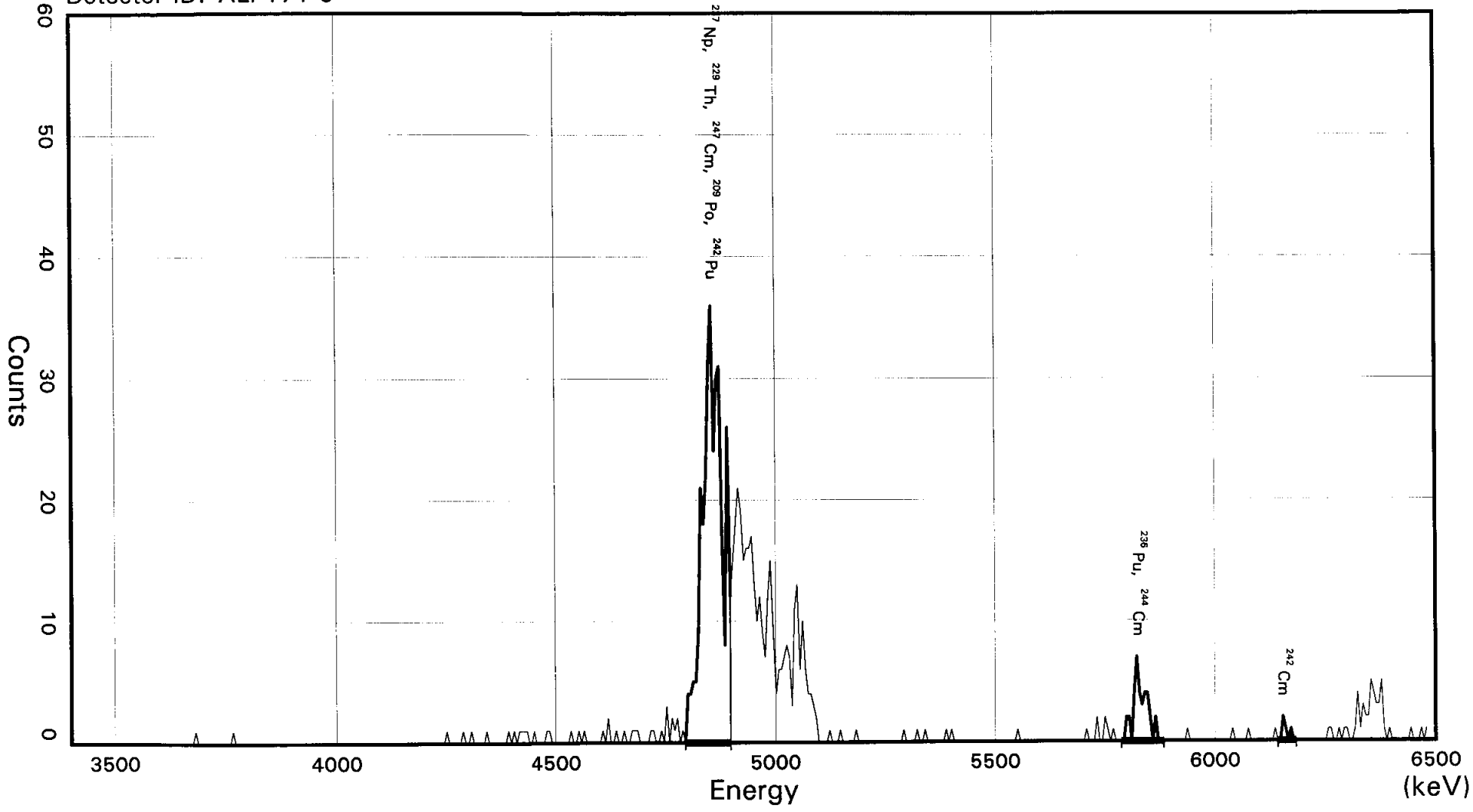
STL Richland WA.

TH BRC

Sample ID: H7DXK1AA

Detector ID: ALP171 6

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.38355E+03

Slope: 6.07069E+00

Quadrature: -4.63837E-05

SAMPLE IDENTIITY: H7DXK1AA

TITLE : TH BRC

DETECTOR : ALP171 6
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXK1AA_130760535F.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:10:11

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3383.55 keV CONSTANT FWHM : 7.66667 Channels
SLOPE : 6.07069 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.463837E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXK1AA

Detector: ALP171 6
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5130.6	102.7	278	295	0.00	0.00	M
PO-209	335	1	0	0.670	4898.9	102.8	233	250	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5320.1	102.7	309	326	0.00	0.00	M
AC-227	2	4	0	0.000	6053.7	108.5	430	448	0.00	0.00	
TH-227	2	4	0	0.000	6053.7	108.5	430	448	0.00	0.00	
TH-228	-9999	-9999	0	-10.010	5438.9	102.7	329	346	0.00	0.00	M
TH-229	335	1	0	0.670	4861.0	102.8	233	250	0.00	0.00	P
TH-230	7	1	2	0.013	4703.4	102.9	207	224	0.00	0.00	S
TH-232	0	2	0	-0.002	4028.7	103.0	96	113	0.00	0.00	
U-232	-9999	-9999	0	-10.010	5335.9	102.7	312	329	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4790.3	102.8	221	238	0.00	0.00	S I
U-235	7	1	0	0.013	4413.5	102.9	159	176	0.00	0.00	
PU-236	34	74	0	-0.006	5783.4	96.5	397	413	0.00	0.00	P
NP-237	335	1	0	0.670	4803.7	102.8	233	250	0.00	0.00	P
PU-238	-9999	-9999	0	-10.010	5514.7	102.7	341	358	0.00	0.00	M
U-238	1	0	0	0.002	4213.7	103.0	126	143	0.00	0.00	
PU-239	-9999	-9999	0	-10.010	5172.3	102.7	284	301	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5501.3	102.7	339	356	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5222.5	102.7	293	310	0.00	0.00	M
CM-242	4	5	0	0.003	6128.4	42.2	456	463	0.00	0.00	P
PU-242	335	1	0	0.670	4916.2	102.8	233	250	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5291.0	102.7	304	321	0.00	0.00	M
CM-244	34	74	0	-0.006	5820.5	96.5	397	413	0.00	0.00	P
CM-246	-9999	-9999	0	-10.010	5402.2	102.7	323	340	0.00	0.00	M
CM-247	335	1	0	0.670	4886.1	102.8	233	250	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5094.3	102.8	272	289	0.00	0.00	M

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXK1AA
Detector: ALP171 6
Report Date: 13-Jul-06 01:56 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1		0	51		0	101		0	151		0	201	15		251		0	301		0	351		0	401		0	451		0	501
		2		0	52		0	102		1	152		1	202	18		252		0	302		0	352		4	402		0	452		0	502
	0	3		0	53		0	103		0	153		0	203	21		253		0	303		0	353		7	403		0	453		0	503
	0	4		0	54		0	104		0	154		2	204	19		254		0	304		0	354		4	404		0	454		0	504
	0	5		0	55		0	105		0	155		0	205	15		255		0	305		0	355		3	405		1	455		0	505
	0	6		0	56		0	106		0	156		0	206	16		256		0	306		0	356		4	406		0	456		1	506
	0	7		0	57		0	107		0	157		1	207	16		257		0	307		0	357		4	407		0	457		0	507
	0	8		0	58		0	108		1	158		0	208	17		258		0	308		1	358		2	408		2	458		0	508
	0	9		0	59		0	109		0	159		0	209	13		259		0	309		0	359		0	409		1	459		0	509
	0	10		0	60		0	110		0	160		1	210	10		260		0	310		0	360		2	410		0	460		1	510
	0	11		0	61		0	111		0	161		0	211	12		261		0	311		0	361		0	411		1	461		0	511
	0	12		0	62		0	112		0	162		0	212	9		262		0	312		0	362		0	412		0	462		1	512
	0	13		1	63		0	113		0	163		1	213	7		263		0	313		0	363		0	413		0	463			
	0	14		0	64		0	114		0	164		1	214	12		264		0	314		0	364		0	414		0	464			
	0	15		0	65		0	115		0	165		1	215	15		265		1	315		0	365		0	415		0	465			
	0	16		0	66		0	116		1	166		0	216	9		266		0	316		0	366		0	416		0	466			
	0	17		0	67		0	117		0	167		0	217	4		267		0	317		0	367		0	417		0	467			
	0	18		0	68		0	118		1	168		0	218	6		268		0	318		0	368		0	418		0	468			
	0	19		0	69		0	119		0	169		0	219	6		269		0	319		0	369		0	419		0	469			
	0	20		0	70		0	120		1	170		1	220	7		270		1	320		0	370		0	420		0	470			
	0	21		0	71		0	121		1	171		1	221	8		271		0	321		0	371		0	421		0	471			
	0	22		0	72		0	122		1	172		0	222	7	+	272		0	322		0	372		1	422		0	472			
	0	23		0	73		0	123		1	173		0	223	3	+	273		1	323		0	373		0	423		0	473			
	0	24		0	74		0	124		0	174		1	224	11	+	274		0	324		0	374		0	424		0	474			
	0	25		0	75		0	125		0	175		0	225	13	+	275		0	325		0	375		0	425		1	475			
	0	26		0	76		0	126		1	176		3	226	6	+	276		0	326		0	376		0	426		1	476			
	0	27		0	77		0	127		0	177		0	227	10	+	277		0	327		0	377		0	427		0	477			
	0	28		0	78		0	128		0	178		2	228	6	@	278		0	328		0	378		0	428		0	478			
	0	29		0	79		0	129		0	179		1	229	4	@	279		0	329		0	379		0	429		1	479			
	0	30		0	80		0	130		0	180		2	230	4	@	280		0	330		0	380		0	430		0	480			
	0	31		0	81		0	131		1	181		0	231	3	@	281		1	331		0	381		0	431		1	481			
	0	32		0	82		0	132		1	182		1	232	2	@	282		0	332		0	382		0	432		1	482			
	0	33		0	83		0	133		0	183		0	233	0	@	283		1	333		0	383		0	433		0	483			
	0	34		0	84		0	134		0	184		4	234	0	@	284		0	334		1	384		0	434		0	484			
	0	35		0	85		0	135		0	185		4	235	0	@	285		0	335		0	385		0	435		1	485			
	0	36		0	86		0	136		0	186		5	236	0	@	286		0	336		0	386		0	436		4	486			
	0	37		0	87		0	137		0	187		5	237	1	@	287		0	337		0	387		0	437		1	487			
	0	38		0	88		0	138		0	188		9	238	0	@	288		0	338		2	388		0	438		3	488			
	0	39		0	89		0	139		0	189		21	239	0	@	289		0	339		0	389		1	439		2	489			
	0	40		0	90		0	140		1	190		18	240	0	@	290		0	340		0	390		0	440		2	490			
	0	41		0	91		0	141		0	191		22	241	1	@	291		0	341		2	391		0	441		5	491			
	0	42		0	92		0	142		0	192		31	242	0	@	292		0	342		1	392		0	442		4	492			
	0	43		0	93		1	143		1	193		36	243	0	-	293		0	343		0	393		0	443		3	493			
	0	44		0	94		0	144		0	194		24	244	0	@	294		0	344		1	394		0	444		3	494			
	0	45		0	95		0	145		1	195		30	245	0	@	295		0	345		0	395		1	445		5	495			
	0	46		0	96		0	146		0	196		31	246	0	@	296		0	346		0	396		0	446		1	496			
	0	47		0	97		0	147		0	197		17	247	1	@	297		0	347		0	397		0	447		0	497			
	0	48		0	98		0	148		0	198		8	248	0	@	298		0	348		0	398		0	448		1	498			
	1	49		0	99		1	149		0	199		26	249	0	@	299		0	349		2	399		0	449		0	499			
	0	50		0	100		0	150		0	200		12	250	0	@	300		0	350		2	400		0	450		0	500			

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:56:55

Configuration : $DISK1:[ALP171.SAMPLE]H7DXK1AA_130760535F.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXK1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3401.76 keV End energy : 6479.59 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4860.99	335	0	54.64	243.83	233	17	1.12E-02	5.5	
2	0	5828.54	34	0	42.49	404.00	397	16	1.13E-03	17.1	
3	0	6157.21	4	0	24.28	458.50	456	7	1.33E-04	50.0	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:56:57

Configuration : $DISK1:[ALP171.SAMPLE]H7DXK1AA_130760535F.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXK1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 3
Number of unidentified lines 0
Number of lines tentatively identified by NID 3 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-236	2.86Y	1.03	0.000E+00	0.000E+00	0.000E+00	0.00	
NP-237	2.14E+06Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-242	162.80D	1.24	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-244	18.10Y	1.01	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXK1AA_130760535F.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4860.99	233	250	335	303	1.75		
5828.53	397	413	34	34	0.00		
6157.21	456	463	4	4	0.00		

***** WARNING: Possible PEAK/ALPHA Error *****
Review Spectrum on Screen

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXL1AA

Detector: ALP171 7
Report Date: 13-Jul-06 02:58 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	0	1	-0.001	5423.2	112.5	311	331
TH-229	243	0	0.487	4845.3	343.4	205	266
TH-230	2	0	0.004	4687.7	112.6	180	200
TH-232	1	0	0.002	4013.0	112.7	60	80

End of Alpha Region Report
(Produced by ANAL Report)

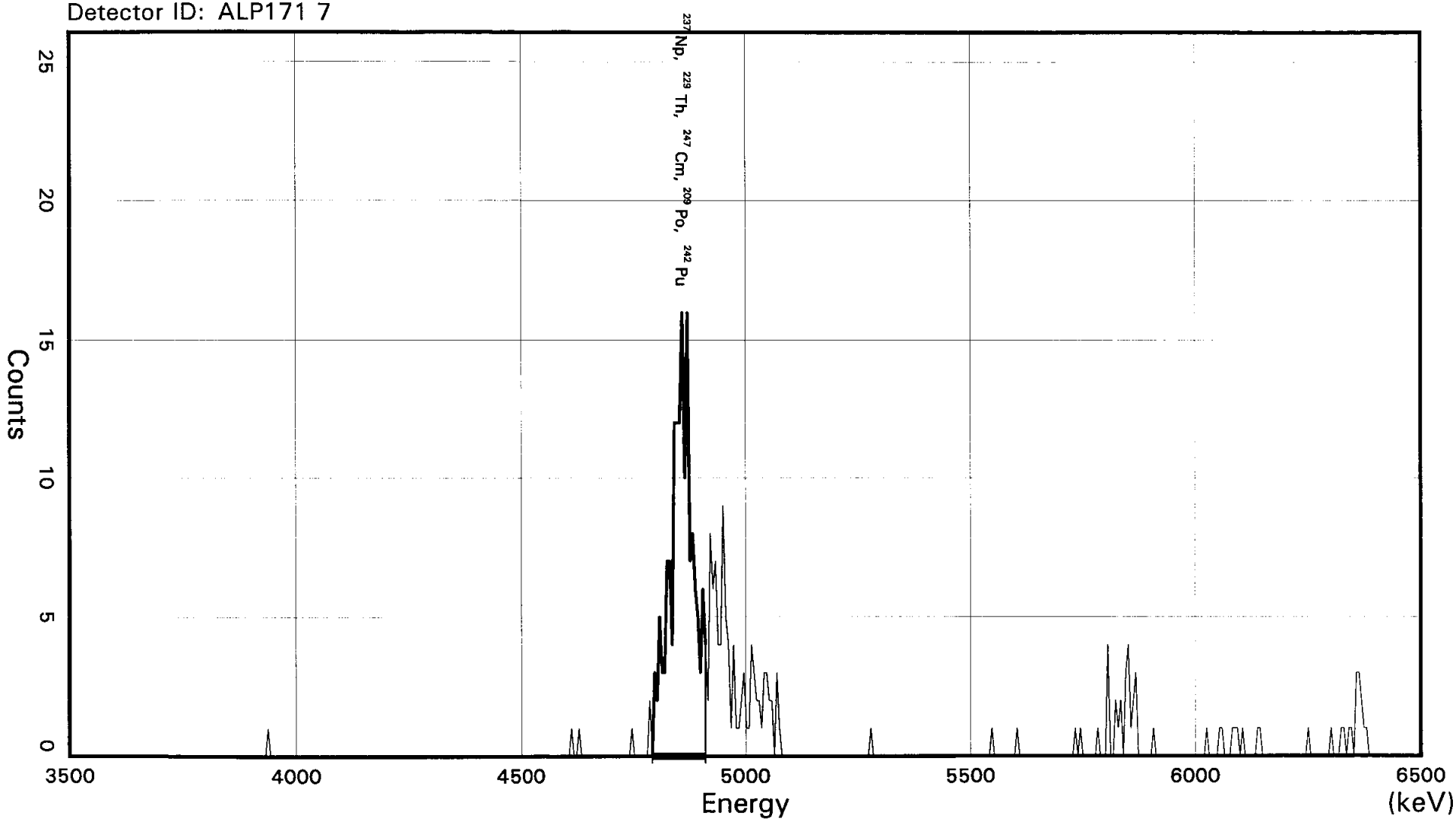
STL Richland WA.

TH BRC

Sample ID: H7DXL1AA

Detector ID: ALP171 7

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.58783E+03

Slope: 5.63778E+00

Quadrature: -1.77179E-05

SAMPLE IDENTIITY: H7DXL1AA

TITLE : TH BRC

DETECTOR : ALP171 7
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXL1AA_130760535G.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:10:41

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3587.83 keV CONSTANT FWHM : 6.50000 Channels
SLOPE : 5.63778 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.177179E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXL1AA

Detector: ALP171 7
Report Date: 13-Jul-06 01:57 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5130.7	118.2	262	283	0.00	0.00	M
PO-209	150	0	0	0.300	4899.0	118.2	214	235	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5320.1	118.2	296	317	0.00	0.00	M
AC-227	5	0	5	0.009	6053.8	118.1	426	447	0.00	0.00	S
TH-227	5	0	5	0.009	6053.8	118.1	426	447	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5439.0	118.1	317	338	0.00	0.00	M
TH-229	150	0	0	0.300	4861.1	118.2	214	235	0.00	0.00	P
TH-230	1	0	1	0.001	4703.5	118.2	186	207	0.00	0.00	S
TH-232	0	0	0	0.000	4028.8	118.3	66	87	0.00	0.00	
U-232	-9999	-9999	0	-10.010	5335.9	118.2	298	319	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4790.4	118.2	201	222	0.00	0.00	S I
U-235	0	1	0	-0.001	4413.6	118.3	135	156	0.00	0.00	
PU-236	7	17	10	-0.003	5783.4	118.1	378	399	0.00	0.00	S
NP-237	150	0	0	0.300	4803.8	118.2	214	235	0.00	0.00	P
PU-238	-9999	-9999	0	-10.010	5514.8	118.1	330	351	0.00	0.00	M
U-238	0	0	0	0.000	4213.8	118.3	99	120	0.00	0.00	
PU-239	-9999	-9999	0	-10.010	5172.4	118.2	269	290	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5501.4	118.1	328	349	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5222.6	118.2	278	299	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6128.5	118.1	439	460	0.00	0.00	M
PU-242	150	0	0	0.300	4916.3	118.2	214	235	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5291.1	118.2	290	311	0.00	0.00	M
CM-244	18	43	10	-0.007	5820.6	118.1	385	406	0.00	0.00	S
CM-246	-9999	-9999	0	-10.010	5402.3	118.2	310	331	0.00	0.00	M
CM-247	150	0	0	0.300	4886.2	118.2	214	235	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5094.4	118.2	255	276	0.00	0.00	M

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXL1AA
Detector: ALP171 7
Report Date: 13-Jul-06 01:57 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	+	101	0	+	151	0	@	201	1		251	0	@	301	0	+	351	3	-	401	0	-	451	0		501
		2	0		52	0	+	102	0	+	152	0	@	202	1		252	0	@	302	0		352	4	-	402	0	-	452	0		502
0		3	0		53	0	+	103	0	+	153	0	@	203	4		253	0	@	303	0		353	1	-	403	1	-	453	0		503
0		4	0		54	0	+	104	0	+	154	0	@	204	3		254	0	@	304	0		354	2	-	404	1	-	454	0		504
0		5	0		55	0	+	105	0	+	155	0	@	205	2	+	255	0	@	305	0		355	3	-	405	0	-	455	0		505
0		6	0		56	0	+	106	0	+	156	1	@	206	2	+	256	0	@	306	0		356	0	-	406	0	-	456	0		506
0		7	0		57	0	+	107	0		157	0	@	207	1	+	257	0	@	307	0		357	0		407	0	-	457	0		507
0		8	0		58	0	+	108	0		158	0	-	208	3	+	258	0	@	308	1		358	0		408	0	-	458	0		508
0		9	0		59	0	+	109	0		159	0	-	209	3	+	259	0	@	309	0		359	0		409	0	-	459	0		509
0		10	0		60	0	+	110	0		160	0	-	210	2	+	260	0	-	310	0		360	0		410	0	-	460	0		510
0		11	0		61	0	+	111	0		161	0	-	211	2	+	261	0	@	311	0		361	0		411	0		461	0		511
0		12	1		62	0	+	112	0		162	0	-	212	0	@	262	0	@	312	0		362	1		412	0		462	0		512
0		13	0		63	0	+	113	0		163	2	-	213	3	@	263	0	@	313	0		363	0		413	0		463			
0		14	0		64	0	+	114	0		164	0	-	214	1	@	264	0	@	314	0		364	0		414	0		464			
0		15	0		65	0	+	115	0		165	3	@	215	0	@	265	0	@	315	0		365	0		415	0		465			
0		16	0	+	66	0	+	116	0		166	2	@	216	0	@	266	0	@	316	0		366	0		416	0		466			
0		17	0	+	67	0	+	117	0		167	5	@	217	0	@	267	0	@	317	0		367	0		417	0		467			
0		18	0	+	68	0	+	118	0		168	3	@	218	0	@	268	0	@	318	0		368	0		418	0		468			
0		19	0	+	69	0	+	119	0		169	3	@	219	0	@	269	0	@	319	0		369	0		419	0		469			
0		20	0	+	70	0	+	120	0		170	7	@	220	0	@	270	0	@	320	0		370	0		420	0		470			
0		21	0	+	71	0		121	0		171	7	@	221	0	@	271	0	@	321	0		371	0		421	0		471			
0		22	0	+	72	0		122	0		172	4	@	222	0	@	272	0	@	322	0		372	0		422	0		472			
0		23	0	+	73	0		123	0		173	12	@	223	0	@	273	0	@	323	0		373	0		423	1		473			
0		24	0	+	74	0		124	0		174	12	@	224	0	@	274	0	@	324	0		374	0		424	0		474			
0		25	0	+	75	0		125	0		175	12	@	225	0	@	275	0	@	325	0		375	0		425	0		475			
0		26	0	+	76	0		126	0		176	16	@	226	0	@	276	0	@	326	0		376	0	@	426	0		476			
0		27	0	+	77	0		127	0		177	10	@	227	0	@	277	0	@	327	0		377	0	@	427	0		477			
0		28	0	+	78	0		128	0		178	16	@	228	0	-	278	0	@	328	0	+	378	0	@	428	0		478			
0		29	0	+	79	0		129	0		179	7	@	229	0	@	279	0	@	329	0	+	379	0	@	429	0		479			
0		30	0	+	80	0		130	0		180	8	@	230	0	@	280	0	@	330	0	+	380	0	@	430	0		480			
0		31	0	+	81	0		131	0		181	6	@	231	0	@	281	0	@	331	1	+	381	0	@	431	0		481			
0		32	0	+	82	0		132	1		182	5	@	232	0	@	282	0	@	332	0	+	382	0	@	432	1		482			
0		33	0	+	83	0		133	0		183	3	@	233	0	@	283	0	@	333	1	+	383	1	@	433	0		483			
0		34	0	+	84	0		134	0		184	6	@	234	0	@	284	0	@	334	0	+	384	0	@	434	0		484			
0		35	0	+	85	0	+	135	1		185	4		235	0	@	285	0	@	335	0	@	385	0	@	435	0		485			
0		36	0	+	86	0	+	136	0	+	186	2		236	0	@	286	0	@	336	0	@	386	0	@	436	1		486			
0		37	0	+	87	0	+	137	0	+	187	8		237	0	@	287	0	@	337	0	@	387	0	@	437	1		487			
0		38	0		88	0	+	138	0	+	188	6		238	0	@	288	0	@	338	0	@	388	1	@	438	0		488			
0		39	0		89	0	+	139	0	+	189	7		239	0	@	289	0	@	339	0	@	389	1	-	439	1		489			
0		40	0		90	0	+	140	0	+	190	4		240	0	-	290	0	@	340	1	@	390	0	@	440	1		490			
0		41	0		91	0	+	141	0	+	191	4		241	0	@	291	0	@	341	0	@	391	0	@	441	0		491			
0		42	0		92	0	+	142	0	+	192	9		242	0	@	292	0	@	342	0	@	392	0	@	442	3		492			
0		43	0		93	0	+	143	0	+	193	5		243	0	@	293	0	@	343	0	@	393	1	@	443	3		493			
0		44	0		94	0	+	144	0	+	194	4		244	0	@	294	0	@	344	4	@	394	1	@	444	2		494			
0		45	0		95	0	+	145	0	+	195	1		245	0	@	295	0	@	345	0	@	395	1	@	445	1		495			
0		46	0		96	0	+	146	0	+	196	4		246	0	@	296	0	@	346	0	@	396	0	@	446	1		496			
0		47	0		97	0	+	147	0	+	197	1		247	0	@	297	0	@	347	2	@	397	1	@	447	0		497			
0		48	0		98	0	+	148	0	+	198	1		248	0	@	298	1	@	348	1	@	398	0	-	448	0		498			
0		49	0	+	99	0	+	149	0	+	199	2		249	0	@	299	0	@	349	2	@	399	0	-	449	0		499			
0		50	0	+	100	0	+	150	0	+	200	3		250	1	@	300	0	+	350	0	-	400	0	-	450	0		500			

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:57:00

Configuration : $DISK1:[ALP171.SAMPLE]H7DXL1AA_130760535G.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXL1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3604.75 keV End energy : 6469.73 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4861.07	150	0	50.74	226.00	214	21	5.01E-03	8.2	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:57:02

Configuration : $DISK1:[ALP171.SAMPLE]H7DXL1AA_130760535G.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXL1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 1
Number of unidentified lines 0
Number of lines tentatively identified by NID 1 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
NP-237	2.14E+06Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXL1AA_130760535G.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4861.06	214	235	150	151	-0.08		

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXM1AA

Detector: ALP171 8
Report Date: 13-Jul-06 02:59 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	3	1	0.005	5423.2	117.6	307	327
TH-229	568	1	1.136	4845.3	347.3	207	266
TH-230	1	1	0.001	4687.7	117.8	182	202
TH-232	1	2	0.000	4013.0	117.9	67	87

End of Alpha Region Report
(Produced by ANAL Report)

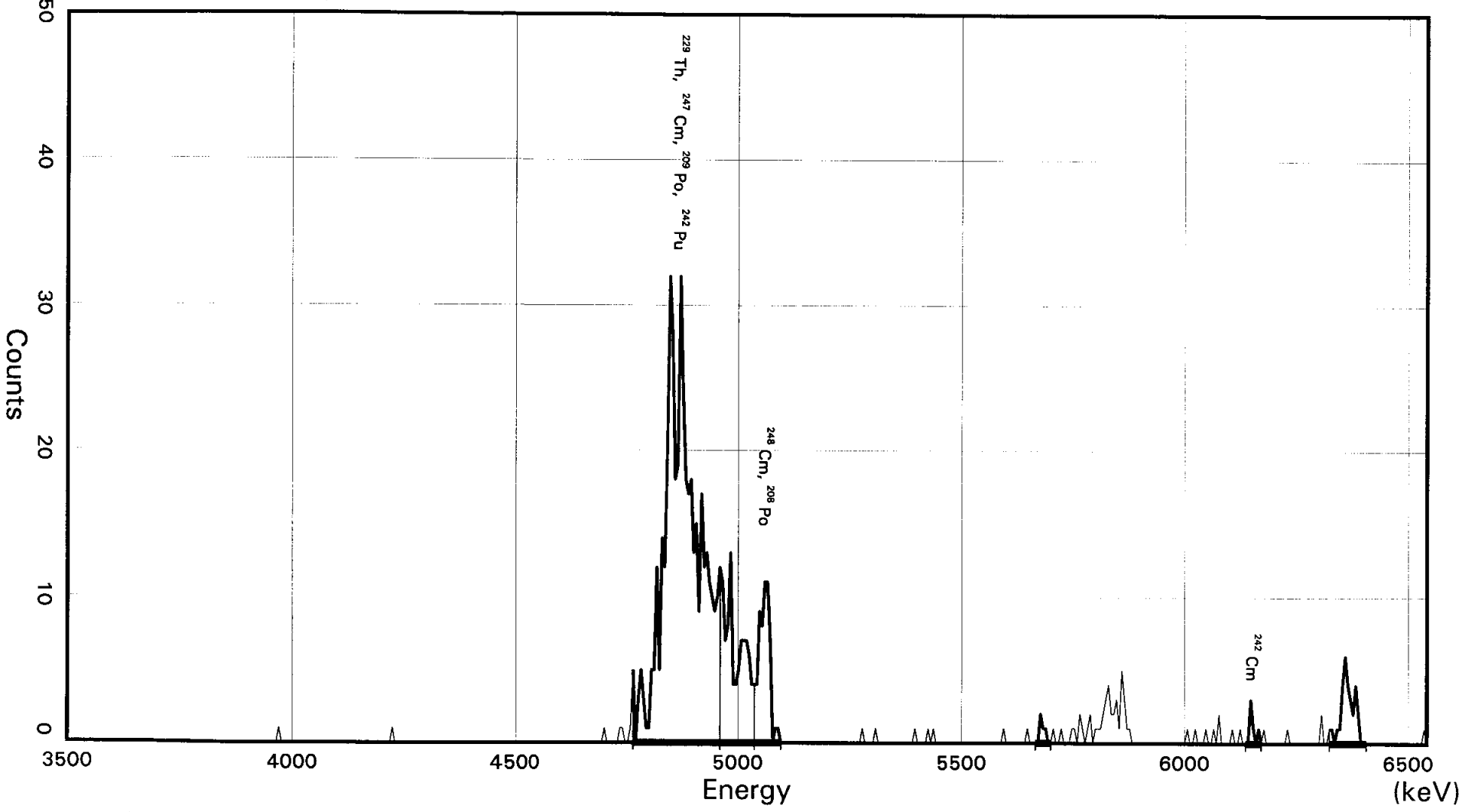
STL Richland WA.

TH BRC

Sample ID: H7DXM1AA

Detector ID: ALP171 8

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 05:35:51.64

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.52787E+03

Slope: 5.89894E+00

Quadrature: -2.65745E-05

SAMPLE IDENTIITY: H7DXM1AA

TITLE : TH BRC

DETECTOR : ALP171 8
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXM1AA_130760535H.CN
F;1
ACQUIRE DATE of BACKGROUND: 09-JUL-2006 10:13:03

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 05:35:51 CALIB DATE : 07-JUL-2006 02:11:05

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3527.87 keV CONSTANT FWHM : 7.33333 Channels
SLOPE : 5.89894 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.265745E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXM1AA

Detector: ALP171 8
Report Date: 13-Jul-06 01:57 PM
Acquire Date: 13-JUL-2006 05:35:51.64
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	73	0	0	0.146	5138.4	135.4	243	266	0.00	0.00	P
PO-209	493	1	0	0.986	4906.7	270.8	210	256	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5327.9	270.6	288	334	0.00	0.00	M
AC-227	-9999	-9999	0	-10.010	6061.6	270.3	413	459	0.00	0.00	S I
TH-227	-9999	-9999	0	-10.010	6061.6	270.3	413	459	0.00	0.00	S I
TH-228	-9999	-9999	0	-10.010	5446.7	270.5	308	354	0.00	0.00	M
TH-229	493	1	0	0.986	4868.8	270.8	210	256	0.00	0.00	P
TH-230	-9999	-9999	0	-10.010	4711.2	270.8	183	229	0.00	0.00	M I
TH-232	1	3	0	-0.001	4036.5	271.1	69	115	0.00	0.00	S
U-232	-9999	-9999	0	-10.010	5343.7	270.6	291	337	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4798.1	270.8	198	244	0.00	0.00	M I
U-235	0	3	0	-0.003	4421.3	271.0	134	180	0.00	0.00	S
PU-236	22	31	39	0.012	5791.2	270.4	367	413	0.00	0.00	S
NP-237	-9999	-9999	0	-10.010	4811.5	270.8	200	246	0.00	0.00	M I
PU-238	-9999	-9999	0	-10.010	5522.6	270.5	321	367	0.00	0.00	M
U-238	-9999	-9999	0	-10.010	4221.5	271.1	100	146	0.00	0.00	M
PU-239	-9999	-9999	0	-10.010	5180.1	270.7	263	309	0.00	0.00	M I
AM-241	-9999	-9999	0	-10.010	5509.1	270.5	319	365	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5230.3	270.6	271	317	0.00	0.00	M
CM-242	4	7	0	0.001	6136.3	35.3	443	449	0.00	0.00	P
PU-242	493	1	0	0.986	4924.0	270.8	210	256	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5298.8	270.6	283	329	0.00	0.00	M
CM-244	-9999	-9999	0	-10.010	5828.4	270.4	373	419	0.00	0.00	M
CM-246	-9999	-9999	0	-10.010	5410.0	270.6	302	348	0.00	0.00	M
CM-247	493	1	0	0.986	4893.9	270.8	210	256	0.00	0.00	P
CM-248	73	0	0	0.146	5102.1	135.4	243	266	0.00	0.00	P

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXM1AA
Detector: ALP171 8
Report Date: 13-Jul-06 01:57 PM
Acquire Date: 13-JUL-2006 05:35:51.64

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	@	101	0	+	151	0	@	201	7	@	251	0	@	301	1	@	351	0	@	401
		2	0		52	0	@	102	0	+	152	0	@	202	7	@	252	1	-	302	0	@	352	0	@	402
0		3	0		53	0	@	103	0	+	153	0	@	203	7	@	253	0	@	303	0	@	353	0	@	403
0		4	0		54	0	@	104	0	+	154	0	@	204	6	@	254	0	@	304	0	@	354	0	@	404
0		5	0		55	0	@	105	0	+	155	1	@	205	4	@	255	0	@	305	0	@	355	0	@	405
0		6	0		56	0	@	106	0	+	156	1	@	206	4	@	256	0	@	306	0	@	356	0	@	406
0		7	0		57	0	@	107	0	+	157	0	@	207	4	@	257	0	@	307	0	@	357	0	@	407
0		8	0		58	0	@	108	0	+	158	0	@	208	9	@	258	0	@	308	0	@	358	0	@	408
0		9	0		59	0	@	109	0	+	159	1	@	209	8	@	259	0	@	309	0	@	359	0	@	409
0		10	0		60	0	@	110	0	+	160	5	@	210	11	@	260	0	@	310	1	@	360	0	@	410
0		11	0		61	0	@	111	0	+	161	0	@	211	11	@	261	0	@	311	0	@	361	0	@	411
0		12	0		62	0	@	112	0	+	162	3	@	212	7	@	262	0	@	312	0	@	362	0	@	412
0		13	0		63	0	@	113	0	+	163	5	@	213	0	@	263	0	@	313	0	@	363	0	@	413
0		14	0		64	0	@	114	0	+	164	3	@	214	1	@	264	0	@	314	0	@	364	0	@	414
0		15	0		65	0	@	115	0	+	165	1	@	215	1	@	265	0	@	315	2	@	365	0	@	415
0		16	0		66	0	-	116	0	+	166	1	@	216	0	+	266	0	@	316	1	+	366	0	@	416
0		17	0		67	0	-	117	0	+	167	5	@	217	0	+	267	1	@	317	1	@	367	0	@	417
0		18	0		68	1	-	118	0	+	168	5	@	218	0	+	268	0	@	318	0	+	368	0	@	418
0		19	0	+	69	0	-	119	0	+	169	12	@	219	0	+	269	0	@	319	0	+	369	0	@	419
0		20	0	+	70	0	-	120	0	+	170	5	@	220	0	+	270	0	@	320	1	+	370	0	@	420
0		21	0	+	71	0	-	121	0	+	171	14	@	221	0	@	271	0	@	321	0	+	371	1	@	421
0		22	0	+	72	0	-	122	0	+	172	12	@	222	0	@	272	1	@	322	0	+	372	0	@	422
0		23	0	+	73	0	-	123	0	+	173	20	@	223	0	@	273	0	@	323	1	@	373	0	@	423
0		24	0	+	74	0	-	124	0	+	174	32	@	224	0	@	274	1	@	324	0	@	374	1	@	424
0		25	1	+	75	0	-	125	0	+	175	28	@	225	0	@	275	0	@	325	0	@	375	0	@	425
0		26	0	+	76	0	-	126	0	+	176	18	@	226	0	@	276	0	@	326	0	@	376	0	@	426
0		27	0	+	77	0	-	127	0	+	177	19	@	227	0	@	277	0	@	327	1	@	377	0	@	427
0		28	0	+	78	0	-	128	0	+	178	32	@	228	0	@	278	0	@	328	1	@	378	1	@	428
0		29	0	+	79	0	-	129	0	+	179	24	@	229	0	@	279	0	@	329	0	@	379	0	@	429
0		30	0	+	80	0	-	130	0	+	180	18	@	230	0	@	280	0	@	330	2	@	380	0	@	430
0		31	0	+	81	0	-	131	0		181	17	@	231	0	@	281	0	@	331	1	@	381	1	@	431
0		32	0	+	82	0	-	132	0		182	18	@	232	0	@	282	0	@	332	0	@	382	0	@	432
0		33	0	+	83	0	-	133	0	+	183	13	@	233	0	-	283	0	@	333	1	@	383	2	@	433
0		34	0	+	84	0	@	134	0	+	184	15	@	234	0	@	284	0	@	334	2	@	384	0	@	434
0		35	0	+	85	0	@	135	0	+	185	9	@	235	0	@	285	0	@	335	0	@	385	0	@	435
0		36	0	+	86	0	@	136	0	+	186	17	@	236	0	@	286	0	@	336	1	@	386	0	@	436
0		37	0	+	87	0	@	137	0	+	187	12	@	237	0	@	287	0	@	337	1	@	387	0	@	437
0		38	0	+	88	0	@	138	0	+	188	13	@	238	0	@	288	0	@	338	1	@	388	1	@	438
0		39	0	+	89	0	@	139	0	+	189	11	@	239	0	@	289	0	@	339	2	@	389	0	@	439
0		40	0	+	90	0	@	140	0	+	190	10	@	240	0	@	290	0	@	340	3	@	390	0	@	440
0		41	0	+	91	0	@	141	0	+	191	9	@	241	0	@	291	0	@	341	4	@	391	1	@	441
0		42	0	+	92	0	@	142	0	+	192	10	@	242	0	@	292	0	@	342	2	@	392	0	@	442
0		43	0	+	93	0	@	143	0	+	193	12	-	243	0	@	293	0	@	343	2	@	393	0	-	443
0		44	0	+	94	0	@	144	0	+	194	11	@	244	0	@	294	0	@	344	3	@	394	0	@	444
0		45	0	+	95	0	@	145	0	+	195	7	@	245	0	@	295	0	@	345	1	@	395	3	@	445
0		46	0	+	96	0	@	146	0	+	196	8	@	246	0	@	296	0	@	346	5	@	396	1	@	446
0		47	0	+	97	0	+	147	0	+	197	13	@	247	1	@	297	0	@	347	3	@	397	0	@	447
0		48	0	+	98	0	+	148	0	@	198	4	@	248	0	@	298	0	@	348	1	@	398	1	@	448
0		49	0	+	99	0	+	149	1	@	199	4	@	249	0	@	299	0	@	349	1	@	399	0	@	449
0		50	0	@	100	0	+	150	0	-	200	5	@	250	0	@	300	0	@	350	0	@	400	1	@	450

Cnt	F	Chn	Cnt	F	Chn
0		451	0		501
0		452	0		502
0		453	0		503
0		454	0		504
0		455	0		505
0		456	0		506
0		457	0		507
0		458	0		508
1	@	459	0		509
0		460	0		510
0		461	1		511
0		462	0		512
0		463			
0		464			
0		465			
0		466			
0		467			
0		468			
0		469			
0		470			
0		471			
2		472			
0		473			
0		474			
1		475			
1		476			
0		477			
1		478			
1		479			
4		480			
6		481			
4		482			
3		483			
2		484			
4		485			
2		486			
0		487			
0		488			
0		489			
0		490			
0		491			
0		492			
0		493			
0		494			
0		495			
0		496			
0		497			
0		498			
0		499			
0		500			

VMS Peak Search Report V1.9 Generated 13-JUL-2006 13:57:05

Configuration : $DISK1:[ALP171.SAMPLE]H7DXM1AA_130760535H.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 05:35:51
Sample ID : H7DXM1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3545.57 keV End energy : 6541.16 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4868.84	493	0	76.69	227.56	210	46	1.65E-02	4.5	
2	0	5059.52	73	0	29.49	259.95	243	23	2.44E-03	11.7	
3	0	5680.38	4	0	23.60	365.50	363	6	1.33E-04	50.0	
4	0	6150.57	4	0	23.60	445.50	443	6	1.33E-04	50.0	
5	0	6366.52	30	0	35.39	482.26	475	14	1.00E-03	18.3	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 13:57:08

Configuration	: $DISK1:[ALP171.SAMPLE]H7DXM1AA_130760535H.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.3		
Sample title	: TH BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 13-JUL-2006 05:35:51
Sample ID	: H7DXM1AA	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP171 1	Detector geometry	:
Elapsed live time	: 0 08:19:28.00	Elapsed real time	: 0 08:19:28.00 0.0%
Energy tolerance	: 80.00 keV	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 70.00		

Summary of Nuclide Activity

Total number of lines in spectrum	5	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	3	60.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-208	2.90Y	1.03	0.000E+00	0.000E+00	0.000E+00	0.00	
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-242	162.80D	1.24	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-248	3.39E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXM1AA_130760535H.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4868.84	210	256	493	515	-0.99		
5059.51	243	266	73	151	-9.13	99	-0.04
5680.38	363	369	4	4	0.00		
6150.57	443	449	4	5	-0.50		
6366.51	475	489	30	29	0.18		

End of Report

SEVERN TRENT **STL**

THORIUM ISOTOPIC COUNTING REQUEST

2305

C.R. Technician: OR
Date Counted: 7/13/06
C.R. Analyst: OR
Date Analyzed: 7/14/06

Counting Time
Sample: 500 Minutes

Background: See Alpha Analysis Report
BRC 5/24/06 6167182

SOP's
Operating: RICHRD008
Review: RICHRD0016

WorkOrder #	Th-229 (4845 KeV) Tracer from Th-234 Beta Count (7)				TOTAL COUNTS			Det #	Comment
					Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)		
H7DXP1AA		10		0	See Alpha Analysis Report for ROI Information			171	
H7DXQ1AA		10		0	See Alpha Analysis Report for ROI Information			172	
H7DXV1AA		10		0	See Alpha Analysis Report for ROI Information			173	
H7DX01AA		10		0	See Alpha Analysis Report for ROI Information			174	
H7JP21AA		10		0	See Alpha Analysis Report for ROI Information			175	
H7JP21AC		10		0	See Alpha Analysis Report for ROI Information			176	
		10		0	See Alpha Analysis Report for ROI Information				
		10		0	See Alpha Analysis Report for ROI Information				
		10		0	See Alpha Analysis Report for ROI Information				

Comments:

Form No: RC-012, 10/02, Rev 9

Approved by: OR

Date: 7/14/06

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXP1AA

Detector: ALP171 1
Report Date: 14-Jul-06 01:17 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	12	6	0.018	5423.2	116.4	317	337
TH-229	604	4	1.205	4845.3	349.0	217	277
TH-230	9	1	0.017	4687.7	127.9	190	212
TH-232	3	0	0.006	4013.0	116.2	74	94

End of Alpha Region Report
(Produced by ANAL Report)

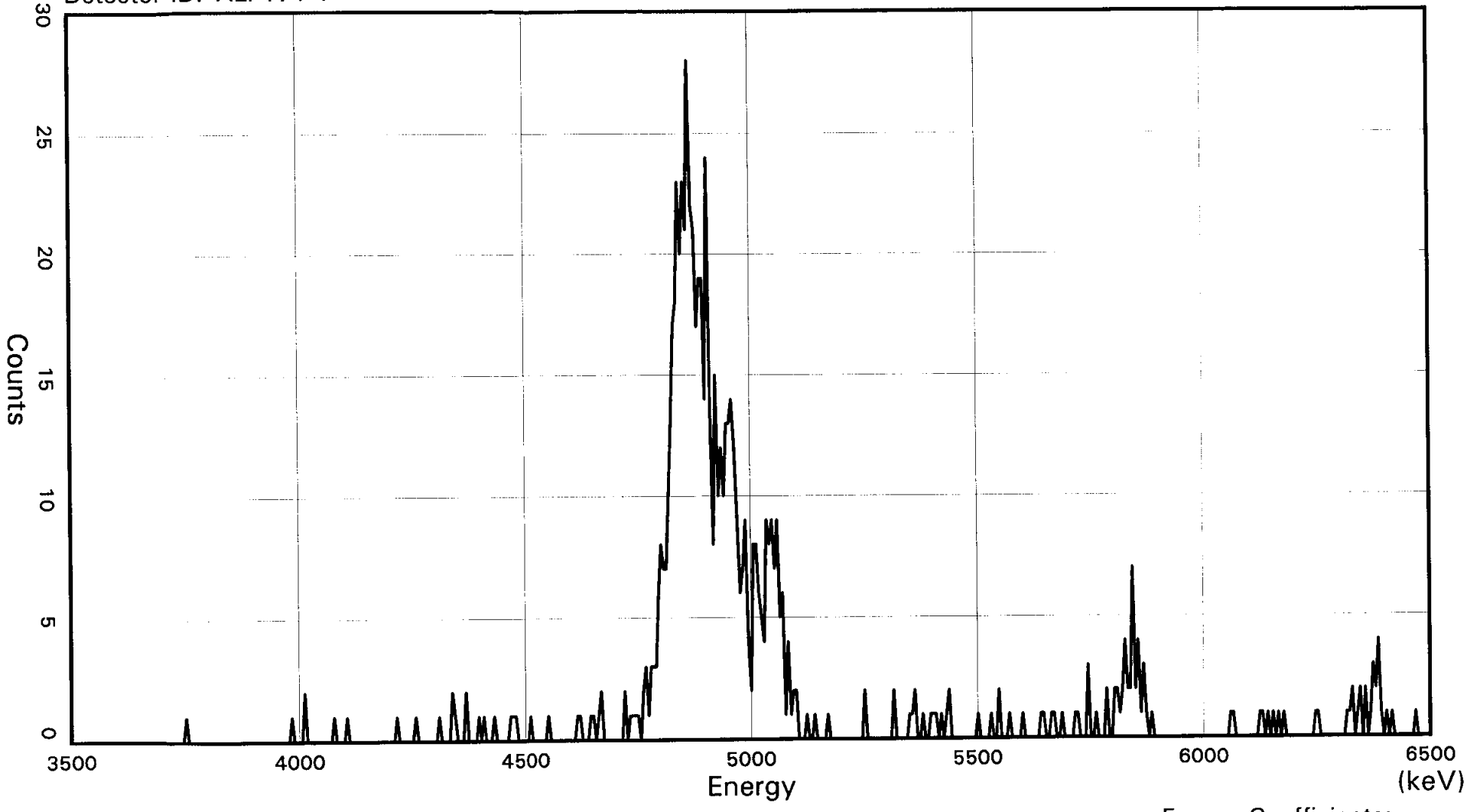
STL Richland WA.

TH BRC

Sample ID: H7DXP1AA

Detector ID: ALP171 1

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 14:45:57.89

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.49560E+03

Slope: 5.80529E+00

Quadrature: 2.24502E-05

SAMPLE IDENTIITY: H7DXP1AA

TITLE : TH BRC

DETECTOR : ALP171 1
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXP1AA_130761445A.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 14:45:57 CALIB DATE : 07-JUL-2006 02:08:58

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3495.60 keV CONSTANT FWHM : 8.83333 Channels
SLOPE : 5.80529 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 2.245020E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Spectrum Listing
for Spectra Not Processed by Alp_rgn_cnts
(Version: 29-Jun-92)

Sample Identity: H7DXP1AA
Detector: ALP171 1
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	1		201	13		251	0		301	0		351	4		401	0		451	0		501
		2	0		52	0		102	0		152	2		202	14		252	2		302	0		352	2		402	1		452	1		502
0		3	0		53	0		103	0		153	0		203	12		253	0		303	2		353	2		403	1		453	0		503
0		4	0		54	0		104	0		154	0		204	9		254	0		304	0		354	7		404	0		454	0		504
0		5	0		55	1		105	1		155	0		205	6		255	0		305	0		355	2		405	1		455	0		505
0		6	0		56	0		106	0		156	0		206	7		256	0		306	0		356	4		406	0		456	0		506
0		7	0		57	0		107	1		157	0		207	9		257	0		307	1		357	1		407	1		457	0		507
0		8	0		58	0		108	0		158	0		208	4		258	0		308	0		358	3		408	0		458	0		508
0		9	0		59	0		109	0		159	0		209	2		259	0		309	0		359	1		409	1		459	0		509
0		10	0		60	0		110	0		160	0		210	8		260	0		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	1		161	2		211	8		261	0		311	0		361	1		411	1		461	1		511
0		12	0		62	0		112	0		162	0		212	6		262	0		312	1		362	0		412	0		462	0		512
0		13	0		63	0		113	0		163	1		213	5		263	2		313	0		363	0		413	0		463			
0		14	0		64	0		114	0		164	1		214	4		264	0		314	0		364	0		414	0		464			
0		15	0		65	0		115	0		165	1		215	9		265	0		315	0		365	0		415	0		465			
0		16	0		66	0		116	0		166	1		216	8		266	0		316	0		366	0		416	0		466			
0		17	0		67	0		117	1		167	0		217	9		267	0		317	0		367	0		417	0		467			
0		18	0		68	0		118	1		168	2		218	7		268	0		318	0		368	0		418	0		468			
0		19	0		69	0		119	1		169	3		219	9		269	1		319	1		369	0		419	0		469			
0		20	0		70	0		120	0		170	1		220	5		270	1		320	1		370	0		420	0		470			
0		21	0		71	0		121	0		171	3		221	6		271	2		321	0		371	0		421	0		471			
0		22	0		72	0		122	0		172	3		222	1		272	0		322	0		372	0		422	0		472			
0		23	0		73	0		123	0		173	3		223	4		273	0		323	1		373	0		423	1		473			
0		24	0		74	1		124	0		174	6		224	1		274	1		324	1		374	0		424	1		474			
0		25	0		75	0		125	1		175	8		225	2		275	0		325	0		375	0		425	0		475			
0		26	0		76	0		126	0		176	7		226	2		276	0		326	0		376	0		426	0		476			
0		27	0		77	0		127	0		177	7		227	0		277	1		327	1		377	0		427	0		477			
0		28	0		78	0		128	0		178	10		228	0		278	1		328	0		378	0		428	0		478			
0		29	0		79	0		129	0		179	13		229	0		279	1		329	0		379	0		429	0		479			
0		30	0		80	0		130	0		180	17		230	1		280	0		330	0		380	0		430	0		480			
0		31	0		81	1		131	0		181	18		231	0		281	1		331	0		381	0		431	0		481			
0		32	0		82	0		132	1		182	23		232	0		282	0		332	1		382	0		432	0		482			
0		33	0		83	0		133	0		183	20		233	1		283	1		333	1		383	0		433	0		483			
0		34	1		84	0		134	0		184	23		234	0		284	2		334	0		384	0		434	0		484			
0		35	0		85	0		135	0		185	21		235	0		285	0		335	0		385	0		435	1		485			
0		36	0		86	0		136	0		186	28		236	0		286	0		336	0		386	0		436	1		486			
0		37	0		87	0		137	0		187	22		237	0		287	0		337	3		387	0		437	2		487			
0		38	0		88	0		138	0		188	21		238	1		288	0		338	0		388	0		438	0		488			
0		39	2		89	0		139	0		189	17		239	0		289	0		339	0		389	0		439	1		489			
0		40	0		90	1		140	0		190	19		240	0		290	0		340	1		390	0		440	2		490			
0		41	0		91	0		141	0		191	19		241	0		291	0		341	0		391	1		441	0		491			
0		42	0		92	0		142	0		192	14		242	0		292	0		342	0		392	1		442	2		492			
0		43	0		93	0		143	1		193	24		243	0		293	0		343	0		393	0		443	0		493			
1		44	0		94	0		144	1		194	14		244	0		294	0		344	2		394	0		444	1		494			
0		45	0		95	2		145	0		195	8		245	0		295	1		345	0		395	0		445	3		495			
0		46	0		96	1		146	0		196	15		246	0		296	0		346	0		396	0		446	2		496			
0		47	0		97	0		147	0		197	10		247	0		297	0		347	2		397	0		447	4		497			
0		48	0		98	0		148	1		198	12		248	0		298	0		348	2		398	0		448	1		498			
0		49	0		99	0		149	1		199	10		249	0		299	0		349	1		399	0		449	0		499			

0 50 1 100 2 150 0 200 13 250 0 300 1 350 2 400 0 450 1 500

VMS Peak Search Report V1.9 Generated 13-JUL-2006 23:06:30

Configuration	: $DISK1:[ALP171.SAMPLE]H7DXP1AA_130761445A.CNF;1		
Analyses by	: ALPHA V1.8		
Sample title	: TH BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 13-JUL-2006 14:45:57
Sample ID	: H7DXP1AA	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP171 1	Detector geometry	:
Elapsed live time	: 0 08:19:28.00	Elapsed real time	: 0 08:19:28.00 0.0%
Start energy	: 3513.01 keV	End energy	: 6473.79 keV
Sensitivity	: 3.00	Sum Sensitivity	: 1.00

No peaks were found

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 23:06:33

Configuration	: $DISK1:[ALP171.SAMPLE]H7DXP1AA_130761445A.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.3		
Sample title	: TH BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 13-JUL-2006 14:45:57
Sample ID	: H7DXP1AA	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP171 1	Detector geometry	:
Elapsed live time	: 0 08:19:28.00	Elapsed real time	: 0 08:19:28.00 0.0%
Energy tolerance	: 80.00 keV	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 70.00		

Summary of Nuclide Activity

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Error Report (Date: 13-Jul-06 11:06 PM)

Program: Alp_rgn_cnts
subroutine: Main
Message: No trace pk or nucl
Record being processed: 7

System Status Message:

%NONAME-W-NOMSG, Message number 00000000

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXQ1AA

Detector: ALP171 2
Report Date: 14-Jul-06 01:19 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	4	6	0.002	5423.2	124.1	320	342
TH-229	426	6	0.847	4845.3	344.3	217	278
TH-230	33	1	0.065	4687.7	163.7	185	214
TH-232	0	2	-0.002	4013.0	113.1	70	90

End of Alpha Region Report
(Produced by ANAL Report)

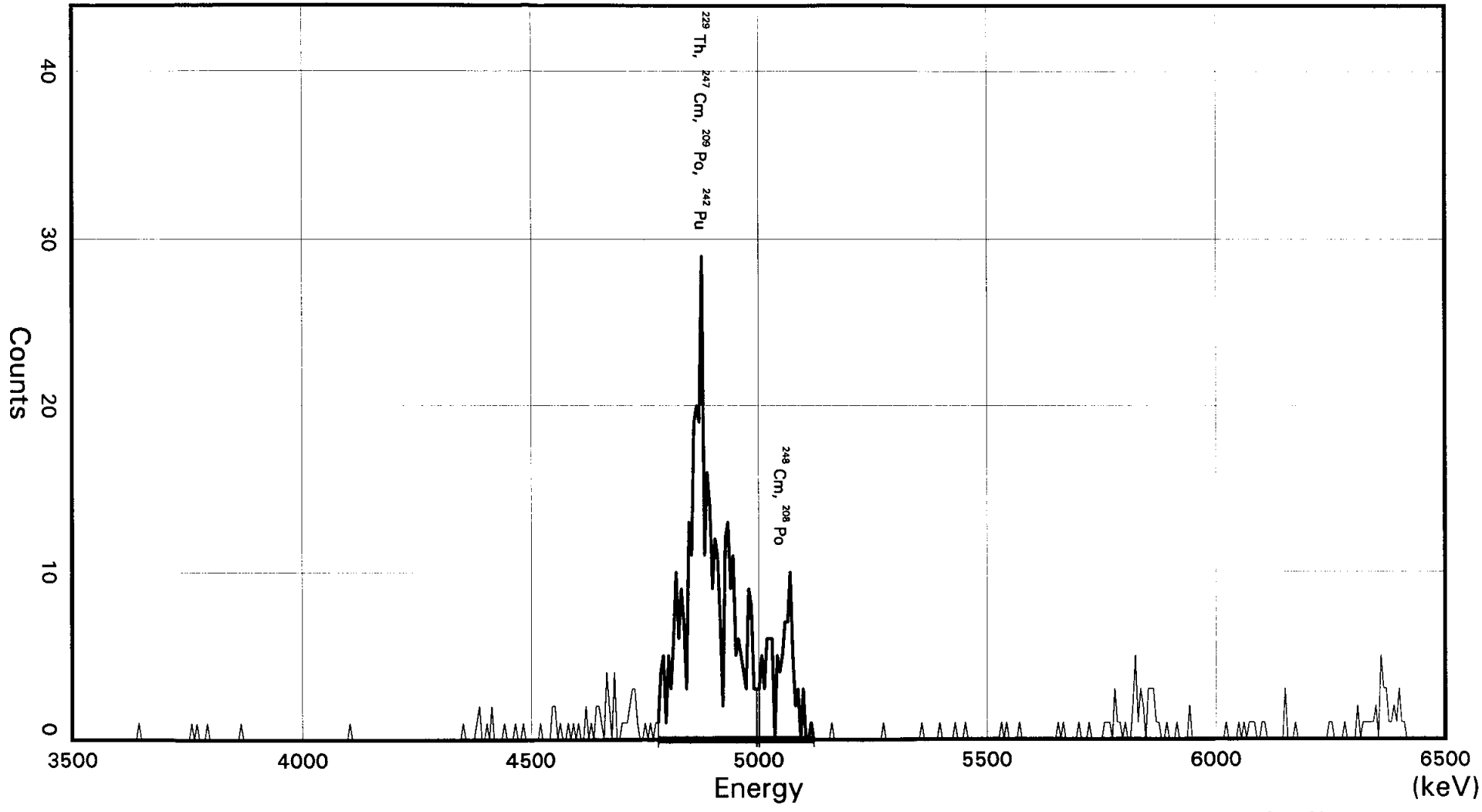
STL Richland WA.

TH BRC

Sample ID: H7DXQ1AA

Detector ID: ALP171 2

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 14:45:57.89

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.53196E+03

Slope: 5.65669E+00

Quadrature: -2.57851E-05

SAMPLE IDENTIITY: H7DXQ1AA

TITLE : TH BRC

DETECTOR : ALP171 2
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXQ1AA_130761445B.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 14-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 14:45:57 CALIB DATE : 07-JUL-2006 02:09:12

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3531.96 keV CONSTANT FWHM : 10.16670 Channels
SLOPE : 5.65669 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.257851E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXQ1AA

Detector: ALP171 2
Report Date: 14-Jul-06 07:31 AM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	75	2	0	0.148	5145.2	124.1	259	281	0.00	0.00	P
PO-209	346	4	0	0.689	4913.5	220.1	221	260	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5334.7	220.0	302	341	0.00	0.00	M
AC-227	7	3	11	0.010	6068.3	225.3	432	472	0.00	0.00	S
TH-227	7	3	11	0.010	6068.3	225.3	432	472	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5453.5	219.9	323	362	0.00	0.00	M
TH-229	346	4	0	0.689	4875.6	220.1	221	260	0.00	0.00	P
TH-230	-9999	-9999	0	-10.010	4718.0	220.2	193	232	0.00	0.00	M I
TH-232	1	1	0	0.001	4043.3	220.4	74	113	0.00	0.00	S
U-232	-9999	-9999	0	-10.010	5350.5	220.0	305	344	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4804.9	220.2	208	247	0.00	0.00	M I
U-235	15	1	1	0.028	4428.1	220.3	142	181	0.00	0.00	S
PU-236	19	40	35	-0.003	5797.9	219.8	385	424	0.00	0.00	S
NP-237	-9999	-9999	0	-10.010	4818.3	220.1	211	250	0.00	0.00	M I
PU-238	-9999	-9999	0	-10.010	5529.3	219.9	337	376	0.00	0.00	M
U-238	-9999	-9999	0	-10.010	4228.3	220.4	106	145	0.00	0.00	M
PU-239	-9999	-9999	0	-10.010	5186.9	220.0	276	315	0.00	0.00	M I
AM-241	-9999	-9999	0	-10.010	5515.9	225.5	334	374	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5237.1	220.0	285	324	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6143.0	219.7	446	485	0.00	0.00	M
PU-242	346	4	0	0.689	4930.8	220.1	221	260	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5305.6	220.0	297	336	0.00	0.00	M
CM-244	20	33	35	0.007	5835.1	219.8	391	430	0.00	0.00	S
CM-246	-9999	-9999	0	-10.010	5416.8	219.9	317	356	0.00	0.00	M
CM-247	346	4	0	0.689	4900.7	220.1	221	260	0.00	0.00	P
CM-248	75	2	0	0.148	5108.9	124.1	259	281	0.00	0.00	P

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXQ1AA
Detector: ALP171 2
Report Date: 14-Jul-06 07:31 AM
Acquire Date: 13-JUL-2006 14:45:57.89

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	1	+	101	2	+	151	4	+	201	5	@	251	0	@	301	0	@	351	0	@	401
		2	0		52	0	+	102	0	+	152	2	+	202	6	@	252	0	@	302	0	@	352	1	@	402
0		3	0		53	0	+	103	0	+	153	0	+	203	5	@	253	0	@	303	0	@	353	0	@	403
0		4	0		54	0	+	104	1	+	154	4	+	204	4	@	254	0	@	304	1	@	354	0	@	404
0		5	0		55	0	+	105	0	+	155	0	+	205	3	@	255	0	@	305	0	@	355	2	@	405
0		6	0		56	0	@	106	2	+	156	0	+	206	9	@	256	0	@	306	1	@	356	5	@	406
0		7	0		57	0	@	107	0	+	157	1	+	207	8	@	257	0	@	307	0	@	357	1	@	407
0		8	0		58	0	@	108	0	+	158	1	@	208	3	@	258	1	@	308	0	@	358	3	@	408
0		9	1		59	0	@	109	0	+	159	1	@	209	3	-	259	0	@	309	0	@	359	2	@	409
0		10	0		60	0	@	110	0	+	160	2	@	210	3	@	260	0	@	310	0	@	360	0	@	410
0		11	0		61	0	@	111	1	+	161	3	-	211	5	@	261	0	@	311	1	@	361	3	@	411
0		12	0		62	0	@	112	0	+	162	3	@	212	3	@	262	0	@	312	0	@	362	3	@	412
0		13	0		63	0	@	113	0	+	163	1	@	213	6	@	263	0	@	313	0	@	363	3	@	413
0		14	0		64	0	-	114	0	+	164	0	@	214	6	@	264	0	@	314	0	@	364	1	@	414
0		15	0		65	0	-	115	1	+	165	0	@	215	6	@	265	0	@	315	0	@	365	1	@	415
0		16	0		66	0	-	116	0	+	166	1	@	216	0	@	266	0	@	316	0	@	366	0	@	416
0		17	0		67	0	-	117	0	+	167	0	@	217	5	@	267	0	-	317	0	@	367	0	@	417
0		18	0		68	0	-	118	1	+	168	1	@	218	4	@	268	0	@	318	0	@	368	1	@	418
0		19	0		69	0	-	119	0	+	169	0	@	219	5	@	269	0	@	319	0	@	369	0	@	419
1		20	0		70	0	-	120	0	+	170	1	@	220	7	@	270	0	@	320	0	@	370	0	@	420
0		21	0		71	0	-	121	0	+	171	1	@	221	7	@	271	0	@	321	0	@	371	0	@	421
0		22	0		72	0	-	122	0	+	172	4	@	222	10	@	272	0	@	322	0	@	372	1	@	422
0		23	0		73	0	-	123	0	+	173	5	@	223	5	@	273	1	@	323	0	@	373	0	@	423
0		24	0	+	74	0	-	124	0	+	174	1	@	224	2	@	274	0	@	324	0	@	374	0	@	424
0		25	0	+	75	0	-	125	1	+	175	5	@	225	3	@	275	0	@	325	0	+	375	0	-	425
0		26	0	+	76	0	-	126	0	+	176	3	@	226	0	@	276	0	@	326	1	+	376	0	-	426
0		27	0	+	77	0	-	127	0	+	177	6	@	227	3	@	277	0	@	327	0		377	2	-	427
0		28	0	+	78	0	-	128	0	+	178	10	@	228	0	@	278	0	@	328	1		378	0	-	428
0		29	0	+	79	0	-	129	0	+	179	6	@	229	0	@	279	0	@	329	0		379	0	-	429
0		30	0	+	80	0	-	130	2	+	180	9	@	230	1	@	280	1	@	330	0		380	0	-	430
0		31	0	+	81	0	-	131	2	+	181	7	@	231	0	+	281	0	@	331	0		381	0		431
0		32	0	+	82	0	-	132	0		182	3	@	232	0	+	282	0	@	332	0		382	0	@	432
0		33	0	+	83	0	-	133	1		183	13	@	233	0	+	283	0	@	333	0		383	0	@	433
0		34	0	+	84	0	-	134	0		184	11	@	234	0	+	284	0	@	334	1		384	0	@	434
0		35	0	+	85	0	-	135	0		185	19	@	235	0	@	285	0	@	335	0	+	385	0	@	435
0		36	0	+	86	0	-	136	1		186	20	@	236	0	@	286	1	@	336	0	+	386	0	@	436
0		37	0	+	87	0	-	137	0		187	19	@	237	0	@	287	0	@	337	0	+	387	0	@	437
0		38	0	+	88	0	-	138	1		188	29	@	238	1	@	288	0	@	338	1	+	388	0	@	438
0		39	0	+	89	0	-	139	0		189	11	@	239	0	@	289	0	@	339	0	+	389	0	@	439
1		40	0	+	90	0	-	140	1		190	16	@	240	0	@	290	1	@	340	0	+	390	0	@	440
0		41	0	+	91	0	-	141	0		191	14	@	241	0	@	291	0	@	341	0	@	391	1	@	441
1		42	0	+	92	0	@	142	0		192	9	@	242	0	@	292	0	@	342	0	@	392	0	@	442
0		43	0	+	93	0	@	143	2	+	193	12	@	243	0	@	293	0	@	343	0	@	393	0	@	443
0		44	0	+	94	0	@	144	0	+	194	11	@	244	0	@	294	0	@	344	1	@	394	0	@	444
0		45	0	+	95	1	@	145	1	+	195	7	@	245	0	@	295	0	@	345	1	@	395	0	@	445
1		46	0	+	96	0	+	146	0	+	196	2	@	246	0	@	296	0	@	346	1	@	396	1	-	446
0		47	0	+	97	0	+	147	2	+	197	12	@	247	0	-	297	0	@	347	0	@	397	0	@	447
0		48	0	+	98	0	+	148	2	+	198	13	@	248	0	@	298	0	@	348	3	@	398	1	@	448
0		49	0	+	99	0	+	149	1	+	199	9	@	249	0	@	299	0	@	349	1	@	399	0	@	449
0		50	0	+	100	1	+	150	0	+	200	11	@	250	0	@	300	0	@	350	1	@	400	1	@	450

Cnt	F	Chn
5		501
3		502
3		503
1		504
1		505
2		506
1		507
3		508
1		509
1		510
0		511
0		512

VMS Peak Search Report V1.9 Generated 14-JUL-2006 07:31:55

Configuration : $DISK1:[ALP171.SAMPLE]H7DXQ1AA_130761445B.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7DXQ1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3548.93 keV End energy : 6421.43 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4875.58	346	0	50.91	237.79	221	39	1.15E-02	5.4	
2	0	5047.64	75	0	73.54	268.27	259	22	2.50E-03	11.5	

VMS Nuclide Identification Report V3.0 Generated 14-JUL-2006 07:31:58

Configuration : $DISK1:[ALP171.SAMPLE]H7DXQ1AA_130761445B.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7DXQ1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 2
Number of unidentified lines 0
Number of lines tentatively identified by NID 2 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-208	2.90Y	1.03	0.000E+00	0.000E+00	0.000E+00	0.00	
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-248	3.39E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DXQ1AA_130761445B.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4875.58	221	260	346	347	-0.05		
5047.64	259	281	75	84	-1.04	6	-0.19

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DXV1AA

Detector: ALP171 3
Report Date: 14-Jul-06 01:20 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	0	1	-0.001	5423.2	119.3	309	329
TH-229	182	2	0.362	4845.3	387.8	210	275
TH-230	3	0	0.006	4687.7	119.4	185	205
TH-232	0	0	0.000	4013.0	119.5	72	92

End of Alpha Region Report
(Produced by ANAL Report)

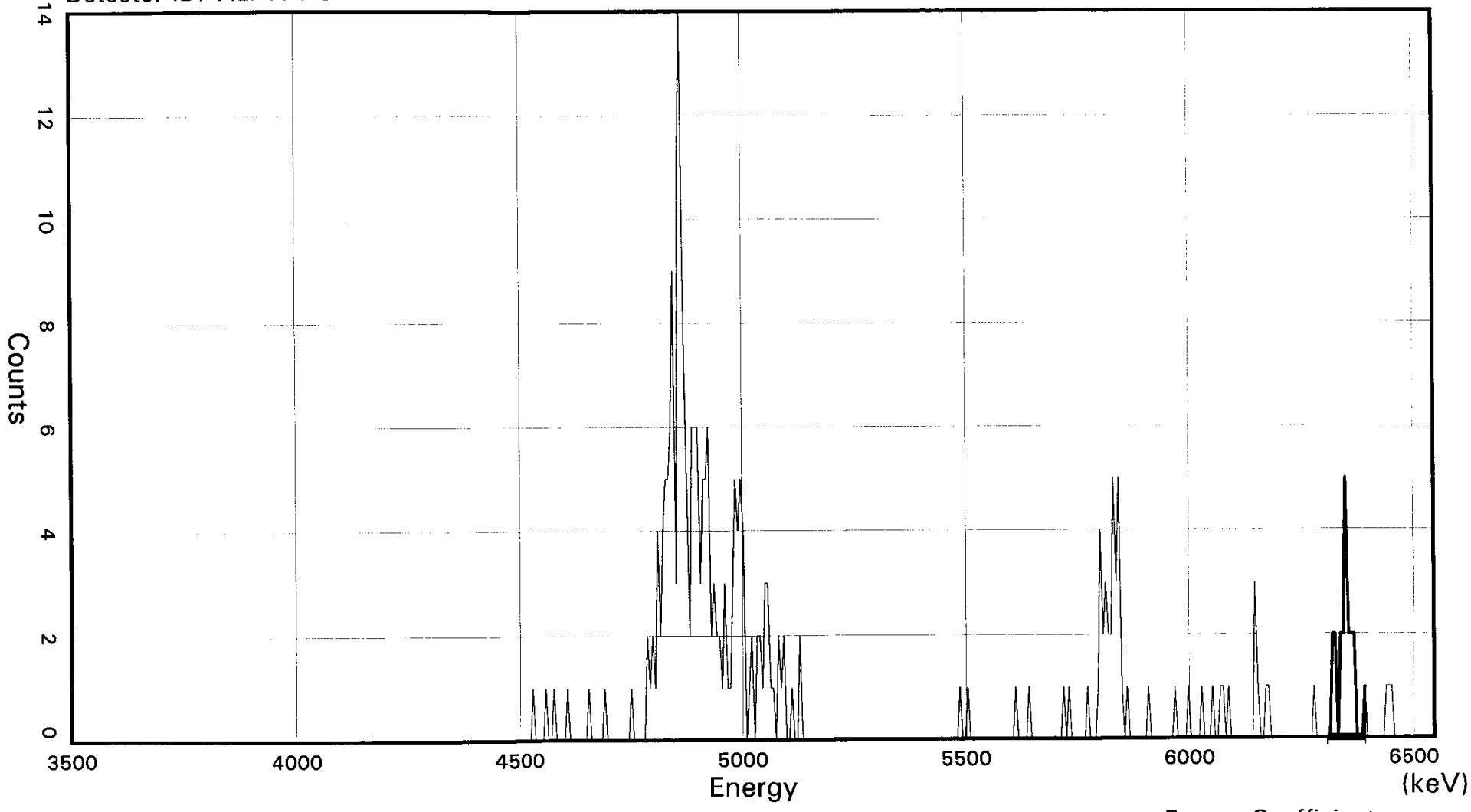
STL Richland WA.

TH BRC

Sample ID: H7DXV1AA

Detector ID: ALP171 3

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 14:45:57.89

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.49135E+03

Slope: 5.98005E+00

Quadrature: -2.72507E-05

SAMPLE IDENTIITY: H7DXV1AA

TITLE : TH BRC

DETECTOR : ALP171 3
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DXV1AA_130761445C.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 14:45:57 CALIB DATE : 07-JUL-2006 02:09:29

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3491.35 keV CONSTANT FWHM : 8.83333 Channels
SLOPE : 5.98005 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.272507E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Spectrum Listing
for Spectra Not Processed by Alp_rgn_cnts
(Version: 29-Jun-92)

Sample Identity: H7DXV1AA
Detector: ALP171 3
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	1		201	4		251	0		301	0		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0		202	5		252	0		302	0		352	0		402	0		452	0		502
	0	3	0		53	0		103	0		153	0		203	4		253	0		303	0		353	0		403	0		453	0		503
	0	4	0		54	0		104	0		154	0		204	0		254	0		304	0		354	0		404	0		454	0		504
	0	5	0		55	0		105	0		155	0		205	1		255	0		305	1		355	1		405	0		455	0		505
	0	6	0		56	0		106	0		156	0		206	2		256	0		306	0		356	0		406	0		456	0		506
	0	7	0		57	0		107	0		157	0		207	0		257	0		307	0		357	0		407	0		457	0		507
	0	8	0		58	0		108	0		158	0		208	2		258	0		308	0		358	0		408	0		458	0		508
	0	9	0		59	0		109	0		159	0		209	2		259	0		309	0		359	0		409	0		459	0		509
	0	10	0		60	0		110	0		160	0		210	1		260	0		310	1		360	0		410	0		460	0		510
	0	11	0		61	0		111	0		161	1		211	3		261	0		311	0		361	0		411	0		461	0		511
	0	12	0		62	0		112	0		162	0		212	3		262	0		312	0		362	0		412	0		462	0		512
	0	13	0		63	0		113	0		163	0		213	1		263	0		313	0		363	0		413	0		463			
	0	14	0		64	0		114	0		164	0		214	1		264	0		314	0		364	0		414	0		464			
	0	15	0		65	0		115	0		165	0		215	0		265	0		315	0		365	1		415	0		465			
	0	16	0		66	0		116	0		166	0		216	2		266	0		316	0		366	0		416	0		466			
	0	17	0		67	0		117	0		167	2		217	1		267	0		317	0		367	0		417	1		467			
	0	18	0		68	0		118	0		168	1		218	2		268	0		318	0		368	0		418	0		468			
	0	19	0		69	0		119	0		169	2		219	0		269	0		319	0		369	0		419	0		469			
	0	20	0		70	0		120	0		170	1		220	0		270	0		320	0		370	1		420	0		470			
	0	21	0		71	0		121	0		171	4		221	1		271	0		321	0		371	0		421	0		471			
	0	22	0		72	0		122	0		172	2		222	0		272	0		322	0		372	0		422	0		472			
	0	23	0		73	0		123	0		173	4		223	0		273	0		323	1		373	0		423	0		473			
	0	24	0		74	0		124	1		174	5		224	2		274	0		324	0		374	0		424	2		474			
	0	25	0		75	0		125	0		175	5		225	0		275	0		325	1		375	1		425	2		475			
	0	26	0		76	0		126	0		176	6		226	0		276	0		326	0		376	0		426	0		476			
	0	27	0		77	0		127	0		177	9		227	0		277	0		327	0		377	0		427	2		477			
	0	28	0		78	0		128	0		178	3		228	0		278	0		328	0		378	0		428	2		478			
	0	29	0		79	0		129	1		179	11		229	0		279	0		329	0		379	1		429	5		479			
	0	30	0		80	0		130	0		180	14		230	0		280	0		330	0		380	0		430	2		480			
	0	31	0		81	0		131	0		181	8		231	0		281	0		331	0		381	0		431	2		481			
	0	32	0		82	0		132	1		182	5		232	0		282	0		332	1		382	1		432	2		482			
	0	33	0		83	0		133	0		183	2		233	0		283	0		333	0		383	1		433	0		483			
	0	34	0		84	0		134	0		184	6		234	0		284	1		334	0		384	0		434	0		484			
	0	35	0		85	0		135	0		185	6		235	0		285	0		335	0		385	1		435	0		485			
	0	36	0		86	0		136	0		186	6		236	0		286	0		336	1		386	0		436	1		486			
	0	37	0		87	0		137	1		187	3		237	0		287	1		337	4		387	0		437	0		487			
	0	38	0		88	0		138	0		188	5		238	0		288	0		338	2		388	0		438	0		488			
	0	39	0		89	0		139	0		189	5		239	0		289	0		339	3		389	0		439	0		489			
	0	40	0		90	0		140	0		190	6		240	0		290	0		340	2		390	0		440	0		490			
	0	41	0		91	0		141	0		191	2		241	0		291	0		341	2		391	0		441	0		491			
	0	42	0		92	0		142	0		192	3		242	0		292	0		342	5		392	0		442	0		492			
	0	43	0		93	0		143	0		193	2		243	0		293	0		343	3		393	0		443	0		493			
	0	44	0		94	0		144	0		194	2		244	0		294	0		344	5		394	0		444	1		494			
	0	45	0		95	0		145	1		195	1		245	0		295	0		345	1		395	3		445	1		495			
	0	46	0		96	0		146	0		196	3		246	0		296	0		346	0		396	1		446	1		496			
	0	47	0		97	0		147	0		197	1		247	0		297	0		347	1		397	0		447	0		497			
	0	48	0		98	0		148	0		198	1		248	0		298	0		348	0		398	0		448	0		498			
	0	49	0		99	0		149	0		199	3		249	0		299	0		349	0		399	1		449	0		499			

0 50 0 100 0 150 0 200 5 250 0 300 0 350 0 400 1 450 0 500

VMS Peak Search Report V1.9 Generated 13-JUL-2006 23:06:38

Configuration : $DISK1:[ALP171.SAMPLE]H7DXV1AA_130761445C.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7DXV1AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3509.29 keV End energy : 6545.99 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	6347.42	19	0	35.88	478.64	472	14	6.34E-04	22.9	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 23:06:40

```
Configuration     : $DISK1:[ALP171.SAMPLE]H7DXV1AA_130761445C.CNF;1
Analyses by       : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title      : TH BRC
Sample date       : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID         : H7DXV1AA             Sample quantity  : 0.00000E+00 SAMPLE
Sample type       : disk                 Sample geometry  :
Detector name     : ALP171 1             Detector geometry:
Elapsed live time: 0 08:19:28.00         Elapsed real time: 0 08:19:28.00   0.0%
Energy tolerance :    80.00 keV          Half life ratio  :     1.00
Errors propagated: No                    Systematic Error :     0.00 %
Efficiency type  : Spline                Efficiencies at  : Peak Energy
Abundance limit  :    70.00
```

Summary of Nuclide Activity

```
 Total number of lines in spectrum                1
 Number of unidentified lines                     1
 Number of lines tentatively identified by NID    0        0.00%
**** There are no nuclides meeting summary criteria ****
```

```
Flags: "K" = Keyline not found          "M" = Manually accepted
       "E" = Manually edited            "A" = Nuclide specific abn. limit
```

Error Report (Date: 13-Jul-06 11:06 PM)

Program: Alp_rgn_cnts
subroutine: Main
Message: No trace pk or nucl
Record being processed: 7

System Status Message:

%NONAME-W-NOMSG, Message number 00000000

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7DX01AA

Detector: ALP171 4
Report Date: 14-Jul-06 01:21 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	3	0	0.006	5423.2	111.2	307	327
TH-229	520	3	1.038	4845.3	349.8	202	265
TH-230	4	0	0.008	4687.7	110.9	175	195
TH-232	0	0	0.000	4013.0	110.6	53	73

End of Alpha Region Report
(Produced by ANAL Report)

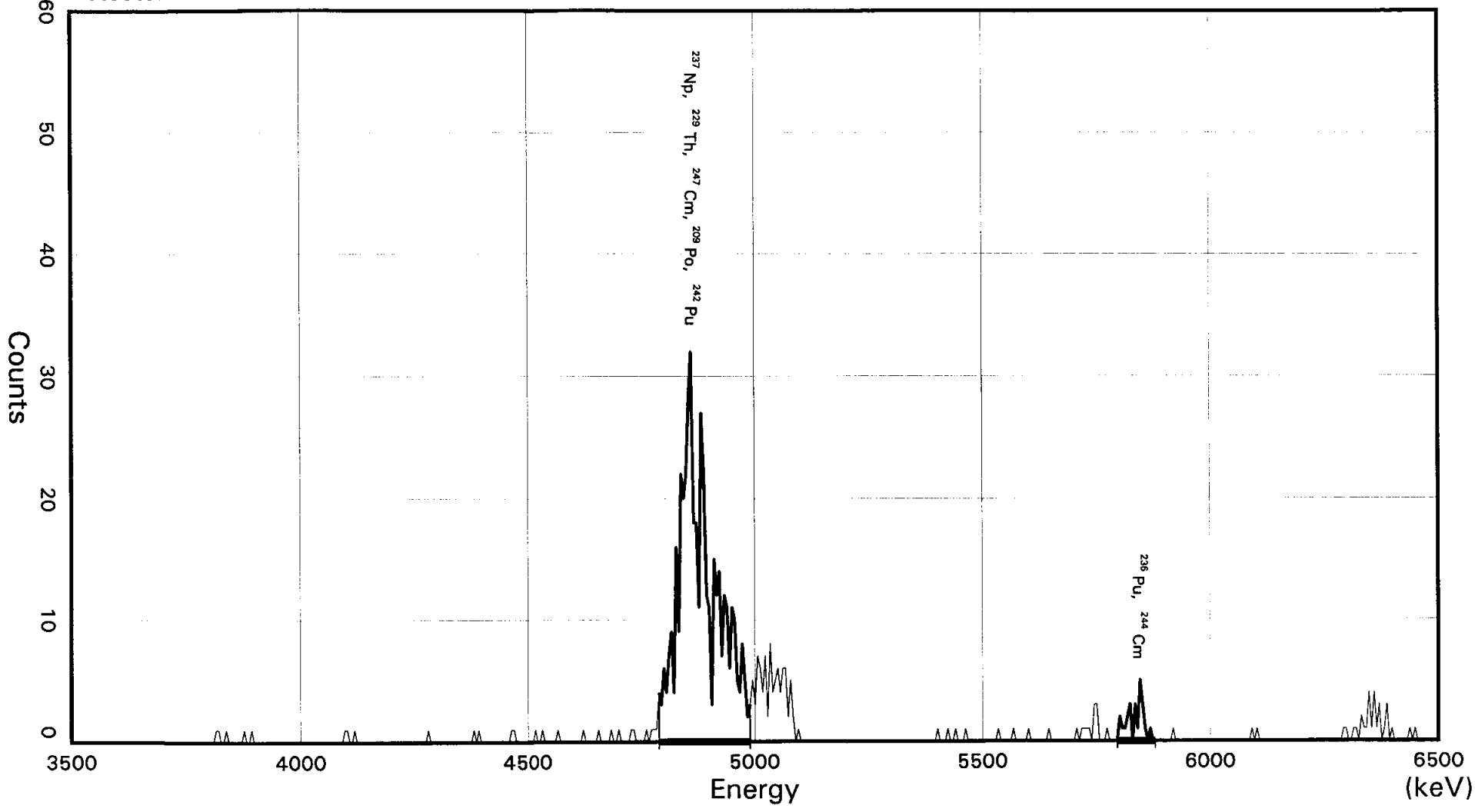
STL Richland WA.

TH BRC

Sample ID: H7DX01AA

Detector ID: ALP171 4

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 14:45:57.89

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.63808E+03

Slope: 5.52501E+00

Quadrature: 5.83550E-05

SAMPLE IDENTIITY: H7DX01AA

TITLE : TH BRC

DETECTOR : ALP171 4
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7DX01AA_130761445D.CN
F;1
ACQUIRE DATE of BACKGROUND: 08-JUL-2006 07:53:15

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 14:45:57 CALIB DATE : 07-JUL-2006 02:09:39

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3638.08 keV CONSTANT FWHM : 11.00000 Channels
SLOPE : 5.52501 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 5.835500E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DX01AA

Detector: ALP171 4
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5133.5	200.1	257	293	0.00	0.00	M
PO-209	460	1	0	0.920	4901.8	199.8	208	244	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5323.0	200.2	291	327	0.00	0.00	M
AC-227	1	6	2	-0.004	6056.6	200.7	422	458	0.00	0.00	S
TH-227	1	6	2	-0.004	6056.6	200.7	422	458	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5441.8	200.3	312	348	0.00	0.00	M
TH-229	460	1	0	0.920	4863.9	199.8	208	244	0.00	0.00	P
TH-230	-9999	-9999	0	-10.010	4706.3	199.7	180	216	0.00	0.00	S I
TH-232	3	0	0	0.006	4031.6	199.2	58	94	0.00	0.00	S
U-232	-9999	-9999	0	-10.010	5338.8	200.2	293	329	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4793.2	199.8	195	231	0.00	0.00	S I
U-235	6	2	0	0.010	4416.4	199.5	127	163	0.00	0.00	
PU-236	23	39	0	0.007	5786.3	83.6	389	404	0.00	0.00	P
NP-237	460	1	0	0.920	4806.6	199.8	208	244	0.00	0.00	P
PU-238	-9999	-9999	0	-10.010	5517.6	200.3	326	362	0.00	0.00	M
U-238	1	2	0	0.000	4216.6	199.4	91	127	0.00	0.00	S
PU-239	-9999	-9999	0	-10.010	5175.2	200.1	264	300	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5504.2	200.3	323	359	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5225.4	200.1	273	309	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6131.3	200.8	436	472	0.00	0.00	M
PU-242	460	1	0	0.920	4919.1	199.8	208	244	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5293.9	200.2	285	321	0.00	0.00	M
CM-244	23	39	0	0.007	5823.4	83.6	389	404	0.00	0.00	P
CM-246	-9999	-9999	0	-10.010	5405.1	200.3	305	341	0.00	0.00	M
CM-247	460	1	0	0.920	4889.0	199.8	208	244	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5097.2	200.0	250	286	0.00	0.00	M

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DX01AA
Detector: ALP171 4
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	-	101	0	+	151	0	@	201	2	+	251	0	@	301	0	@	351	0	@	401
		2	0		52	0	-	102	0	+	152	0	@	202	8	+	252	0	@	302	0	@	352	1	@	402
0		3	0		53	0	-	103	0	+	153	1	@	203	4	+	253	0	@	303	0	@	353	0	@	403
0		4	0		54	0	-	104	0	+	154	0	@	204	5	+	254	0	@	304	1	@	354	0		404
0		5	0		55	0	-	105	0	+	155	1	@	205	6	+	255	0	-	305	0	@	355	0		405
0		6	0		56	0	-	106	0	+	156	1	@	206	4	+	256	0	@	306	0	@	356	0		406
0		7	0		57	0	-	107	0	+	157	1	@	207	6	@	257	0	@	307	0	@	357	0		407
0		8	0	+	58	0	-	108	0	+	158	4	-	208	6	@	258	0	@	308	0	@	358	0		408
0		9	0	+	59	0	-	109	1	+	159	3	@	209	2	@	259	0	@	309	0	@	359	0		409
0		10	0	+	60	0	-	110	0	+	160	6	@	210	5	@	260	0	@	310	0	+	360	0		410
0		11	0	+	61	0	-	111	0	+	161	4	@	211	2	@	261	0	@	311	0	+	361	1		411
0		12	0	+	62	0	-	112	1	+	162	7	@	212	0	@	262	0	@	312	1	+	362	0		412
0		13	0	+	63	0	-	113	0	+	163	9	@	213	1	@	263	0	@	313	0		363	0		413
0		14	0	+	64	0	-	114	0		164	4	@	214	0	@	264	0	@	314	0		364	0		414
0		15	0	+	65	0	-	115	0		165	16	@	215	0	@	265	0	@	315	0		365	0		415
0		16	0	+	66	1	-	116	0		166	9	@	216	0	@	266	0	@	316	0		366	0		416
0		17	0	+	67	0	-	117	0		167	22	@	217	0	@	267	0	@	317	0		367	0		417
0		18	0	+	68	0	-	118	1		168	20	@	218	0	@	268	1	@	318	0		368	0		418
0		19	0	+	69	0	-	119	0		169	22	@	219	0	@	269	0	@	319	0		369	0		419
0		20	0	+	70	0	-	120	0		170	28	@	220	0	@	270	0	@	320	0		370	0		420
0		21	0	+	71	0	-	121	0		171	32	@	221	0	@	271	0	@	321	0		371	0		421
0		22	0	+	72	0	-	122	0		172	18	@	222	0	@	272	1	@	322	0		372	0	@	422
0		23	0	+	73	0	-	123	0		173	18	@	223	0	@	273	0	@	323	1		373	0	@	423
0		24	0	+	74	0	-	124	0		174	11	@	224	0	@	274	0	@	324	0		374	0	@	424
0		25	0	+	75	0	-	125	0		175	27	@	225	0	@	275	1	@	325	1		375	0	@	425
0		26	0	+	76	0	-	126	0		176	22	@	226	0	@	276	0	@	326	1		376	0	@	426
0		27	0	+	77	0	@	127	0		177	12	@	227	0	@	277	0	@	327	1		377	0	@	427
0		28	0	+	78	0	+	128	1		178	11	@	228	0	@	278	0	@	328	1		378	0	@	428
0		29	0	+	79	0	+	129	0		179	3	@	229	0	@	279	1	@	329	0		379	0	@	429
0		30	0	+	80	0	+	130	0	+	180	15	@	230	0	@	280	0	@	330	3		380	0	@	430
0		31	0	+	81	0	+	131	0	+	181	12	@	231	0	@	281	0	@	331	3		381	0	@	431
1		32	0	+	82	0	+	132	0	+	182	14	@	232	0	@	282	0	@	332	0		382	0	@	432
1		33	1	+	83	0	+	133	0	+	183	7	@	233	0	@	283	0	@	333	0		383	0	@	433
0		34	1	+	84	1	+	134	1	+	184	12	@	234	0	@	284	0	@	334	0		384	0	@	434
0		35	0	+	85	0	+	135	0	+	185	11	@	235	0	@	285	0	@	335	1		385	0	@	435
1		36	0	+	86	1	+	136	0	+	186	6	@	236	0	@	286	0	@	336	0		386	0	-	436
0		37	1	+	87	0	+	137	0	+	187	11	@	237	0	@	287	0	@	337	0		387	0	@	437
0		38	0	+	88	0	+	138	0	+	188	10	@	238	0	@	288	0	@	338	0		388	0	@	438
0		39	0	+	89	0	+	139	1	+	189	5	@	239	0	@	289	0	@	339	0	@	389	0	@	439
0		40	0	+	90	0	+	140	0	+	190	4	@	240	0	@	290	0	@	340	2	@	390	0	@	440
0		41	0	@	91	0	+	141	0	+	191	8	@	241	0	@	291	0	@	341	1	@	391	0	@	441
0		42	0	@	92	0	+	142	1	+	192	5	@	242	0	@	292	1	@	342	1	@	392	1	@	442
1		43	0	@	93	0	+	143	0	+	193	2	@	243	0	@	293	0	@	343	2	@	393	0	@	443
0		44	0	@	94	0	+	144	0	+	194	3		244	0	@	294	0	@	344	3	@	394	1	@	444
0		45	0	-	95	0	+	145	0	@	195	5		245	0	@	295	0	@	345	0	@	395	0	@	445
1		46	0	-	96	0	+	146	0	@	196	3		246	0	@	296	0	@	346	3	@	396	0	@	446
0		47	0	-	97	0	+	147	1	@	197	7		247	0	@	297	0	@	347	1	@	397	0	@	447
0		48	0	-	98	0	+	148	1	@	198	6		248	0	@	298	1	@	348	5	@	398	0	@	448
0		49	0	-	99	1	+	149	0	@	199	4		249	0	@	299	0	@	349	3	@	399	0	@	449
0		50	0	-	100	1	+	150	0	@	200	7	+	250	0	@	300	0	@	350	1	@	400	0	@	450

Cnt	F	Chn	Cnt	F	Chn
		0	0	@	451
		0	0		501
		0	0		502
		0	0		503
		1	0		504
		0	0		505
		1	0		506
		0	0		507
		0	0		508
		0	0		509
		0	0		510
		0	0		511
		0	0		512
		0	0	-	463
		0	0	-	464
		0	0	-	465
		0	0	-	466
		0	0	-	467
		0	0	-	468
		0	0	-	469
		0	0	-	470
		0	0	-	471
		0	0	-	472
		0	0		473
		0	0		474
		0	0		475
		0	0		476
		0	0		477
		1	0		478
		1	0		479
		0	0		480
		0	0		481
		1	0		482
		1	0		483
		0	0		484
		2	0		485
		1	0		486
		1	0		487
		4	0		488
		1	0		489
		4	0		490
		1	0		491
		3	0		492
		0	0		493
		1	0		494
		3	0		495
		0	0		496
		1	0		497
		0	0		498
		0	0		499
		0	0		500

VMS Peak Search Report V1.9 Generated 13-JUL-2006 23:06:42

Configuration : $DISK1:[ALP171.SAMPLE]H7DX01AA_130761445D.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7DX01AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3654.66 keV End energy : 6482.19 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4863.90	460	0	66.30	221.35	208	36	1.53E-02	4.7	
2	0	5844.06	23	0	33.15	397.60	389	15	7.67E-04	20.9	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 23:06:44

Configuration : $DISK1:[ALP171.SAMPLE]H7DX01AA_130761445D.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7DX01AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 2
Number of unidentified lines 0
Number of lines tentatively identified by NID 2 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-236	2.86Y	1.03	0.000E+00	0.000E+00	0.000E+00	0.00	
NP-237	2.14E+06Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-244	18.10Y	1.01	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7DX01AA_130761445D.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4863.89	208	244	460	433	1.26		
5844.05	389	404	23	23	0.00		

***** WARNING: Possible PEAK/ALPHA Error *****
Review Spectrum on Screen

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7JP21AA

Detector: ALP171 5
Report Date: 14-Jul-06 01:22 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	1	1	0.001	5423.2	118.0	301	321
TH-229	590	2	1.179	4845.3	401.6	201	269
TH-230	6	0	0.012	4687.7	118.2	176	196
TH-232	0	1	-0.001	4013.0	118.4	62	82

End of Alpha Region Report
(Produced by ANAL Report)

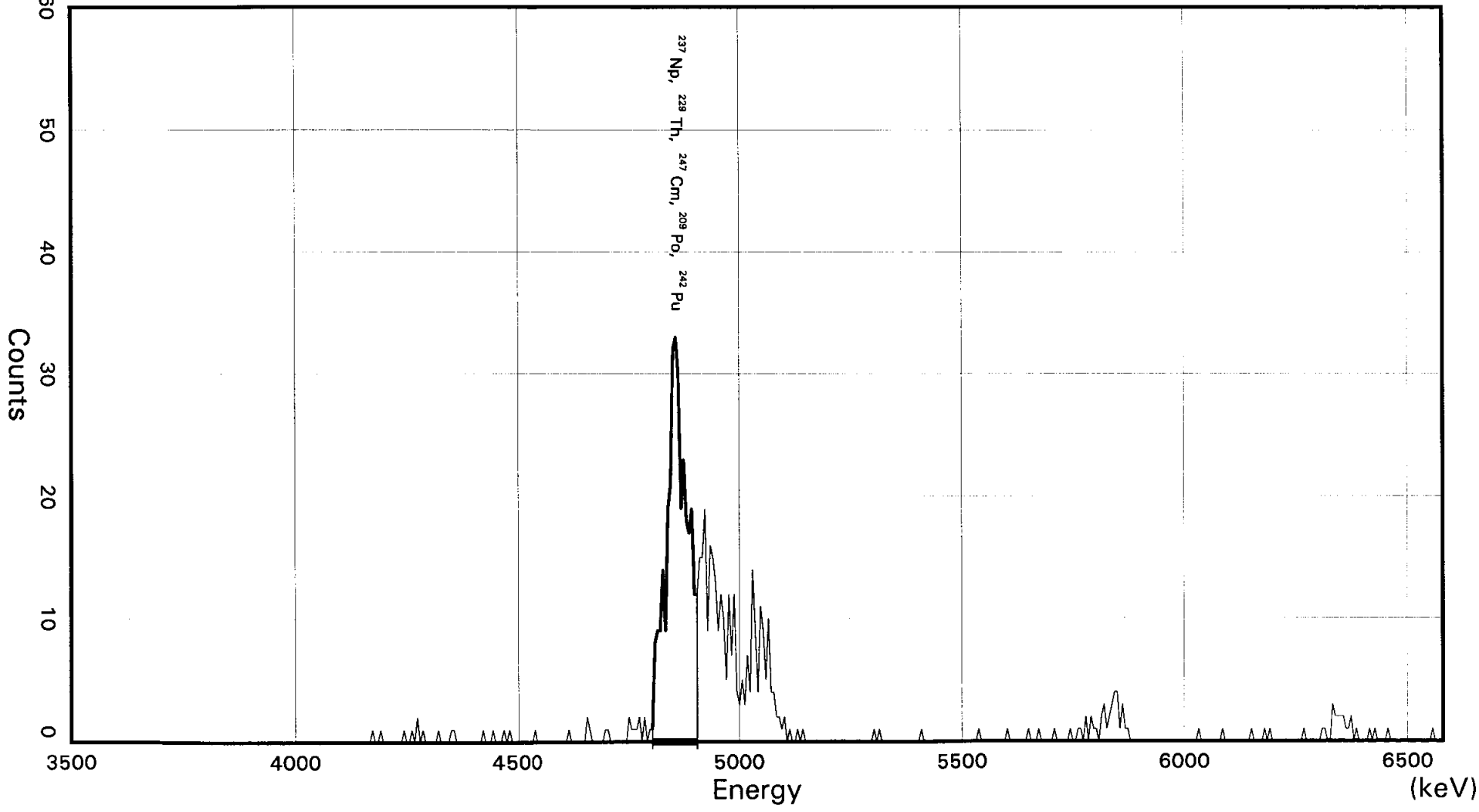
STL Richland WA.

TH BRC

Sample ID: H7JP21AA

Detector ID: ALP171 5

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 14:45:57.89

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.55643E+03

Slope: 5.92919E+00

Quadrature: -4.83406E-05

SAMPLE IDENTIITY: H7JP21AA

TITLE : TH BRC

DETECTOR : ALP171 5
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7JP21AA_130761445E.CN
F;1
ACQUIRE DATE of BACKGROUND: 08-JUL-2006 07:53:15

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 14:45:57 CALIB DATE : 08-JUL-2006 00:27:11

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3556.43 keV CONSTANT FWHM : 8.00000 Channels
SLOPE : 5.92919 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.483406E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7JP21AA

Detector: ALP171 5
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
High Counts Limit: 36
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
PO-208	-9999	-9999	0	-10.010	5133.1	100.4	257	274	0.00	0.00	M
PO-209	304	0	0	0.609	4901.4	100.4	211	228	0.00	0.00	P
PO-210	-9999	-9999	0	-10.010	5322.5	100.3	289	306	0.00	0.00	M
AC-227	2	2	1	0.002	6056.2	100.1	413	430	0.00	0.00	S
TH-227	2	2	1	0.002	6056.2	100.1	413	430	0.00	0.00	S
TH-228	-9999	-9999	0	-10.010	5441.4	100.3	309	326	0.00	0.00	M
TH-229	304	0	0	0.609	4863.5	100.4	211	228	0.00	0.00	P
TH-230	5	0	0	0.010	4705.9	100.5	184	201	0.00	0.00	S
TH-232	0	1	0	-0.001	4031.2	100.7	70	87	0.00	0.00	
U-232	-9999	-9999	0	-10.010	5338.3	100.3	291	308	0.00	0.00	M
U-234	-9999	-9999	0	-10.010	4792.8	100.5	199	216	0.00	0.00	S I
U-235	3	0	0	0.006	4416.0	100.6	135	152	0.00	0.00	
PU-236	9	11	13	0.007	5785.8	100.2	367	384	0.00	0.00	S
NP-237	304	0	0	0.609	4806.2	100.4	211	228	0.00	0.00	P
PU-238	-9999	-9999	0	-10.010	5517.2	100.3	322	339	0.00	0.00	M
U-238	4	0	0	0.008	4216.2	100.6	102	119	0.00	0.00	
PU-239	-9999	-9999	0	-10.010	5174.8	100.3	264	281	0.00	0.00	M
AM-241	-9999	-9999	0	-10.010	5503.8	100.3	319	336	0.00	0.00	M
AM-242M	-9999	-9999	0	-10.010	5225.0	100.3	272	289	0.00	0.00	M
CM-242	-9999	-9999	0	-10.010	6130.9	100.1	426	443	0.00	0.00	M
PU-242	304	0	0	0.609	4918.7	100.4	211	228	0.00	0.00	P
AM-243	-9999	-9999	0	-10.010	5293.5	100.3	284	301	0.00	0.00	M
CM-244	25	41	13	0.009	5823.0	100.2	374	391	0.00	0.00	S
CM-246	-9999	-9999	0	-10.010	5404.7	100.3	303	320	0.00	0.00	M
CM-247	304	0	0	0.609	4888.6	100.4	211	228	0.00	0.00	P
CM-248	-9999	-9999	0	-10.010	5096.8	106.3	250	268	0.00	0.00	M

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7JP21AA
Detector: ALP171 5
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0	+	151	0	@	201	4	+	251	0	@	301	0		351	0		401	0		451	0		501
		2	0		52	0	+	102	0	+	152	2	-	202	11	+	252	0	@	302	0		352	0		402	0		452	0		502
0		3	0		53	0	+	103	0		153	1	-	203	9	+	253	0	-	303	0		353	0		403	0		453	0		503
0		4	0		54	1	+	104	1		154	1	-	204	5	+	254	0	@	304	1		354	0		404	0		454	0		504
0		5	0		55	0	+	105	0		155	1	-	205	10	+	255	0	@	305	0		355	0		405	0		455	0		505
0		6	0		56	0	+	106	1		156	2	-	206	4	+	256	0	@	306	0		356	0		406	0		456	0		506
0		7	0		57	1	+	107	0		157	0	-	207	4	@	257	0	@	307	0		357	0		407	0		457	0		507
0		8	0		58	0	+	108	0		158	2	-	208	2	@	258	0	@	308	1		358	0		408	0		458	1		508
0		9	0		59	0	+	109	0		159	0	-	209	2	@	259	0	@	309	0		359	0		409	1		459	0		509
0		10	0		60	0	+	110	0		160	1	-	210	1	@	260	0	@	310	0		360	0		410	0		460	0		510
0		11	0		61	0	+	111	0		161	1	-	211	2	@	261	0	@	311	0		361	0		411	0		461	0		511
0		12	0		62	0	+	112	0		162	8	@	212	0	@	262	0	@	312	0		362	0		412	0		462	0		512
0		13	0		63	0	+	113	0		163	9	@	213	1	@	263	1	@	313	0		363	0	@	413	0		463			
0		14	0		64	0	+	114	0		164	9	@	214	0	@	264	0	@	314	1		364	0	@	414	0		464			
0		15	0		65	0	+	115	0		165	14	@	215	0	@	265	0	@	315	0		365	0	@	415	0		465			
0		16	0		66	1	+	116	1		166	9	@	216	1	@	266	0	@	316	0		366	0	@	416	1		466			
0		17	0		67	0	+	117	0		167	19	@	217	0	@	267	0	@	317	0	+	367	0	@	417	1		467			
0		18	0		68	0	+	118	0		168	21	@	218	1	@	268	0	@	318	0	+	368	0	@	418	0		468			
0		19	0		69	1	+	119	0		169	32	@	219	0	@	269	0	@	319	0	+	369	1	@	419	0		469			
0		20	0	+	70	0		120	0		170	33	@	220	0	@	270	0	@	320	1	+	370	0	@	420	3		470			
0		21	0	+	71	2		121	0		171	30	@	221	0	@	271	0	@	321	0	+	371	0	@	421	2		471			
0		22	0	+	72	0		122	0		172	19	@	222	0	-	272	0	@	322	0	+	372	0	@	422	2		472			
0		23	0	+	73	1		123	0		173	23	@	223	0	@	273	0	@	323	1	+	373	0	@	423	2		473			
0		24	0	+	74	0		124	0		174	18	@	224	0	@	274	0	@	324	1	@	374	0	@	424	2		474			
0		25	0	+	75	0		125	0		175	17	@	225	0	@	275	0	@	325	0	@	375	0	@	425	1		475			
0		26	0	+	76	0		126	0		176	19	@	226	0	@	276	0	@	326	2	@	376	0	-	426	1		476			
0		27	0	+	77	0		127	0		177	12	@	227	0	@	277	0	@	327	0	@	377	0	@	427	2		477			
0		28	0	+	78	0		128	0		178	12		228	0	@	278	0	@	328	2	@	378	1	@	428	0		478			
0		29	0	+	79	1		129	1		179	15		229	0	@	279	0	@	329	1	@	379	0	@	429	1		479			
0		30	0	+	80	0		130	0		180	15		230	0	@	280	0	@	330	1	@	380	0	@	430	0		480			
0		31	0	+	81	0		131	0		181	19		231	0	@	281	0	@	331	0	@	381	0	-	431	0		481			
0		32	0	+	82	0		132	0		182	9		232	0	-	282	0	@	332	2	@	382	0	-	432	0		482			
0		33	0	+	83	0		133	0		183	16		233	0	-	283	0	@	333	3	@	383	0	-	433	0		483			
0		34	0	+	84	1		134	0	+	184	15		234	0	@	284	0	@	334	1	@	384	0	-	434	1		484			
0		35	0	+	85	1	+	135	0	+	185	13		235	0	@	285	1	@	335	2	-	385	0	-	435	0		485			
0		36	0	+	86	0	+	136	2	+	186	9		236	0	@	286	0	@	336	3	-	386	0	-	436	1		486			
0		37	0	+	87	0	+	137	1	+	187	12		237	0	@	287	0	+	337	4	-	387	0	-	437	0		487			
0		38	0		88	0	+	138	0	+	188	10		238	0	@	288	0	+	338	4	-	388	0	-	438	0		488			
0		39	0		89	0	+	139	0	+	189	5		239	0	@	289	0	+	339	1	-	389	1	-	439	0		489			
0		40	0		90	0	+	140	0	+	190	12		240	0	@	290	0		340	3	-	390	0	-	440	0		490			
0		41	0		91	0	+	141	0	+	191	7		241	0	@	291	0		341	1	-	391	0	-	441	1		491			
0		42	0		92	0	+	142	0	+	192	12		242	0	@	292	0		342	1		392	0	-	442	0		492			
0		43	0		93	0	+	143	1	+	193	4		243	0	@	293	0		343	0		393	0	-	443	0		493			
0		44	0		94	0	+	144	1	+	194	3		244	0	@	294	0		344	0		394	1		444	0		494			
0		45	0		95	0	+	145	0	+	195	5		245	1	@	295	0		345	0		395	0		445	0		495			
0		46	0		96	1	+	146	0	+	196	3		246	0	@	296	1		346	0		396	1		446	0		496			
0		47	0		97	0	+	147	0	+	197	7		247	1	@	297	0		347	0		397	0		447	0		497			
0		48	0		98	0	+	148	0	+	198	4		248	0	@	298	0		348	0		398	0		448	0		498			
0		49	0		99	0	+	149	0	@	199	14		249	0	@	299	0		349	0		399	0		449	0		499			
0		50	0		100	1	+	150	0	@	200	9	+	250	0	@	300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 13-JUL-2006 23:06:46

Configuration : $DISK1:[ALP171.SAMPLE]H7JP21AA_130761445E.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7JP21AA Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3574.21 keV End energy : 6579.50 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4863.46	304	0	53.36	220.84	211	17	1.01E-02	5.7	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 23:06:48

```
Configuration     : $DISK1:[ALP171.SAMPLE]H7JP21AA_130761445E.CNF;1
Analyses by       : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title      : TH BRC
Sample date       : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID         : H7JP21AA             Sample quantity  : 0.00000E+00 SAMPLE
Sample type       : disk                 Sample geometry  :
Detector name     : ALP171 1             Detector geometry:
Elapsed live time: 0 08:19:28.00         Elapsed real time: 0 08:19:28.00   0.0%
Energy tolerance :    80.00 keV          Half life ratio  :     1.00
Errors propagated: No                    Systematic Error :     0.00 %
Efficiency type  : Spline                Efficiencies at  : Peak Energy
Abundance limit  :    70.00
```

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
PO-209	102.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-229	7340.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
NP-237	2.14E+06Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PU-242	3.73E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
CM-247	1.56E+07Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP171.SAMPLE]H7JP21AA_130761445E.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4863.45	211	228	304	305	-0.06		

End of Report

Alpha Analysis Report
(Version: 7-Feb-98)

Sample Identity: H7JP21AC

Detector: ALP171 6
Report Date: 14-Jul-06 01:24 PM
Acquire Date: 13-JUL-2006 14:45:57.89
Tracer Nuclide: TH-229
Sample Live Time: 499 minutes
Bkgrnd Live Time: 999 minutes

Nuclide Name	Smpl Count	Bkg Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl
TH-228	2	3	0.001	5423.2	120.8	322	342
TH-229	602	2	1.203	4845.3	350.7	225	283
TH-230	567	1	1.134	4687.7	139.2	197	220
TH-232	3	2	0.004	4013.0	133.4	89	111

End of Alpha Region Report
(Produced by ANAL Report)

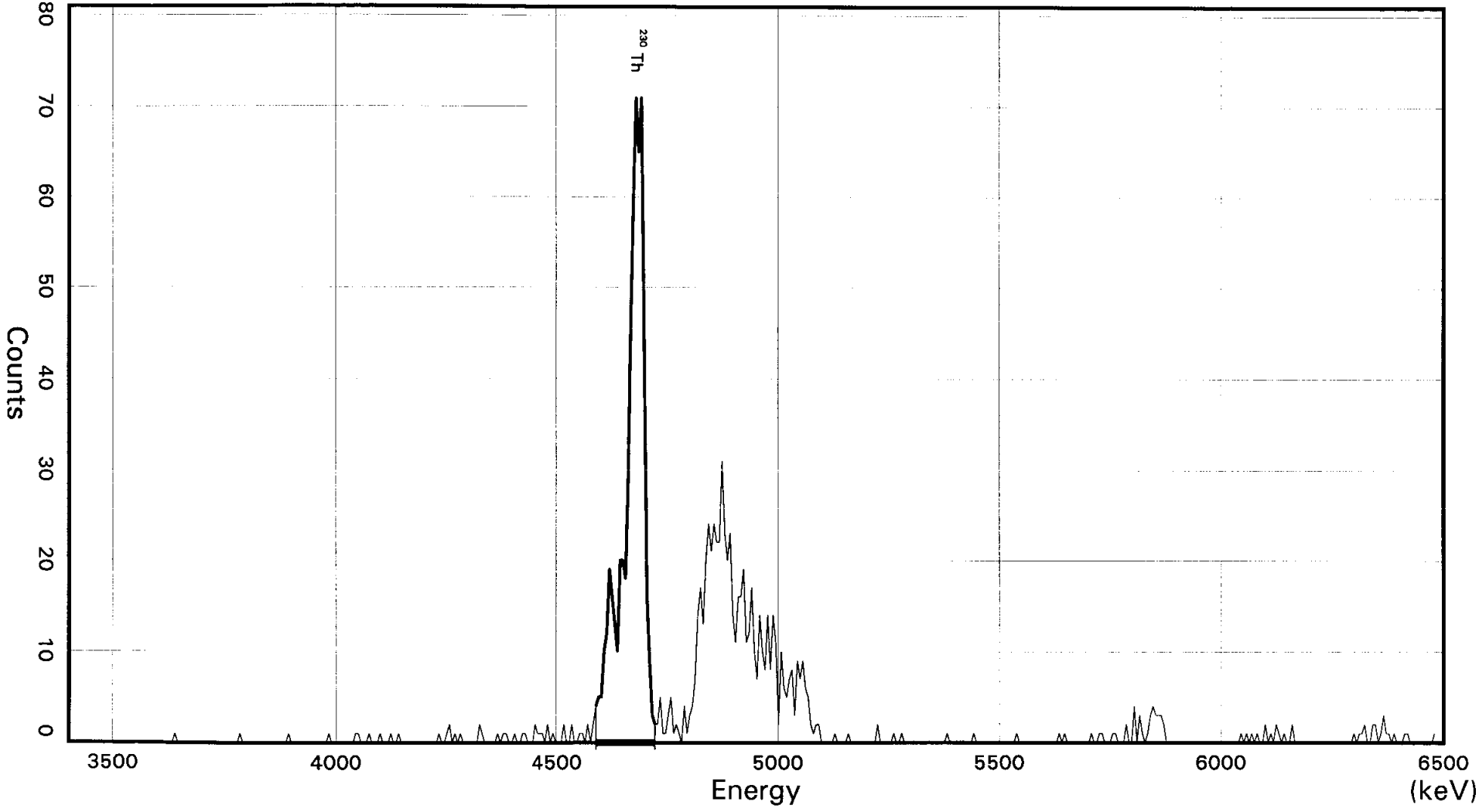
STL Richland WA.

TH BRC

Sample ID: H7JP21AC

Detector ID: ALP171 6

Batch ID: 6167182



Acquisition Start: 13-JUL-2006 14:45:57.89

Preset Live Time: 0 08:20:00.00

Elapsed Live Time: 0 08:19:28.00

Energy Coefficients:

Offset: 3.38355E+03

Slope: 6.07069E+00

Quadrature: -4.63837E-05

SAMPLE IDENTIITY: H7JP21AC

TITLE : TH BRC

DETECTOR : ALP171 6
CONFIGURATION NAME : $DISK1:[ALP171.SAMPLE]H7JP21AC_130761445F.CN
F;1
ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:39

REPORT DATE : 13-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 13-JUL-2006 14:45:57 CALIB DATE : 07-JUL-2006 02:10:11

PRESET LIVE TIME: 0 08:20:00 ELAPSED LIVE TIME: 0 08:19:28

OFFSET : 3383.55 keV CONSTANT FWHM : 7.66667 Channels
SLOPE : 6.07069 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.463837E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Spectrum Listing
for Spectra Not Processed by Alp_rgn_cnts
(Version: 29-Jun-92)

Sample Identity: H7JP21AC
Detector: ALP171 6
Report Date: 13-Jul-06 11:06 PM
Acquire Date: 13-JUL-2006 14:45:57.89

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	5		201	11		251	0		301	0		351	0		401	1		451	1		501
		2	0		52	0		102	0		152	10		202	16		252	0		302	0		352	3		402	0		452	1		502
0		3	0		53	0		103	0		153	12		203	16		253	0		303	0		353	1		403	2		453	0		503
0		4	0		54	0		104	0		154	19		204	19		254	2		304	0		354	0		404	1		454	0		504
0		5	0		55	0		105	2		155	16		205	11		255	0		305	0		355	1		405	0		455	0		505
0		6	0		56	0		106	1		156	13		206	12		256	0		306	1		356	3		406	1		456	0		506
0		7	0		57	0		107	0		157	10		207	17		257	0		307	0		357	4		407	0		457	0		507
0		8	0		58	0		108	0		158	20		208	10		258	0		308	0		358	3		408	0		458	0		508
0		9	0		59	1		109	0		159	20		209	7		259	0		309	0		359	3		409	2		459	0		509
0		10	0		60	1		110	0		160	18		210	14		260	1		310	0		360	3		410	0		460	0		510
0		11	0		61	0		111	0		161	29		211	10		261	0		311	0		361	2		411	0		461	0		511
0		12	0		62	0		112	1		162	46		212	8		262	0		312	0		362	0		412	0		462	1		512
0		13	0		63	0		113	0		163	60		213	14		263	1		313	0		363	0		413	0		463			
0		14	0		64	1		114	1		164	71		214	8		264	0		314	0		364	0		414	0		464			
0		15	0		65	0		115	1		165	65		215	14		265	0		315	0		365	0		415	0		465			
0		16	1		66	0		116	0		166	71		216	11		266	0		316	0		366	0		416	0		466			
0		17	0		67	0		117	0		167	43		217	2		267	0		317	0		367	0		417	0		467			
0		18	0		68	1		118	1		168	16		218	10		268	0		318	0		368	0		418	0		468			
0		19	0		69	0		119	0		169	9		219	6		269	0		319	0		369	0		419	0		469			
0		20	0		70	0		120	0		170	3		220	5		270	0		320	0		370	0		420	0		470			
0		21	0		71	0		121	1		171	2		221	7		271	0		321	0		371	0		421	0		471			
0		22	0		72	1		122	1		172	2		222	8		272	0		322	1		372	0		422	0		472			
0		23	0		73	0		123	0		173	5		223	3		273	0		323	0		373	0		423	0		473			
0		24	0		74	0		124	0		174	1		224	9		274	0		324	1		374	0		424	0		474			
0		25	0		75	1		125	0		175	1		225	7		275	0		325	0		375	0		425	0		475			
0		26	0		76	0		126	2		176	3		226	9		276	0		326	0		376	0		426	0		476			
0		27	0		77	0		127	1		177	5		227	6		277	0		327	0		377	0		427	0		477			
0		28	0		78	0		128	1		178	1		228	5		278	0		328	0		378	0		428	0		478			
0		29	0		79	0		129	1		179	2		229	2		279	0		329	0		379	0		429	0		479			
0		30	0		80	0		130	0		180	1		230	1		280	1		330	0		380	0		430	0		480			
0		31	0		81	0		131	2		181	0		231	2		281	0		331	0		381	0		431	0		481			
0		32	0		82	0		132	0		182	4		232	2		282	0		332	0		382	0		432	1		482			
0		33	0		83	0		133	1		183	1		233	0		283	0		333	0		383	0		433	0		483			
0		34	1		84	0		134	0		184	3		234	0		284	0		334	1		384	0		434	1		484			
0		35	0		85	0		135	0		185	4		235	0		285	0		335	0		385	0		435	1		485			
0		36	0		86	0		136	0		186	7		236	0		286	0		336	0		386	0		436	2		486			
0		37	0		87	0		137	2		187	14		237	0		287	0		337	1		387	0		437	0		487			
0		38	0		88	0		138	0		188	17		238	1		288	0		338	1		388	0		438	0		488			
0		39	0		89	0		139	0		189	13		239	0		289	0		339	0		389	0		439	2		489			
0		40	0		90	1		140	2		190	20		240	0		290	1		340	0		390	1		440	2		490			
0		41	0		91	0		141	0		191	24		241	0		291	0		341	0		391	0		441	0		491			
1		42	0		92	0		142	0		192	21		242	0		292	0		342	1		392	1		442	1		492			
0		43	0		93	1		143	1		193	24		243	1		293	0		343	1		393	0		443	3		493			
0		44	0		94	2		144	1		194	22		244	0		294	0		344	0		394	1		444	1		494			
0		45	0		95	0		145	0		195	22		245	0		295	0		345	0		395	0		445	1		495			
0		46	0		96	1		146	2		196	31		246	0		296	0		346	0		396	1		446	0		496			
0		47	0		97	0		147	0		197	23		247	0		297	0		347	2		397	0		447	1		497			
0		48	0		98	1		148	2		198	20		248	0		298	0		348	0		398	0		448	0		498			
0		49	1		99	0		149	4		199	23		249	0		299	0		349	0		399	2		449	0		499			

0 50 0 100 0 150 5 200 14 250 0 300 0 350 4 400 0 450 0 500

VMS Peak Search Report V1.9 Generated 13-JUL-2006 23:06:51

Configuration : $DISK1:[ALP171.SAMPLE]H7JP21AC_130761445F.CNF;1
Analyses by : ALPHA V1.8
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7JP21AC Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Start energy : 3401.76 keV End energy : 6479.59 keV
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4683.56	565	0	36.42	214.50	199	22	1.89E-02	4.2	

VMS Nuclide Identification Report V3.0 Generated 13-JUL-2006 23:06:52

Configuration : $DISK1:[ALP171.SAMPLE]H7JP21AC_130761445F.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : TH BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 13-JUL-2006 14:45:57
Sample ID : H7JP21AC Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP171 1 Detector geometry:
Elapsed live time: 0 08:19:28.00 Elapsed real time: 0 08:19:28.00 0.0%
Energy tolerance : 80.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 70.00

Summary of Nuclide Activity

Total number of lines in spectrum 1
Number of unidentified lines 0
Number of lines tentatively identified by NID 1 100.00%

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
TH-230	7.54E+04Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
		Total Activity :	0.000E+00	0.000E+00			
		Grand Total Activity :	0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Error Report (Date: 13-Jul-06 11:06 PM)

Program: Alp_rgn_cnts
subroutine: Main
Message: No trace pk or nucl
Record being processed: 7

System Status Message:

%NONAME-W-NOMSG, Message number 00000000

6/23/2006 4:55:57 PM

Sample Preparation/Analysis

9N Thiso PrpRc5016, SepRC5084(5003)
S1 Thorium-228,230,232 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 6167182 pCi/sampl
SEQ Batch, Test: None

Prep Tech: ,HansenM

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:
15H7JP2-1-AC-C			1.00sa,in	1.00sa	THSO0081					
J6F160000-182-LCS					06/15/06,pd 10/04/04,r					
05/24/2006 07:40		AmtRec:		#Containers: 1				Scr:	Alpha:	Beta:

176

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AA-SAMP Constituent List:

Th-228	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/sam	LCL:	UCL:	RPD:
Th-232	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20

H7JP21AA-BLK:

Th-228	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/sam	LCL:	UCL:	RPD:
Th-232	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20

H7JP21AC-LCS:

Th-230	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20	Th-234	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20

H7DWT1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H7JP21AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H7JP21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/20/2006 3:07:37 PM

Lot No., Due Date: J6F270218,J6F140270; 07/25/2006,07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6179344; RTHISO Thiso by ALP

SDG, Matrix: 31999,31902; FILTER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Review Thomas E. Wheland **Date** 7/20/06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6179344

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: Sherryl A Adam Date: 7-21-06

7/20/2006 3:06:58 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Cnt Uncert	Tot uncert	MDA	Matrix / Units	Received Date / Expected	Sample Date / Yield	Volumes	
31999	**9H796F10**			**J6F2702181**	000487				FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM		
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.2157E+00**	1.623E+00	1.71E+00	4.523E+00	PCI/SA		1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.5369E+01**	1.72E+00	2.03E+00	5.537E+00	PCI/SA		1.0	1.0E+0	8.365E-2
TH-228	9NS1		0	7/19/2006 12:16:34	**1.8822E-01**	1.16E-01	1.172E-01	4.052E-01	PCI/SA		1.079	1.0E+0	8.387E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**6.2836E-01**	1.534E-01	1.629E-01	2.154E-01	PCI/SA		1.079	1.0E+0	8.387E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**-3.5906E-02**	2.539E-02	2.558E-02	2.643E-01	PCI/SA		1.079	1.0E+0	8.387E-2
U-234	7YSR		0	7/18/2006 6:21:43 PM	**2.7995E-01**	1.743E-01	1.758E-01	4.788E-01	PCI/SA		0.975	1.0E+0	6.258E-2
U-235	7YSR		0	7/18/2006 6:21:43 PM	**9.9979E-02**	9.998E-02	1.003E-01	2.709E-01	PCI/SA		0.975	1.0E+0	6.258E-2
U-238	7YSR		0	7/18/2006 6:21:43 PM	**-1.9991E-02**	1.999E-02	2.006E-02	4.788E-01	PCI/SA		0.975	1.0E+0	6.258E-2
31999	**9H796L10**			**J6F2702182**	000488				FILTER	6/26/2006 9:00:00	6/7/2006 10:25:00 AM		
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.4966E+00**	1.672E+00	1.766E+00	4.546E+00	PCI/SA		1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.7538E+01**	1.725E+00	2.106E+00	5.209E+00	PCI/SA		1.0	1.0E+0	8.479E-2
TH-228	9NS1		0	7/19/2006 12:16:34	**5.5304E-02**	1.237E-01	1.238E-01	6.634E-01	PCI/SA		0.396	1.0E+0	8.517E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**3.165E-01**	1.827E-01	1.857E-01	2.859E-01	PCI/SA		0.396	1.0E+0	8.517E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**0.0E+00**	0.0E+00	1.292E-01	2.859E-01	PCI/SA		0.396	1.0E+0	8.517E-2
U-234	7YSR		0	7/18/2006 6:21:54 PM	**2.8598E-01**	1.651E-01	1.667E-01	2.583E-01	PCI/SA		0.926	1.0E+0	6.23E-2
U-235	7YSR		0	7/18/2006 6:21:54 PM	**2.6691E-01**	1.662E-01	1.676E-01	4.566E-01	PCI/SA		0.926	1.0E+0	6.23E-2
U-238	7YSR		0	7/18/2006 6:21:54 PM	**-3.8129E-02**	2.696E-02	2.713E-02	5.387E-01	PCI/SA		0.926	1.0E+0	6.23E-2
31999	**9H796N10**			**J6F2702183**	000489				FILTER	6/26/2006 9:00:00	6/7/2006 10:35:00 AM		
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**6.4647E+00**	1.658E+00	1.785E+00	3.857E+00	PCI/SA		1.0	1.0E+0	2.107E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.57E+01**	1.626E+00	1.941E+00	4.99E+00	PCI/SA		1.0	1.0E+0	8.648E-2
TH-228	9NS1		0	7/19/2006 12:16:34	**1.7654E-01**	8.827E-02	8.968E-02	1.196E-01	PCI/SA		1.023	1.0E+0	8.634E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.5259E-01**	1.031E-01	1.056E-01	1.141E-01	PCI/SA		1.023	1.0E+0	8.634E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**0.0E+00**	0.0E+00	5.156E-02	1.141E-01	PCI/SA		1.023	1.0E+0	8.634E-2
U-234	7YSR		0	7/18/2006 6:22:08 PM	**2.0632E-01**	1.459E-01	1.468E-01	2.796E-01	PCI/SA		0.951	1.0E+0	6.249E-2
U-235	7YSR		0	7/18/2006 6:22:08 PM	**0.0E+00**	0.0E+00	1.263E-01	2.796E-01	PCI/SA		0.951	1.0E+0	6.249E-2
U-238	7YSR		0	7/18/2006 6:22:08 PM	**8.2533E-02**	1.052E-01	1.054E-01	4.941E-01	PCI/SA		0.951	1.0E+0	6.249E-2
31999	**9H796P10**			**J6F2702184**	000490				FILTER	6/26/2006 9:00:00	6/7/2006 10:50:00 AM		
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**3.1E+00**	1.521E+00	1.554E+00	5.409E+00	PCI/SA		1.0	1.0E+0	2.116E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.905E+01**	1.708E+00	2.143E+00	5.03E+00	PCI/SA		1.0	1.0E+0	8.489E-2
TH-228	9NS1		0	7/19/2006 12:16:34	**1.3167E-01**	7.755E-02	7.84E-02	2.256E-01	PCI/SA		1.107	1.0E+0	8.56E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.8707E-01**	1.015E-01	1.045E-01	9.724E-02	PCI/SA		1.107	1.0E+0	8.56E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**1.7942E-02**	4.012E-02	4.015E-02	2.152E-01	PCI/SA		1.107	1.0E+0	8.56E-2
U-234	7YSR		0	7/18/2006 6:22:38 PM	**-3.0904E-02**	1.545E-02	1.565E-02	5.153E-01	PCI/SA		1.056	1.0E+0	6.234E-2
U-235	7YSR		0	7/18/2006 6:22:38 PM	**8.1011E-02**	9.708E-02	9.729E-02	4.409E-01	PCI/SA		1.056	1.0E+0	6.234E-2
U-238	7YSR		0	7/18/2006 6:22:38 PM	**-4.6356E-02**	1.892E-02	1.928E-02	5.724E-01	PCI/SA		1.056	1.0E+0	6.234E-2
31999	**9H796Q10**			**J6F2702185**	000491				FILTER	6/26/2006 9:00:00	6/7/2006 11:00:00 AM		
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**5.8528E+00**	1.861E+00	1.958E+00	5.57E+00	PCI/SA		1.0	1.0E+0	2.042E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.5815E+01**	1.678E+00	1.993E+00	5.248E+00	PCI/SA		1.0	1.0E+0	8.123E-2
TH-228	9NS1		0	7/19/2006 12:16:34	**1.7989E-01**	1.039E-01	1.051E-01	3.36E-01	PCI/SA		1.017	1.0E+0	8.115E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.0972E-01**	9.533E-02	9.71E-02	2.287E-01	PCI/SA		1.017	1.0E+0	8.115E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**3.0505E-01**	1.175E-01	1.206E-01	2.806E-01	PCI/SA		1.017	1.0E+0	8.115E-2
U-234	7YSR		0	7/18/2006 6:22:53 PM	**7.0218E-01**	2.752E-01	2.809E-01	5.183E-01	PCI/SA		0.981	1.0E+0	6.04E-2
U-235	7YSR		0	7/18/2006 6:22:53 PM	**7.8919E-02**	1.049E-01	1.051E-01	5.183E-01	PCI/SA		0.981	1.0E+0	6.04E-2
U-238	7YSR		0	7/18/2006 6:22:53 PM	**4.861E-01**	2.329E-01	2.361E-01	5.549E-01	PCI/SA		0.981	1.0E+0	6.04E-2
31999	**9H796R10**			**J6F2702186**	000492				FILTER	6/26/2006 9:00:00	6/7/2006 11:20:00 AM		
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**4.1775E+00**	1.513E+00	1.574E+00	4.568E+00	PCI/SA		1.0	1.0E+0	2.069E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.7615E+01**	1.668E+00	2.065E+00	5.009E+00	PCI/SA		1.0	1.0E+0	8.434E-2
TH-228	9NS1		0	7/19/2006 12:16:34	**1.9618E-01**	9.989E-02	1.014E-01	2.615E-01	PCI/SA		0.997	1.0E+0	8.321E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**4.9901E-01**	1.441E-01	1.508E-01	1.127E-01	PCI/SA		0.997	1.0E+0	8.321E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**1.2475E-01**	7.203E-02	7.289E-02	1.127E-01	PCI/SA		0.997	1.0E+0	8.321E-2
U-234	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA		1.009	1.0E+0	6.244E-2

6179344, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 52 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DM81AA=> , mat:FILTER | Air *wo:H8DM81AA=> , mat:FILTER | Air *wo:H8DM81AA=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / MDA	Units	Expected	Yield	Volumes
U-235	7YSR	0		7/18/2006 6:23:10 PM	**-8.2994E-03**	8.299E-03	8.326E-03	4.172E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-238	7YSR	0		7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
31999	**9H796T10**			**J6F2702187**	000493	FILTER	6/26/2006 9:00:00	6/7/2006 10:10:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**-7.4933E-02**	8.593E-01	8.593E-01	4.586E+00	PCI/SA	1.0	1.0E+0	2.117E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.0747E+00**	1.22E+00	1.222E+00	5.046E+00	PCI/SA	1.0	1.0E+0	8.395E-2
TH-228	9NS1	0		7/19/2006 12:16:34	**1.9076E-02**	4.265E-02	4.269E-02	2.288E-01	PCI/SA	0.936	1.0E+0	8.453E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**2.7293E-01**	1.045E-01	1.073E-01	2.183E-01	PCI/SA	0.936	1.0E+0	8.453E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**-3.639E-02**	2.573E-02	2.593E-02	2.678E-01	PCI/SA	0.936	1.0E+0	8.453E-2
U-234	7YSR	0		7/18/2006 6:23:32 PM	**-2.801E-02**	1.617E-02	1.633E-02	5.817E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-235	7YSR	0		7/18/2006 6:23:32 PM	**-1.8673E-02**	1.32E-02	1.329E-02	5.33E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-238	7YSR	0		7/18/2006 6:23:32 PM	**1.166E-01**	1.166E-01	1.17E-01	3.16E-01	PCI/SA	0.885	1.0E+0	6.256E-2
31999	**9H796W10**			**J6F2702188**	P-0660	FILTER	6/26/2006 9:00:00	6/7/2006 9:55:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**3.8436E+00**	1.391E+00	1.445E+00	4.008E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.3482E+01**	1.585E+00	1.923E+00	5.061E+00	PCI/SA	1.0	1.0E+0	8.329E-2
TH-228	9NS1	0		7/19/2006 12:17:22	**-5.5508E-02**	5.549E-02	5.57E-02	3.722E-01	PCI/SA	0.916	1.0E+0	8.475E-2
TH-230	9NS1	0		7/19/2006 12:17:22	**2.6634E+00**	3.08E-01	3.872E-01	2.116E-01	PCI/SA	0.916	1.0E+0	8.475E-2
TH-232	9NS1	0		7/19/2006 12:17:22	**3.5277E-02**	3.528E-02	3.541E-02	9.56E-02	PCI/SA	0.916	1.0E+0	8.475E-2
U-234	7YSR	0		7/18/2006 6:24:30 PM	**1.5766E-01**	1.422E-01	1.427E-01	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-235	7YSR	0		7/18/2006 6:24:30 PM	**-3.9462E-02**	2.79E-02	2.808E-02	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-238	7YSR	0		7/18/2006 6:24:30 PM	**-5.9194E-02**	3.418E-02	3.45E-02	6.223E-01	PCI/SA	1.006	1.0E+0	6.241E-2
31999	**9H797D10**			**J6F2702189**	P-0661	FILTER	6/26/2006 9:00:00	6/7/2006 10:20:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**2.4154E+00**	1.461E+00	1.482E+00	5.531E+00	PCI/SA	1.0	1.0E+0	2.086E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.2452E+01**	1.549E+00	1.861E+00	5.002E+00	PCI/SA	1.0	1.0E+0	8.541E-2
TH-228	9NS1	0		7/19/2006 12:17:33	**1.1088E-01**	9.667E-02	9.717E-02	3.728E-01	PCI/SA	1.071	1.0E+0	8.341E-2
TH-230	9NS1	0		7/19/2006 12:17:33	**8.4616E-02**	5.983E-02	6.03E-02	1.147E-01	PCI/SA	1.071	1.0E+0	8.341E-2
TH-232	9NS1	0		7/19/2006 12:17:33	**0.0E+00**	0.0E+00	5.182E-02	1.147E-01	PCI/SA	1.071	1.0E+0	8.341E-2
U-234	7YSR	0		7/18/2006 6:24:37 PM	**0.0E+00**	0.0E+00	1.219E-01	2.697E-01	PCI/SA	1.029	1.0E+0	6.248E-2
U-235	7YSR	0		7/18/2006 6:24:37 PM	**-5.9728E-02**	3.448E-02	3.481E-02	6.282E-01	PCI/SA	1.029	1.0E+0	6.248E-2
U-238	7YSR	0		7/18/2006 6:24:37 PM	**3.9782E-02**	1.053E-01	1.054E-01	6.282E-01	PCI/SA	1.029	1.0E+0	6.248E-2
31999	**9H797E10**			**J6F27021810**	P-0662	FILTER	6/26/2006 9:00:00	6/7/2006 10:30:00 AM				
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**6.44E+00**	1.887E+00	2.002E+00	5.424E+00	PCI/SA	1.0	1.0E+0	2.072E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.046E+01**	1.699E+00	1.853E+00	6.064E+00	PCI/SA	1.0	1.0E+0	8.603E-2
TH-228	9NS1	0		7/19/2006 12:17:45	**8.9776E-02**	8.399E-02	8.438E-02	3.305E-01	PCI/SA	0.991	1.0E+0	8.433E-2
TH-230	9NS1	0		7/19/2006 12:17:45	**1.7129E-01**	8.565E-02	8.702E-02	1.16E-01	PCI/SA	0.991	1.0E+0	8.433E-2
TH-232	9NS1	0		7/19/2006 12:17:45	**0.0E+00**	0.0E+00	5.245E-02	1.16E-01	PCI/SA	0.991	1.0E+0	8.433E-2
U-234	7YSR	0		7/18/2006 6:24:49 PM	**-1.4874E-01**	5.622E-02	5.748E-02	8.722E-01	PCI/SA	0.906	1.0E+0	6.215E-2
U-235	7YSR	0		7/18/2006 6:24:49 PM	**-6.3746E-02**	3.68E-02	3.716E-02	6.704E-01	PCI/SA	0.906	1.0E+0	6.215E-2
U-238	7YSR	0		7/18/2006 6:24:49 PM	**-2.1298E-02**	1.183E-01	1.183E-01	8.288E-01	PCI/SA	0.906	1.0E+0	6.215E-2
31999	**9H797F10**			**J6F27021811**	P-0663	FILTER	6/26/2006 9:00:00	6/7/2006 10:45:00 AM				
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**3.9003E+00**	1.502E+00	1.556E+00	4.671E+00	PCI/SA	1.0	1.0E+0	2.03E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.6067E+01**	1.616E+00	2.113E+00	4.856E+00	PCI/SA	1.0	1.0E+0	8.165E-2
TH-228	9NS1	0		7/19/2006 12:17:53	**-1.7632E-05**	8.33E-02	8.33E-02	4.466E-01	PCI/SA	0.992	1.0E+0	8.219E-2
TH-230	9NS1	0		7/19/2006 12:17:53	**1.1467E-01**	8.27E-02	8.334E-02	2.751E-01	PCI/SA	0.992	1.0E+0	8.219E-2
TH-232	9NS1	0		7/19/2006 12:17:53	**0.0E+00**	0.0E+00	5.618E-02	1.243E-01	PCI/SA	0.992	1.0E+0	8.219E-2
U-234	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	6.092E-2
U-235	7YSR	0		7/18/2006 6:25:00 PM	**-1.9478E-02**	1.948E-02	1.954E-02	4.665E-01	PCI/SA	1.011	1.0E+0	6.092E-2
U-238	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	6.092E-2
31999	**9H797H10**			**J6F27021812**	P-0664	FILTER	6/26/2006 9:00:00	6/7/2006 11:05:00 AM				
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**3.7E+00**	1.475E+00	1.524E+00	4.621E+00	PCI/SA	1.0	1.0E+0	2.075E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.3205E+01**	1.591E+00	1.827E+00	5.143E+00	PCI/SA	1.0	1.0E+0	8.304E-2
TH-228	9NS1	0		7/19/2006 10:14:05	**1.9535E-06**	8.279E-02	8.279E-02	4.201E-01	PCI/SA	1.047	1.0E+0	8.332E-2
TH-230	9NS1	0		7/19/2006 10:14:05	**1.3025E-01**	7.672E-02	7.757E-02	2.232E-01	PCI/SA	1.047	1.0E+0	8.332E-2
TH-232	9NS1	0		7/19/2006 10:14:05	**3.7213E-02**	3.721E-02	3.736E-02	1.008E-01	PCI/SA	1.047	1.0E+0	8.332E-2
U-234	7YSR	0		7/18/2006 6:25:11 PM	**5.5292E-02**	1.392E-01	1.392E-01	7.569E-01	PCI/SA	1.009	1.0E+0	6.232E-2

6179344, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 52 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DM81AA=> , mat:FILTER | Air *wo:H8DM81AA=> , mat:FILTER | Air *wo:H8DM81AA=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mda	Sample Date / Units	Expected	Yield	Volumes	
U-235	7YSR	0		7/18/2006 6:25:11 PM	**-1.8434E-02**	1.843E-02	1.849E-02	4.414E-01	PCI/SA		1.009	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:25:11 PM	**7.3726E-02**	1.379E-01	1.381E-01	7.192E-01	PCI/SA		1.009	1.0E+0	6.232E-2
31999	**9H797J10**			**J6F27021813**	P-0665	FILTER	6/26/2006 9:00:00		6/7/2006 11:10:00 AM				
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**5.0222E+00**	1.555E+00	1.638E+00	4.09E+00	PCI/SA		1.0	1.0E+0	2.002E-2
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2848E+01**	1.59E+00	1.818E+00	5.167E+00	PCI/SA		1.0	1.0E+0	8.455E-2
TH-228	9NS1	0		7/19/2006 10:14:05	**-7.7987E-02**	6.166E-02	6.204E-02	4.197E-01	PCI/SA		1.004	1.0E+0	8.099E-2
TH-230	9NS1	0		7/19/2006 10:14:05	**5.0194E-01**	1.404E-01	1.472E-01	2.23E-01	PCI/SA		1.004	1.0E+0	8.099E-2
TH-232	9NS1	0		7/19/2006 10:14:05	**6.2033E-07**	4.554E-02	4.554E-02	2.737E-01	PCI/SA		1.004	1.0E+0	8.099E-2
U-234	7YSR	0		7/18/2006 6:25:24 PM	**0.0E+00**	0.0E+00	1.219E-01	2.698E-01	PCI/SA		1.091	1.0E+0	6.015E-2
U-235	7YSR	0		7/18/2006 6:25:24 PM	**-1.9916E-02**	1.992E-02	1.998E-02	4.769E-01	PCI/SA		1.091	1.0E+0	6.015E-2
U-238	7YSR	0		7/18/2006 6:25:24 PM	**1.5928E-01**	1.436E-01	1.441E-01	5.626E-01	PCI/SA		1.091	1.0E+0	6.015E-2
31999	**9H797K10**			**J6F27021814**	P-0666	FILTER	6/26/2006 9:00:00		6/7/2006 10:05:00 AM				
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**-6.0243E-01**	9.947E-01	9.967E-01	5.518E+00	PCI/SA		1.0	1.0E+0	2.066E-2
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2862E+01**	1.583E+00	1.813E+00	5.122E+00	PCI/SA		1.0	1.0E+0	8.229E-2
TH-228	9NS1	0		7/19/2006 10:14:05	**2.4133E-01**	1.097E-01	1.118E-01	2.632E-01	PCI/SA		1.024	1.0E+0	8.496E-2
TH-230	9NS1	0		7/19/2006 10:14:05	**3.7652E-01**	1.255E-01	1.3E-01	1.134E-01	PCI/SA		1.024	1.0E+0	8.496E-2
TH-232	9NS1	0		7/19/2006 10:14:05	**0.0E+00**	0.0E+00	5.124E-02	1.134E-01	PCI/SA		1.024	1.0E+0	8.496E-2
U-234	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-235	7YSR	0		7/18/2006 6:25:43 PM	**1.0956E-01**	1.096E-01	1.099E-01	2.969E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-238	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
31999	**9H797M10**			**J6F27021815**	P-0667	FILTER	6/26/2006 9:00:00		6/7/2006 11:15:00 AM				
ALPHA	BAS7	0		7/19/2006 8:30:44 AM	**-2.1818E+00**	8.681E-01	8.973E-01	6.058E+00	PCI/SA		1.0	1.0E+0	2.084E-2
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.6716E+00**	1.229E+00	1.238E+00	5.002E+00	PCI/SA		1.0	1.0E+0	8.539E-2
TH-228	9NS1	0		7/19/2006 10:14:05	**1.3121E-01**	7.575E-02	7.667E-02	1.185E-01	PCI/SA		1.011	1.0E+0	8.715E-2
TH-230	9NS1	0		7/19/2006 10:14:05	**2.0851E-01**	9.325E-02	9.511E-02	1.13E-01	PCI/SA		1.011	1.0E+0	8.715E-2
TH-232	9NS1	0		7/19/2006 10:14:05	**4.1702E-02**	4.17E-02	4.187E-02	1.13E-01	PCI/SA		1.011	1.0E+0	8.715E-2
U-234	7YSR	0		7/18/2006 6:25:53 PM	**0.0E+00**	0.0E+00	1.38E-01	3.054E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-235	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-238	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
31902	**9H7DWT10**			**J6F1402701**	000473	FILTER	6/14/2006 10:00:00		5/24/2006 7:40:00 AM				
ALPHA	BAS7	0		7/18/2006 1:26:23 PM	**3.4147E+00**	1.54E+00	1.581E+00	5.324E+00	PCI/SA		1.0	1.0E+0	2.096E-2
BETA	BDS8	0		7/18/2006 1:34:31 PM	**1.2465E+01**	1.665E+00	1.896E+00	5.665E+00	PCI/SA		1.0	1.0E+0	8.326E-2
TH-228	9NS1	0		7/19/2006 12:16:34	**-3.9324E-02**	7.357E-02	7.365E-02	4.233E-01	PCI/SA		1.057	1.0E+0	8.382E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**2.0344E-01**	9.247E-02	9.419E-02	2.219E-01	PCI/SA		1.057	1.0E+0	8.382E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**0.0E+00**	0.0E+00	4.53E-02	1.002E-01	PCI/SA		1.057	1.0E+0	8.382E-2
U-234	7YSR	0		7/18/2006 6:21:38 PM	**8.4174E-02**	1.073E-01	1.075E-01	5.042E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-235	7YSR	0		7/18/2006 6:21:38 PM	**0.0E+00**	0.0E+00	1.289E-01	2.852E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:21:38 PM	**-4.2133E-02**	2.979E-02	2.999E-02	5.948E-01	PCI/SA		0.936	1.0E+0	6.232E-2
31999	**H8DM81AB**			**J6F280000344**	INTRA-LAB BLANK	FILTER	6/26/2006 9:00:00		6/7/2006 10:00:00 AM				
TH-228	9NS1	0	B	7/19/2006 10:14:05	**1.1276E-02**	6.642E-03	6.712E-03	1.932E-02	PCI/SA		1.011	1.0E+0	1.0E+0
TH-230	9NS1	0	B	7/19/2006 10:14:05	**2.7646E-02**	9.215E-03	9.515E-03	8.324E-03	PCI/SA		1.011	1.0E+0	1.0E+0
TH-232	9NS1	0	B	7/19/2006 10:14:05	**-1.5358E-03**	1.536E-03	1.541E-03	1.842E-02	PCI/SA		1.011	1.0E+0	1.0E+0
31999	**H8DM81CS**			**J6F280000344**	INTRA-LAB CHECK	FILTER	6/26/2006 9:00:00		6/7/2006 10:00:00 AM				
TH-230	9NS1	0	S	7/19/2006 10:14:05	**1.6477E+00**	7.145E-02	1.576E-01	1.856E-02	PCI/SA	1.8052E+00	1.081	1.0E+0	1.0E+0

6179344, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 52 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DM81AA=> , mat:FILTER | Air *wo:H8DM81AA=> , mat:FILTER | Air *wo:H8DM81AA=> , mat:FILTER | Air.

7/20/2006 3:07:01 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2005, 7/25/2006, Batch: '6179344', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6179344						
AC		**CalcC**	**HansenM**	7/17/2006 9:38:22		
SC			wagarr	IsBatched	6/28/2006 1:36:13 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	7/17/2006 9:38:22 AM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	7/17/2006 9:38:49 AM	RICH-RC-5016 REVISION 5
SC			FABREM	Sep2C	7/18/2006 6:53:43 PM	RICH-RC-5039 REV 6
SC			DAWKINSO	InCnt1	7/18/2006 8:04:58 PM	RICH-RD-0008 REVISION 4
SC			DAWKINSO	CalcC	7/19/2006 10:19:40 PM	RICH-RD-0008 REVISION 4
AC			**HansenM**	7/17/2006 9:38:49		
AC			**FABREM**	7/18/2006 6:53:43 PM		
AC			**DAWKINSO**	7/18/2006 8:04:58 PM		
AC			**DAWKINSO**	7/19/2006 10:19:40		

AC: Accepting Entry; SC: Status Change

7/14/2006 11:27:49 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

9N Thiso PrpRc5016, SepRC5084(5003)
S1 Thorium-228,230,232 by Alpha Spec
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179344 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech: 7-18-06 [illegible]

Prep Tech: HansenM

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 H7DWT-1-AA J6F140270-1-SAMP 05/24/2006 07:40	0.833g	501.65g	50.48g,in	0.0838g	THTF0676 07/06/06,pd 10/04/04,r	500				
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
2 H796F-1-AA J6F270218-1-SAMP 06/07/2006 10:00	0.833g	501.59g	50.50g,in	0.0839g	THTF0677 07/06/06,pd 10/04/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
3 H796L-1-AA J6F270218-2-SAMP 06/07/2006 10:25	0.833g	501.03g	51.23g,in	0.0852g	THTF0678 07/06/06,pd 10/04/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
4 H796N-1-AA J6F270218-3-SAMP 06/07/2006 10:35	0.833g	500.85g	51.91g,in	0.0863g	THTF0679 07/06/06,pd 10/04/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
5 H796P-1-AA J6F270218-4-SAMP 06/07/2006 10:50	0.833g	501.24g	51.51g,in	0.0856g	THTF0680 07/06/06,pd 10/04/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
6 H796Q-1-AA J6F270218-5-SAMP 06/07/2006 11:00	0.833g	517.56g	50.42g,in	0.0811g	THTF0681 07/06/06,pd 10/04/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
7 H796R-1-AA J6F270218-6-SAMP 06/07/2006 11:20	0.833g	502.44g	50.19g,in	0.0832g	THTF0682 07/06/06,pd 10/04/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:

7/14/2006 11:27:50 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

9N Thiso PrpRc5016, SepRC5084(5003)
S1 Thorium-228,230,232 by Alpha Spec
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179344 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
8 H796T-1-AA J6F270218-7-SAMP 06/07/2006 10:10	0.833g	500.22g	50.76g,in	0.0845g	THTF0683 07/06/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
9 H796W-1-AA J6F270218-8-SAMP 06/07/2006 09:55	0.833g	501.87g	51.06g,in	0.0847g	THTF0684 07/06/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
10 H797D-1-AA J6F270218-9-SAMP 06/07/2006 10:20	0.833g	500.74g	50.14g,in	0.0834g	THTF0685 07/06/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
11 H797E-1-AA J6F270218-10-SAMP 06/07/2006 10:30	0.833g	503.68g	50.99g,in	0.0843g	THTF0686 07/06/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
12 H797F-1-AA J6F270218-11-SAMP 06/07/2006 10:45	0.833g	513.46g	50.66g,in	0.0822g	THTF0692 07/14/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
13 H797H-1-AA J6F270218-12-SAMP 06/07/2006 11:05	0.833g	501.88g	50.20g,in	0.0833g	THTF0693 07/14/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
14 H797J-1-AA J6F270218-13-SAMP 06/07/2006 11:10	0.833g	521.25g	50.68g,in	0.081g	THTF0694 07/14/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:

7/14/2006 11:27:50 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

9N Thiso PrpRc5016, SepRC5084(5003)
S1 Thorium-228,230,232 by Alpha Spec
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179344 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HansenM

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:
15H797K-1-AA J6F270218-14-SAMP 06/07/2006 10:05	0.833g	506.13g	51.62g,in	0.085g	THTF0695 07/14/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
16H797M-1-AA J6F270218-15-SAMP 06/07/2006 11:15	0.833g	500.73g	52.39g,in	0.0872g	THTF0696 07/14/06,pd 10/04/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
17H8DM8-1-AA-B J6F280000-344-BLK 06/07/2006 10:00			1.00sa,in	1.00sa	THTF0697 07/14/06,pd 10/04/04,r					
			AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
18H8DM8-1-AC-C J6F280000-344-LCS 06/07/2006 10:00			1.00sa,in	1.00sa	THSO0082 06/15/06,pd 10/04/04,r					
			AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AA-SAMP Constituent List:

Th-228	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/sam	LCL:	UCL:	RPD:
Th-232	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20

H8DM81AA-BLK:

Th-228	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/sam	LCL:	UCL:	RPD:
Th-232	RDL:1	pCi/sam	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20

Batch Nbr: 6179344

Alpha Spec, ThIso by ALP , Results

Summary Report

7/19/2006 10:18:25 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
ThIso by ALP				Richland Standard AlpIso Wo Blk Subt.										
Calc	S1	FILTER	H7DWT1AA	TH-228	-3.93E-02	(7.37E-02)	U4	PCI/SA	R	1.58E-01	4.23E-01		106%	
Calc	S1	FILTER	H7DWT1AA	TH-230	2.03E-01	(9.42E-02)		PCI/SA	R	6.08E-02	2.22E-01		106%	
Calc	S1	FILTER	H7DWT1AA	TH-232	0.00E+00	(4.53E-02)	U4	PCI/SA	R		1.00E-01		106%	
Calc	S1	FILTER	H796F1AA	TH-228	1.88E-01	(1.17E-01)	U4	PCI/SA	R	1.52E-01	4.05E-01		108%	
Calc	S1	FILTER	H796F1AA	TH-230	6.28E-01	(1.63E-01)		PCI/SA	R	5.91E-02	2.15E-01		108%	
Calc	S1	FILTER	H796F1AA	TH-232	-3.59E-02	(2.56E-02)	U4	PCI/SA	R	8.35E-02	2.64E-01		108%	
Calc	S1	FILTER	H796L1AA	TH-228	5.53E-02	(1.24E-01)	U4	PCI/SA	R	1.82E-01	6.63E-01		40%	
Calc	S1	FILTER	H796L1AA	TH-230	3.17E-01	(1.86E-01)		PCI/SA	R		2.86E-01		40%	
Calc	S1	FILTER	H796L1AA	TH-232	0.00E+00	(1.29E-01)	U4	PCI/SA	R		2.86E-01		40%	
Calc	S1	FILTER	H796N1AA	TH-228	1.77E-01	(8.97E-02)		PCI/SA	R		1.20E-01		102%	
Calc	S1	FILTER	H796N1AA	TH-230	2.53E-01	(1.06E-01)		PCI/SA	R		1.14E-01		102%	
Calc	S1	FILTER	H796N1AA	TH-232	0.00E+00	(5.16E-02)	U4	PCI/SA	R		1.14E-01		102%	
Calc	S1	FILTER	H796P1AA	TH-228	1.32E-01	(7.84E-02)		PCI/SA	R	6.19E-02	2.26E-01		111%	
Calc	S1	FILTER	H796P1AA	TH-230	2.87E-01	(1.05E-01)		PCI/SA	R		9.72E-02		111%	
Calc	S1	FILTER	H796P1AA	TH-232	1.79E-02	(4.01E-02)	U4	PCI/SA	R	5.90E-02	2.15E-01		111%	
Calc	S1	FILTER	H796Q1AA	TH-228	1.80E-01	(1.05E-01)		PCI/SA	R	1.14E-01	3.36E-01		102%	
Calc	S1	FILTER	H796Q1AA	TH-230	2.10E-01	(9.71E-02)		PCI/SA	R	6.27E-02	2.29E-01		102%	
Calc	S1	FILTER	H796Q1AA	TH-232	3.05E-01	(1.21E-01)		PCI/SA	R	8.87E-02	2.81E-01		102%	
Calc	S1	FILTER	H796R1AA	TH-228	1.96E-01	(1.01E-01)		PCI/SA	R	7.17E-02	2.61E-01		100%	
Calc	S1	FILTER	H796R1AA	TH-230	4.99E-01	(1.51E-01)		PCI/SA	R		1.13E-01		100%	
Calc	S1	FILTER	H796R1AA	TH-232	1.25E-01	(7.29E-02)		PCI/SA	R		1.13E-01		100%	
Calc	S1	FILTER	H796T1AA	TH-228	1.91E-02	(4.27E-02)	U4	PCI/SA	R	6.28E-02	2.29E-01		94%	
Calc	S1	FILTER	H796T1AA	TH-230	2.73E-01	(1.07E-01)		PCI/SA	R	5.99E-02	2.18E-01		94%	
Calc	S1	FILTER	H796T1AA	TH-232	-3.64E-02	(2.59E-02)	U4	PCI/SA	R	8.47E-02	2.68E-01		94%	
Calc	S1	FILTER	H796W1AA	TH-228	-5.55E-02	(5.57E-02)	U4	PCI/SA	R	1.36E-01	3.72E-01		92%	
Calc	S1	FILTER	H796W1AA	TH-230	2.66E+00	(3.87E-01)		PCI/SA	R	5.80E-02	2.12E-01		92%	
Calc	S1	FILTER	H796W1AA	TH-232	3.53E-02	(3.54E-02)	U4	PCI/SA	R		9.56E-02		92%	
Calc	S1	FILTER	H797D1AA	TH-228	1.11E-01	(9.72E-02)	U4	PCI/SA	R	1.26E-01	3.73E-01		107%	
Calc	S1	FILTER	H797D1AA	TH-230	8.46E-02	(6.03E-02)	U4	PCI/SA	R		1.15E-01		107%	
Calc	S1	FILTER	H797D1AA	TH-232	0.00E+00	(5.18E-02)	U4	PCI/SA	R		1.15E-01		107%	
Calc	S1	FILTER	H797E1AA	TH-228	8.98E-02	(8.44E-02)	U4	PCI/SA	R	1.04E-01	3.30E-01		99%	
Calc	S1	FILTER	H797E1AA	TH-230	1.71E-01	(8.70E-02)		PCI/SA	R		1.16E-01		99%	
Calc	S1	FILTER	H797E1AA	TH-232	0.00E+00	(5.24E-02)	U4	PCI/SA	R		1.16E-01		99%	
Calc	S1	FILTER	H797F1AA	TH-228	-1.76E-05	(8.33E-02)	U4	PCI/SA	R	1.58E-01	4.47E-01		99%	
Calc	S1	FILTER	H797F1AA	TH-230	1.15E-01	(8.33E-02)	U4	PCI/SA	R	7.55E-02	2.75E-01		99%	
Calc	S1	FILTER	H797F1AA	TH-232	0.00E+00	(5.62E-02)	U4	PCI/SA	R		1.24E-01		99%	
Calc	S1	FILTER	H797H1AA	TH-228	1.95E-06	(8.28E-02)	U4	PCI/SA	R	1.57E-01	4.20E-01		105%	

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:51
RADCALC v4.8.18
STL Richland

Batch Nbr: 6179344

Alpha Spec, Thlso by ALP , Results

7/19/2006 10:18:25 PM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	S1	FILTER	H797H1AA	TH-230	1.30E-01	(7.76E-02)		PCI/SA	R	6.12E-02	2.23E-01		105%	
Calc	S1	FILTER	H797H1AA	TH-232	3.72E-02	(3.74E-02)	U4	PCI/SA	R		1.01E-01		105%	
Calc	S1	FILTER	H797J1AA	TH-228	-7.80E-02	(6.20E-02)	U4	PCI/SA	R	1.57E-01	4.20E-01		100%	
Calc	S1	FILTER	H797J1AA	TH-230	5.02E-01	(1.47E-01)		PCI/SA	R	6.12E-02	2.23E-01		100%	
Calc	S1	FILTER	H797J1AA	TH-232	6.20E-07	(4.55E-02)	U4	PCI/SA	R	8.65E-02	2.74E-01		100%	
Calc	S1	FILTER	H797K1AA	TH-228	2.41E-01	(1.12E-01)		PCI/SA	R	7.22E-02	2.63E-01		102%	
Calc	S1	FILTER	H797K1AA	TH-230	3.77E-01	(1.30E-01)		PCI/SA	R		1.13E-01		102%	
Calc	S1	FILTER	H797K1AA	TH-232	0.00E+00	(5.12E-02)	U4	PCI/SA	R		1.13E-01		102%	
Calc	S1	FILTER	H797M1AA	TH-228	1.31E-01	(7.67E-02)		PCI/SA	R		1.19E-01		101%	
Calc	S1	FILTER	H797M1AA	TH-230	2.09E-01	(9.51E-02)		PCI/SA	R		1.13E-01		101%	
Calc	S1	FILTER	H797M1AA	TH-232	4.17E-02	(4.19E-02)	U4	PCI/SA	R		1.13E-01		101%	
Calc	S1	FILTER	H8DM81AA	TH-228	1.13E-02	(6.71E-03)		PCI/SA	R	5.30E-03	1.93E-02	B	101%	
Calc	S1	FILTER	H8DM81AA	TH-230	2.76E-02	(9.52E-03)		PCI/SA	R		8.32E-03	B	101%	
Calc	S1	FILTER	H8DM81AA	TH-232	-1.54E-03	(1.54E-03)	U4	PCI/SA	R	5.05E-03	1.84E-02	B	101%	
Calc	S1	FILTER	H8DM81AC	TH-230	1.65E+00	(1.58E-01)		PCI/SA	R	5.09E-03	1.86E-02	S	108%	91%

OK
GB
7/20/06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:70
RADCALC v4.8.18
STL Richland

Batch Nbr: 6179344

Alpha Spec, ThIso by ALP , Calculated Results

Detailed Report

7/19/2006 10:18:26 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S1	FILTER	*STLE	AlpIsoWoBS	H7DWT1AA	PCI/SA		05/24/06 07:40	07/19/06 00:16			1	1.00 Sa	
536403,000473					,J6F140270-1 v4.8.18		FILTER					THTF0676 Alq		0.083823 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	2	6	ALP171	ED	N	N	2.9087E-01		N	106%	N		1.0000E+00	4.5045E-01	1.0568E+00	
			499.4666666	998.95			Y		(8.726E-03)			6%			(0.000E+00)	11.929891		
1	07/18/06 20:06	TH-229	627	4	ALP171	ED	Y	N	2.9087E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.726E-03)						(0.000E+00)	11.929891		
2	07/18/06 20:06	TH-230	6	1	ALP171	ED	N	N	2.9087E-01		N	106%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.726E-03)			6%			(0.000E+00)	11.929891		
3	07/18/06 20:06	TH-232	0	0	ALP171	ED	N	N	2.9087E-01		N	106%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.726E-03)			6%			(0.000E+00)	11.929891		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**-0.039324**	U4	-2.00204E-03	-0.006925	-0.006925	1.00 Sa	106%		0.423304		
				(0.073653)		(3.7456E-03)	(0.012964)	(0.012964)	(0.027064)			0.158459		
	07/19/06	TH-229	R	**23.11865**		1.25133E+00	4.302089	4.302089	1.00 Sa	106%				
				(1.751555)		(5.0173E-02)	(0.215435)	(0.215435)	(0.027064)					
	07/19/06	TH-230	R	**0.203444**		1.10118E-02	0.037858	0.037858	1.00 Sa	106%		0.221866		
				(0.094188)		(5.0053E-03)	(0.017395)	(0.017395)	(0.027064)			0.060848		
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	106%		0.100242		
				(0.045303)		(0.0000E+00)	(0.00843)	(0.00843)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S1	FILTER	*STLE	AlpIsoWoBS	H796F1AA	PCI/SA		06/07/06 10:00	07/19/06 00:16			1	1.00 Sa	
536403,000487					,J6F270218-1 v4.8.18		FILTER					THTF0677 Alq		0.083866 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	8	6	ALP172	ED	N	N	2.9949E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(8.985E-03)			6%			(0.000E+00)	11.92374		
1	07/18/06 20:06	TH-229	665	7	ALP172	ED	Y	N	2.9949E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.985E-03)						(0.000E+00)	11.92374		
2	07/18/06 20:06	TH-230	18	1	ALP172	ED	N	N	2.9949E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.985E-03)			6%			(0.000E+00)	11.92374		
3	07/18/06 20:06	TH-232	0	2	ALP172	ED	N	N	2.9949E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.985E-03)			6%			(0.000E+00)	11.92374		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.18

STL Richland

Batch Nbr: 6179344

Alpha Spec, Thiso by ALP , Calculated Results

7/19/2006 10:18:26 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.188222**	U4	1.00108E-02	0.033628	0.033628	1.00 Sa	108%		0.405199		
				(0.117188)		(6.1710E-03)	(0.020849)	(0.020849)	(0.027064)			0.151682		
	07/19/06	TH-229	R	**23.751929**		1.32441E+00	4.422214	4.422214	1.00 Sa	108%				
				(1.786325)		(5.1698E-02)	(0.217711)	(0.217711)	(0.027064)					
	07/19/06	TH-230	R	**0.628358**		3.50374E-02	0.11699	0.11699	1.00 Sa	108%		0.215366		
				(0.162934)		(8.5531E-03)	(0.029597)	(0.029597)	(0.027064)			0.059065		
	07/19/06	TH-232	R	**-0.035906**	U4	-2.00210E-03	-0.006685	-0.006685	1.00 Sa	108%		0.264268		
				(0.025582)		(1.4157E-03)	(0.004748)	(0.004748)	(0.027064)			0.083531		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796L1AA**	**PCI/SA**		06/07/06 10:25	07/19/06 00:16			1	1.00 Sa	
536403,000488					,J6F270218-2 v4.8.18		FILTER					THTF0678 Alq		0.085174 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	1	1	ALP173	ED	N	N	2.5374E-01		N	40%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(7.612E-03)			3%			(0.000E+00)	11.74071		
1	07/18/06 20:06	TH-229	205	2	ALP173	ED	Y	N	2.5374E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.612E-03)						(0.000E+00)	11.74071		
2	07/18/06 20:06	TH-230	3	0	ALP173	ED	N	N	2.5374E-01		N	40%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.612E-03)			3%			(0.000E+00)	11.74071		
3	07/18/06 20:06	TH-232	0	0	ALP173	ED	N	N	2.5374E-01		N	40%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.612E-03)			3%			(0.000E+00)	11.74071		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.055304**	U4	1.00108E-03	0.010035	0.010035	1.00 Sa	40%		0.663415		
				(0.123797)		(2.2384E-03)	(0.022456)	(0.022456)	(0.027064)			0.181945		
	07/19/06	TH-229	R	**8.512774**		4.08436E-01	1.609645	1.609645	1.00 Sa	40%				
				(0.810748)		(2.8701E-02)	(0.122988)	(0.122988)	(0.027064)					
	07/19/06	TH-230	R	**0.316504**		6.00641E-03	0.059846	0.059846	1.00 Sa	40%		0.285909		
				(0.18574)		(3.4678E-03)	(0.034956)	(0.034956)	(0.027064)					
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	40%		0.285909		
				(0.129212)		(0.0000E+00)	(0.024432)	(0.024432)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796N1AA**	**PCI/SA**		06/07/06 10:35	07/19/06 00:16			1	1.00 Sa	
536403,000489					,J6F270218-3 v4.8.18		FILTER					THTF0679 Alq		0.086335 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	4	0	ALP174	ED	N	N	2.4814E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(7.444E-03)			6%			(0.000E+00)	11.582749		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.18
STL Richland

1	07/18/06 20:06	TH-229	520	3	ALP174	ED	Y	N	2.4814E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(7.444E-03)				(0.000E+00)	11.582749	
2	07/18/06 20:06	TH-230	6	0	ALP174	ED	N	N	2.4814E-01	N	102%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(7.444E-03)		6%		(0.000E+00)	11.582749	
3	07/18/06 20:06	TH-232	0	0	ALP174	ED	N	N	2.4814E-01	N	102%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(7.444E-03)		6%		(0.000E+00)	11.582749	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.176536**		8.00854E-03	0.032469	0.032469	1.00 Sa	102%		0.119603		
				(0.089679)		(4.0043E-03)	(0.016391)	(0.016391)	(0.027064)					
	07/19/06	TH-229	R	**21.827578**		1.03811E+00	4.183573	4.183573	1.00 Sa	102%				
				(1.700517)		(4.5689E-02)	(0.222832)	(0.222832)	(0.027064)					
	07/19/06	TH-230	R	**0.252585**		1.20128E-02	0.048412	0.048412	1.00 Sa	102%		0.114084		
				(0.105581)		(4.9042E-03)	(0.020048)	(0.020048)	(0.027064)					
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	102%		0.114084		
				(0.051559)		(0.0000E+00)	(0.009882)	(0.009882)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796P1AA**	**PCI/SA**		06/07/06 10:50	07/19/06 00:16			1	1.00 Sa	
536403,000490					,J6F270218-4 v4.8.18		FILTER					THTF0680 Alq		0.085603 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	4	1	ALP175	ED	N	N	2.9360E-01		N	111%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(8.808E-03)			7%			(0.000E+00)	11.681784		
1	07/18/06 20:06	TH-229	661	2	ALP175	ED	Y	N	2.9360E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.808E-03)						(0.000E+00)	11.681784		
2	07/18/06 20:06	TH-230	8	0	ALP175	ED	N	N	2.9360E-01		N	111%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.808E-03)			7%			(0.000E+00)	11.681784		
3	07/18/06 20:06	TH-232	1	1	ALP175	ED	N	N	2.9360E-01		N	111%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.808E-03)			7%			(0.000E+00)	11.681784		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.131666**		7.00749E-03	0.024012	0.024012	1.00 Sa	111%		0.225639		
				(0.078402)		(4.1275E-03)	(0.014233)	(0.014233)	(0.027064)			0.061883		
	07/19/06	TH-229	R	**23.683061**		1.32141E+00	4.500721	4.500721	1.00 Sa	111%				
				(1.780339)		(5.1494E-02)	(0.221342)	(0.221342)	(0.027064)					
	07/19/06	TH-230	R	**0.287067**		1.60171E-02	0.054554	0.054554	1.00 Sa	111%		0.097244		
				(0.104549)		(5.6629E-03)	(0.019625)	(0.019625)	(0.027064)					
	07/19/06	TH-232	R	**0.017942**	U4	1.00108E-03	0.00341	0.00341	1.00 Sa	111%		0.215229		
				(0.040149)		(2.2384E-03)	(0.007628)	(0.007628)	(0.027064)			0.059028		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796Q1AA**	**PCI/SA**		06/07/06 11:00	07/19/06 00:16			1	1.00 Sa	
536403,000491					,J6F270218-5 v4.8.18		FILTER					THTF0681 Alq		0.08115 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	6	3	ALP176	ED	N	N	2.9146E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(8.744E-03)			6%			(0.000E+00)	12.322898		
1	07/18/06 20:06	TH-229	608	2	ALP176	ED	Y	N	2.9146E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.744E-03)						(0.000E+00)	12.322898		
2	07/18/06 20:06	TH-230	6	1	ALP176	ED	N	N	2.9146E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.744E-03)			6%			(0.000E+00)	12.322898		
3	07/18/06 20:06	TH-232	9	2	ALP176	ED	N	N	2.9146E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.744E-03)			6%			(0.000E+00)	12.322898		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.179886**		9.00966E-03	0.031099	0.031099	1.00 Sa	102%		0.335986		
				(0.10506)		(5.2017E-03)	(0.018077)	(0.018077)	(0.027064)			0.113895		
	07/19/06	TH-229	R	**23.145276**		1.21530E+00	4.169682	4.169682	1.00 Sa	102%				
				(1.760256)		(4.9388E-02)	(0.210621)	(0.210621)	(0.027064)					
	07/19/06	TH-230	R	**0.209719**		1.10118E-02	0.037781	0.037781	1.00 Sa	102%		0.228708		
				(0.097103)		(5.0053E-03)	(0.017361)	(0.017361)	(0.027064)			0.062724		
	07/19/06	TH-232	R	**0.305045**		1.60171E-02	0.054955	0.054955	1.00 Sa	102%		0.28064		
				(0.120564)		(6.1710E-03)	(0.021494)	(0.021494)	(0.027064)			0.088706		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796R1AA**	**PCI/SA**		06/07/06 11:20	07/19/06 00:16			1	1.00 Sa	
536403,000492					,J6F270218-6 v4.8.18		FILTER					THTF0682 Alq		0.08321 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	5	1	ALP177	ED	N	N	2.6130E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(7.839E-03)			6%			(0.000E+00)	12.017718		
1	07/18/06 20:06	TH-229	532	0	ALP177	ED	Y	N	2.6130E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.839E-03)						(0.000E+00)	12.017718		
2	07/18/06 20:06	TH-230	12	0	ALP177	ED	N	N	2.6130E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.839E-03)			6%			(0.000E+00)	12.017718		
3	07/18/06 20:06	TH-232	3	0	ALP177	ED	N	N	2.6130E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.839E-03)			6%			(0.000E+00)	12.017718		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.196176**		9.00963E-03	0.034777	0.034777	1.00 Sa	100%		0.261481		
				(0.101417)		(4.5875E-03)	(0.017869)	(0.017869)	(0.027064)			0.071713		
	07/19/06	TH-229	R	**22.066436**		1.06514E+00	4.076276	4.076276	1.00 Sa	100%				
				(1.710991)		(4.6180E-02)	(0.214913)	(0.214913)	(0.027064)					
	07/19/06	TH-230	R	**0.499012**		2.40256E-02	0.092181	0.092181	1.00 Sa	100%		0.112694		
				(0.150809)		(6.9356E-03)	(0.027361)	(0.027361)	(0.027064)					
	07/19/06	TH-232	R	**0.124753**		6.00641E-03	0.023045	0.023045	1.00 Sa	100%		0.112694		
				(0.072886)		(3.4678E-03)	(0.0134)	(0.0134)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796T1AA**	**PCI/SA**		06/07/06 10:10	07/19/06 00:16			1	1.00 Sa	
536403,000493					,J6F270218-7 v4.8.18		FILTER					THTF0683 Alq		0.084529 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:06	TH-228	1	1	ALP178	ED	N	N	3.1338E-01		N	94%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			499.4666666	998.95			Y		(9.401E-03)			6%			(0.000E+00)	11.830264		
1	07/18/06 20:06	TH-229	598	1	ALP178	ED	Y	N	3.1338E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(9.401E-03)						(0.000E+00)	11.830264		
2	07/18/06 20:06	TH-230	8	1	ALP178	ED	N	N	3.1338E-01		N	94%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(9.401E-03)			6%			(0.000E+00)	11.830264		
3	07/18/06 20:06	TH-232	0	2	ALP178	ED	N	N	3.1338E-01		N	94%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(9.401E-03)			6%			(0.000E+00)	11.830264		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.019076**	U4	1.00108E-03	0.003435	0.003435	1.00 Sa	94%		0.228836		
				(0.042688)		(2.2384E-03)	(0.007685)	(0.007685)	(0.027064)			0.062759		
	07/19/06	TH-229	R	**20.342262**		1.19628E+00	3.817317	3.817317	1.00 Sa	94%				
				(1.550316)		(4.8971E-02)	(0.193736)	(0.193736)	(0.027064)					
	07/19/06	TH-230	R	**0.272932**		1.50160E-02	0.051217	0.051217	1.00 Sa	94%		0.218273		
				(0.107267)		(5.7507E-03)	(0.019917)	(0.019917)	(0.027064)			0.059862		
	07/19/06	TH-232	R	**-0.03639**	U4	-2.00210E-03	-0.006829	-0.006829	1.00 Sa	94%		0.267835		
				(0.025932)		(1.4157E-03)	(0.004851)	(0.004851)	(0.027064)			0.084658		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H796W1AA**	**PCI/SA**		06/07/06 09:55	07/19/06 00:17			1	1.00 Sa	
536403,P-0660					,J6F270218-8 v4.8.18		FILTER					THTF0684 Alq		0.084749 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:07	TH-228	1	5	ALP114	ED	N	N	3.2873E-01		N	92%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			500.1666666	1000			Y		(9.862E-03)			6%			(0.000E+00)	11.799549		

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1	07/18/06 20:07	TH-229	613	1	ALP114	ED	Y	N	3.2873E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			500.1666666	1000			Y		(9.862E-03)				(0.000E+00)	11.799549	
2	07/18/06 20:07	TH-230	76	1	ALP114	ED	N	N	3.2873E-01	N	92%	N	1.0000E+00	4.5045E-01	1.0000E+00
			500.1666666	1000			Y		(9.862E-03)		6%		(0.000E+00)	11.799549	
3	07/18/06 20:07	TH-232	1	0	ALP114	ED	N	N	3.2873E-01	N	92%	N	1.0000E+00	4.5045E-01	1.0000E+00
			500.1666666	1000			Y		(9.862E-03)		6%		(0.000E+00)	11.799549	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**-0.055508**	U4	-3.00067E-03	-0.010021	-0.010021	1.00 Sa	92%		0.372198		
				(0.055702)		(2.9996E-03)	(0.01004)	(0.01004)	(0.027064)			0.136065		
	07/19/06	TH-229	R	**19.799875**		1.22459E+00	3.725207	3.725207	1.00 Sa	92%				
				(1.503633)		(4.9511E-02)	(0.187547)	(0.187547)	(0.027064)					
	07/19/06	TH-230	R	**2.663432**		1.50949E-01	0.501106	0.501106	1.00 Sa	92%		0.211614		
				(0.387186)		(1.7458E-02)	(0.067044)	(0.067044)	(0.027064)			0.058041		
	07/19/06	TH-232	R	**0.035277**	U4	1.99933E-03	0.006637	0.006637	1.00 Sa	92%		0.095602		
				(0.035414)		(1.9993E-03)	(0.006652)	(0.006652)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H797D1AA**	**PCI/SA**		06/07/06 10:20	07/19/06 00:17			1	1.00 Sa	
536403,P-0661					,J6F270218-9 v4.8.18		FILTER					THTF0685 Alq		0.08341 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:07	TH-228	4	3	ALP116	ED	N	N	2.5523E-01		N	107%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			500.1166666	1000.0833			Y		(7.657E-03)			7%			(0.000E+00)	11.989		
1	07/18/06 20:07	TH-229	557	0	ALP116	ED	Y	N	2.5523E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1166666	1000.0833			Y		(7.657E-03)						(0.000E+00)	11.989		
2	07/18/06 20:07	TH-230	2	0	ALP116	ED	N	N	2.5523E-01		N	107%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1166666	1000.0833			Y		(7.657E-03)			7%			(0.000E+00)	11.989		
3	07/18/06 20:07	TH-232	0	0	ALP116	ED	N	N	2.5523E-01		N	107%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1166666	1000.0833			Y		(7.657E-03)			7%			(0.000E+00)	11.989		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.110878**	U4	4.99838E-03	0.019702	0.019702	1.00 Sa	107%		0.372827		
				(0.097174)		(4.3580E-03)	(0.01723)	(0.01723)	(0.027064)			0.126387		
	07/19/06	TH-229	R	**23.565564**		1.11374E+00	4.363634	4.363634	1.00 Sa	107%				
				(1.814365)		(4.7191E-02)	(0.226545)	(0.226545)	(0.027064)					
	07/19/06	TH-230	R	**0.084616**	U4	3.99907E-03	0.015668	0.015668	1.00 Sa	107%		0.114655		
				(0.060304)		(2.8278E-03)	(0.011131)	(0.011131)	(0.027064)					
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	107%		0.114655		
				(0.051817)		(0.0000E+00)	(0.009595)	(0.009595)	(0.027064)					

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Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S1	FILTER	*STLE	AlpIsoWoBS	H797E1AA	PCI/SA		06/07/06 10:30	07/19/06 00:17			1	1.00 Sa	
536403,P-0662					,J6F270218-10 v4.8.18		FILTER					THTF0686 Alq		0.084329 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:07	TH-228	3	2	ALP119	ED	N	N	2.5157E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			500.1833333	1000.0833			Y		(7.547E-03)			6%			(0.000E+00)	11.858362		
1	07/18/06 20:07	TH-229	510	1	ALP119	ED	Y	N	2.5157E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1833333	1000.0833			Y		(7.547E-03)						(0.000E+00)	11.858362		
2	07/18/06 20:07	TH-230	4	0	ALP119	ED	N	N	2.5157E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1833333	1000.0833			Y		(7.547E-03)			6%			(0.000E+00)	11.858362		
3	07/18/06 20:07	TH-232	0	0	ALP119	ED	N	N	2.5157E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1833333	1000.0833			Y		(7.547E-03)			6%			(0.000E+00)	11.858362		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.089776**	U4	3.99797E-03	0.016128	0.016128	1.00 Sa	99%		0.330451		
				(0.08438)		(3.7404E-03)	(0.015131)	(0.015131)	(0.027064)			0.104456		
	07/19/06	TH-229	R	**21.628344**		1.01863E+00	4.049039	4.049039	1.00 Sa	99%				
				(1.688959)		(4.5161E-02)	(0.21675)	(0.21675)	(0.027064)					
	07/19/06	TH-230	R	**0.17129**		7.99707E-03	0.032067	0.032067	1.00 Sa	99%		0.116049		
				(0.087019)		(3.9985E-03)	(0.016189)	(0.016189)	(0.027064)					
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	99%		0.116049		
				(0.052447)		(0.0000E+00)	(0.009819)	(0.009819)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S1	FILTER	*STLE	AlpIsoWoBS	H797F1AA	PCI/SA		06/07/06 10:45	07/19/06 00:17			1	1.00 Sa	
536403,P-0663					,J6F270218-11 v4.8.18		FILTER					THTF0692 Alq		0.082187 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:07	TH-228	2	4	ALP120	ED	N	N	2.4073E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0421E+00	
			500.1166666	1000.05			Y		(7.222E-03)			6%			(0.000E+00)	12.167362		
1	07/18/06 20:07	TH-229	487	1	ALP120	ED	Y	N	2.4073E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1166666	1000.05			Y		(7.222E-03)						(0.000E+00)	12.167362		
2	07/18/06 20:07	TH-230	3	1	ALP120	ED	N	N	2.4073E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1166666	1000.05			Y		(7.222E-03)			6%			(0.000E+00)	12.167362		
3	07/18/06 20:07	TH-232	0	0	ALP120	ED	N	N	2.4073E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			500.1166666	1000.05			Y		(7.222E-03)			6%			(0.000E+00)	12.167362		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6179344

Alpha Spec, Thlso by ALP , Calculated Results

7/19/2006 10:18:27 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**-1.7632E-05**	U4	-7.33126E-07	-3.0871E-06	-3.0871E-06	1.00 Sa	99%		0.446592		
				(0.083298)		(3.4635E-03)	(0.014585)	(0.014585)	(0.027064)			0.158229		
	07/19/06	TH-229	R	**22.147308**		9.72773E-01	4.040898	4.040898	1.00 Sa	99%				
				(1.742633)		(4.4137E-02)	(0.219799)	(0.219799)	(0.027064)					
	07/19/06	TH-230	R	**0.114673**	U4	4.99865E-03	0.020923	0.020923	1.00 Sa	99%		0.275149		
				(0.083344)		(3.6048E-03)	(0.01516)	(0.01516)	(0.027064)			0.075464		
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	99%		0.12431		
				(0.05618)		(0.0000E+00)	(0.01025)	(0.01025)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H797H1AA**	**PCI/SA**		06/07/06 11:05	07/19/06 10:14			1	1.00 Sa	
536403,P-0664					,J6F270218-12 v4.8.18		FILTER					THTF0693 Alq		0.08332 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 06:04	TH-228	3	6	ALP171	ED	N	N	2.9087E-01		N	105%	N		1.0000E+00	4.5045E-01	1.0425E+00	
			499.4666666	998.95			Y		(8.726E-03)			6%			(0.000E+00)	12.001932		
1	07/19/06 06:04	TH-229	618	4	ALP171	ED	Y	N	2.9087E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.726E-03)						(0.000E+00)	12.001932		
2	07/19/06 06:04	TH-230	4	1	ALP171	ED	N	N	2.9087E-01		N	105%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.726E-03)			6%			(0.000E+00)	12.001932		
3	07/19/06 06:04	TH-232	1	0	ALP171	ED	N	N	2.9087E-01		N	105%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.726E-03)			6%			(0.000E+00)	12.001932		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**1.9535E-06**	U4	1.00212E-07	3.4661E-07	3.4661E-07	1.00 Sa	105%		0.420103		
				(0.082792)		(4.2471E-03)	(0.01469)	(0.01469)	(0.027064)			0.157261		
	07/19/06	TH-229	R	**22.923338**		1.23332E+00	4.240139	4.240139	1.00 Sa	105%				
				(1.740325)		(4.9813E-02)	(0.213329)	(0.213329)	(0.027064)					
	07/19/06	TH-230	R	**0.130247**		7.00749E-03	0.024092	0.024092	1.00 Sa	105%		0.223206		
				(0.077569)		(4.1275E-03)	(0.014283)	(0.014283)	(0.027064)			0.061215		
	07/19/06	TH-232	R	**0.037213**	U4	2.00214E-03	0.006883	0.006883	1.00 Sa	105%		0.100848		
				(0.037357)		(2.0021E-03)	(0.006899)	(0.006899)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H797J1AA**	**PCI/SA**		06/07/06 11:10	07/19/06 10:14			1	1.00 Sa	
536403,P-0665					,J6F270218-13 v4.8.18		FILTER					THTF0694 Alq		0.080991 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 06:04	TH-228	1	6	ALP172	ED	N	N	2.9949E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0425E+00	
			499.4666666	998.95			Y		(8.985E-03)			6%			(0.000E+00)	12.347086		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.18

STL Richland

1	07/19/06 06:04	TH-229	614	6	ALP172	ED	Y	N	2.9949E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(8.985E-03)				(0.000E+00)	12.347086	
2	07/19/06 06:04	TH-230	14	1	ALP172	ED	N	N	2.9949E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(8.985E-03)		6%		(0.000E+00)	12.347086	
3	07/19/06 06:04	TH-232	1	2	ALP172	ED	N	N	2.9949E-01	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			499.4666666	998.95			Y		(8.985E-03)		6%		(0.000E+00)	12.347086	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**-0.077987**	U4	-4.00417E-03	-0.013451	-0.013451	1.00 Sa	100%		0.419738		
				(0.062037)		(3.1656E-03)	(0.010672)	(0.010672)	(0.027064)			0.157124		
	07/19/06	TH-229	R	**22.717587**		1.22330E+00	4.084615	4.084615	1.00 Sa	100%				
				(1.72731)		(4.9672E-02)	(0.206211)	(0.206211)	(0.027064)					
	07/19/06	TH-230	R	**0.501944**		2.70288E-02	0.090249	0.090249	1.00 Sa	100%		0.223012		
				(0.147164)		(7.5579E-03)	(0.025958)	(0.025958)	(0.027064)			0.061162		
	07/19/06	TH-232	R	**6.2033E-07**	U4	3.34040E-08	1.1154E-07	1.1154E-07	1.00 Sa	100%		0.273651		
				(0.045537)		(2.4521E-03)	(0.008188)	(0.008188)	(0.027064)			0.086496		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H797K1AA**	**PCI/SA**		06/07/06 10:05	07/19/06 10:14			1	1.00 Sa	
536403,P-0666					,J6F270218-14 v4.8.18		FILTER					THTF0695 Alq		0.084957 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 06:04	TH-228	6	1	ALP173	ED	N	N	2.5374E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0425E+00	
			499.4666666	998.95			Y		(7.612E-03)			6%			(0.000E+00)	11.770613		
1	07/19/06 06:04	TH-229	531	2	ALP173	ED	Y	N	2.5374E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.612E-03)						(0.000E+00)	11.770613		
2	07/19/06 06:04	TH-230	9	0	ALP173	ED	N	N	2.5374E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.612E-03)			6%			(0.000E+00)	11.770613		
3	07/19/06 06:04	TH-232	0	0	ALP173	ED	N	N	2.5374E-01		N	102%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.612E-03)			6%			(0.000E+00)	11.770613		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.241331**		1.10118E-02	0.043659	0.043659	1.00 Sa	102%		0.263183		
				(0.111803)		(5.0053E-03)	(0.020073)	(0.020073)	(0.027064)			0.072179		
	07/19/06	TH-229	R	**22.172848**		1.06113E+00	4.181921	4.181921	1.00 Sa	102%				
				(1.721018)		(4.6158E-02)	(0.220975)	(0.220975)	(0.027064)					
	07/19/06	TH-230	R	**0.37652**		1.80192E-02	0.071014	0.071014	1.00 Sa	102%		0.113374		
				(0.129954)		(6.0064E-03)	(0.024175)	(0.024175)	(0.027064)					
	07/19/06	TH-232	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	102%		0.113374		
				(0.051238)		(0.0000E+00)	(0.009664)	(0.009664)	(0.027064)					

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Alpha Spec, Thiso by ALP , Calculated Results

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
16	Calc	S1	FILTER	*STLE	AlpIsoWoBS	H797M1AA	PCI/SA		06/07/06 11:15	07/19/06 10:14			1	1.00 Sa	
536403,P-0667					,J6F270218-15 v4.8.18		FILTER					THTF0696 Alq		0.087154 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 06:04	TH-228	3	0	ALP174	ED	N	N	2.4814E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0425E+00	
			499.4666666	998.95			Y		(7.444E-03)			6%			(0.000E+00)	11.473878		
1	07/19/06 06:04	TH-229	514	3	ALP174	ED	Y	N	2.4814E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.444E-03)						(0.000E+00)	11.473878		
2	07/19/06 06:04	TH-230	5	0	ALP174	ED	N	N	2.4814E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.444E-03)			6%			(0.000E+00)	11.473878		
3	07/19/06 06:04	TH-232	1	0	ALP174	ED	N	N	2.4814E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(7.444E-03)			6%			(0.000E+00)	11.473878		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.131208**		6.00641E-03	0.024352	0.024352	1.00 Sa	101%		0.118524		
				(0.076666)		(3.4678E-03)	(0.014161)	(0.014161)	(0.027064)					
	07/19/06	TH-229	R	**21.3722**		1.02609E+00	4.135161	4.135161	1.00 Sa	101%				
				(1.66816)		(4.5425E-02)	(0.221136)	(0.221136)	(0.027064)					
	07/19/06	TH-230	R	**0.208509**		1.00107E-02	0.040343	0.040343	1.00 Sa	101%		0.113012		
				(0.095113)		(4.4769E-03)	(0.018259)	(0.018259)	(0.027064)					
	07/19/06	TH-232	R	**0.041702**	U4	2.00214E-03	0.008069	0.008069	1.00 Sa	101%		0.113012		
				(0.04187)		(2.0021E-03)	(0.008088)	(0.008088)	(0.027064)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
17	Calc	S1	FILTER	*STLE	AlpIsoWoBS	H8DM81AA	PCI/SA	B	06/07/06 10:00	07/19/06 10:14			1	1.00 Sa	
0,INTRA-LAB BLANK					,J6F280000-344		FILTER					THTF0697 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 06:04	TH-228	4	1	ALP175	ED	N	N	2.9360E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0425E+00	
			499.4666666	998.95			Y		(8.808E-03)			6%			(0.000E+00)	1.00		
1	07/19/06 06:04	TH-229	605	2	ALP175	ED	Y	N	2.9360E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.808E-03)						(0.000E+00)	1.00		
2	07/19/06 06:04	TH-230	9	0	ALP175	ED	N	N	2.9360E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.808E-03)			6%			(0.000E+00)	1.00		
3	07/19/06 06:04	TH-232	0	1	ALP175	ED	N	N	2.9360E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.808E-03)			6%			(0.000E+00)	1.00		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:17

RADCALC v4.8.18

STL Richland

Batch Nbr: 6179344

Alpha Spec, Thiso by ALP , Calculated Results

7/19/2006 10:18:28 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-228	R	**0.011276**		7.00749E-03	0.024012	0.024012	1.00 Sa	101%		0.019324		
				(0.006712)		(4.1275E-03)	(0.014236)	(0.014236)	(0.017321)			0.0053		
	07/19/06	TH-229	R	**1.855332**		1.20929E+00	4.118842	4.118842	1.00 Sa	101%				
				(0.135829)		(4.9266E-02)	(0.208388)	(0.208388)	(0.017321)					
	07/19/06	TH-230	R	**0.027646**		1.80192E-02	0.061373	0.061373	1.00 Sa	101%		0.008324		
				(0.009515)		(6.0064E-03)	(0.020872)	(0.020872)	(0.017321)					
	07/19/06	TH-232	R	**-0.001536**	**U4**	-1.00105E-03	-0.00341	-0.00341	1.00 Sa	101%		0.018424		
				(0.001541)		(1.0011E-03)	(0.003417)	(0.003417)	(0.017321)			0.005053		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
18	Calc	S1	FILTER	*STLE	AlpIsoWoBS	**H8DM81AC**	**PCI/SA**	**S**	06/07/06 10:00	07/19/06 10:14		THSO0082	1	1.00 Sa	
0,INTRA-LAB CHECK					,J6F280000-344		FILTER					THSO0082 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/19/06 06:04	TH-229	637	2	ALP176	ED	Y	N	2.9146E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.744E-03)						(0.000E+00)	1.00		
2	07/19/06 06:04	TH-230	533	1	ALP176	ED	N	N	2.9146E-01		N	108%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			499.4666666	998.95			Y		(8.744E-03)			6%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	TH-229	R	**1.967968**		1.27336E+00	4.368892	4.368892	1.00 Sa	108%				
				(0.142946)		(5.0551E-02)	(0.217395)	(0.217395)	(0.017321)					
	07/19/06	TH-230	R	**1.647709**		1.06614E+00	3.657917	3.657917	1.00 Sa	108%	91%	0.01856		
				(0.157575)		(4.6234E-02)	(0.291387)	(0.291387)	(0.017321)			0.00509		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18

RADCALC v4.8.18

STL Richland

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/10/2006 3:32:04 PM

Lot No., Due Date: J6F140270; 07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6167169; RUSIO Uiso by ALP

SDG, Matrix: 31902; FILTER

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 [signature] **Date** 7/10/06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: Q167169

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: Sherryl A Adam Date: 7-11-06

7/10/2006 3:30:21 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mga	Sample Date / Units	Expected	Yield	Volumes
31902	**9H7DX010**			**J6F14027013**	P-0652	FILTER	6/14/2006 10:00:00		5/24/2006 8:15:00 AM			
RA-226	BXTE		0	7/1/2006 5:54:02 PM	**3.0674E-01**	1.589E-01	1.619E-01	5.026E-01	PCI/SA	0.94	1.0E+0	2.439E-1
U-234	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	6.116E-2
U-235	7YSR		0	7/8/2006 1:10:33 PM	**-1.8891E-02**	1.889E-02	1.895E-02	4.522E-01	PCI/SA	0.998	1.0E+0	6.116E-2
U-238	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	6.116E-2
31902	**9H7DXC10**			**J6F1402702**	000474	FILTER	6/14/2006 10:00:00		5/24/2006 8:10:00 AM			
RA-226	BXTE		0	7/1/2006 5:23:00 PM	**3.0178E-01**	2.836E-01	2.853E-01	1.008E+00	PCI/SA	0.867	1.0E+0	2.49E-1
U-234	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	6.241E-2
U-235	7YSR		0	7/8/2006 9:30:33 AM	**-1.848E-02**	1.848E-02	1.854E-02	4.425E-01	PCI/SA	1.004	1.0E+0	6.241E-2
U-238	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	6.241E-2
31902	**9H7DXD10**			**J6F1402703**	000477	FILTER	6/14/2006 10:00:00		5/24/2006 10:30:00 AM			
RA-226	BXTE		0	7/1/2006 5:22:00 PM	**4.4327E-01**	2.36E-01	2.404E-01	7.719E-01	PCI/SA	0.95	1.0E+0	2.489E-1
U-234	7YSR		0	7/8/2006 9:30:37 AM	**1.1566E+00**	3.401E-01	3.525E-01	4.694E-01	PCI/SA	1.039	1.0E+0	6.224E-2
U-235	7YSR		0	7/8/2006 9:30:37 AM	**0.0E+00**	0.0E+00	1.2E-01	2.656E-01	PCI/SA	1.039	1.0E+0	6.224E-2
U-238	7YSR		0	7/8/2006 9:30:37 AM	**5.6848E-01**	2.409E-01	2.451E-01	4.694E-01	PCI/SA	1.039	1.0E+0	6.224E-2
31902	**9H7DXF10**			**J6F1402704**	000478	FILTER	6/14/2006 10:00:00		5/24/2006 11:20:00 AM			
RA-226	BXTE		0	7/1/2006 5:22:01 PM	**-1.1411E-01**	1.323E-01	1.328E-01	6.297E-01	PCI/SA	0.93	1.0E+0	2.503E-1
U-234	7YSR		0	7/8/2006 9:30:47 AM	**1.7843E-01**	1.262E-01	1.27E-01	2.418E-01	PCI/SA	0.984	1.0E+0	6.26E-2
U-235	7YSR		0	7/8/2006 9:30:47 AM	**7.1362E-02**	9.098E-02	9.116E-02	4.273E-01	PCI/SA	0.984	1.0E+0	6.26E-2
U-238	7YSR		0	7/8/2006 9:30:47 AM	**-3.5705E-02**	2.525E-02	2.541E-02	5.042E-01	PCI/SA	0.984	1.0E+0	6.26E-2
31902	**9H7DXH10**			**J6F1402705**	000479	FILTER	6/14/2006 10:00:00		5/24/2006 9:15:00 AM			
RA-226	BXTE		0	7/1/2006 5:21:00 PM	**-1.8428E-01**	1.907E-01	1.918E-01	8.373E-01	PCI/SA	0.964	1.0E+0	2.496E-1
U-234	7YSR		0	7/8/2006 9:31:00 AM	**1.1133E-01**	1.113E-01	1.117E-01	3.017E-01	PCI/SA	0.882	1.0E+0	6.241E-2
U-235	7YSR		0	7/8/2006 9:31:00 AM	**0.0E+00**	0.0E+00	1.364E-01	3.017E-01	PCI/SA	0.882	1.0E+0	6.241E-2
U-238	7YSR		0	7/8/2006 9:31:00 AM	**-2.2288E-02**	2.229E-02	2.236E-02	5.333E-01	PCI/SA	0.882	1.0E+0	6.241E-2
31902	**9H7DXJ10**			**J6F1402706**	P-0644	FILTER	6/14/2006 10:00:00		5/24/2006 7:30:00 AM			
RA-226	BXTE		0	7/1/2006 5:25:00 PM	**2.0883E-01**	2.01E-01	2.023E-01	7.254E-01	PCI/SA	0.92	1.0E+0	2.499E-1
U-234	7YSR		0	7/8/2006 9:31:05 AM	**1.6712E-01**	1.489E-01	1.495E-01	5.905E-01	PCI/SA	0.923	1.0E+0	6.236E-2
U-235	7YSR		0	7/8/2006 9:31:05 AM	**7.9377E-02**	1.055E-01	1.057E-01	5.212E-01	PCI/SA	0.923	1.0E+0	6.236E-2
U-238	7YSR		0	7/8/2006 9:31:05 AM	**1.4203E-01**	1.496E-01	1.501E-01	6.719E-01	PCI/SA	0.923	1.0E+0	6.236E-2
31902	**9H7DXK10**			**J6F1402707**	P-0645	FILTER	6/14/2006 10:00:00		5/24/2006 8:00:00 AM			
RA-226	BXTE		0	7/1/2006 5:17:00 PM	**-2.6994E-01**	2.303E-01	2.32E-01	1.088E+00	PCI/SA	0.824	1.0E+0	2.507E-1
U-234	7YSR		0	7/8/2006 9:31:08 AM	**7.473E-02**	9.928E-02	9.946E-02	4.905E-01	PCI/SA	1.047	1.0E+0	6.267E-2
U-235	7YSR		0	7/8/2006 9:31:08 AM	**6.6861E-02**	9.959E-02	9.973E-02	5.252E-01	PCI/SA	1.047	1.0E+0	6.267E-2
U-238	7YSR		0	7/8/2006 9:31:08 AM	**-3.1475E-02**	1.574E-02	1.594E-02	5.252E-01	PCI/SA	1.047	1.0E+0	6.267E-2
31902	**9H7DXL10**			**J6F1402708**	P-0646	FILTER	6/14/2006 10:00:00		5/24/2006 8:30:00 AM			
RA-226	BXTE		0	7/1/2006 5:57:00 PM	**0.0E+00**	0.0E+00	2.114E-01	8.351E-01	PCI/SA	0.962	1.0E+0	2.487E-1
U-234	7YSR		0	7/8/2006 9:31:19 AM	**-4.3242E-02**	1.934E-02	1.965E-02	6.105E-01	PCI/SA	0.961	1.0E+0	6.233E-2
U-235	7YSR		0	7/8/2006 9:31:19 AM	**-1.7297E-02**	1.223E-02	1.231E-02	4.937E-01	PCI/SA	0.961	1.0E+0	6.233E-2
U-238	7YSR		0	7/8/2006 9:31:19 AM	**-5.189E-02**	2.118E-02	2.16E-02	6.409E-01	PCI/SA	0.961	1.0E+0	6.233E-2
31902	**9H7DXM10**			**J6F1402709**	P-0647	FILTER	6/14/2006 10:00:00		5/24/2006 9:00:00 AM			
RA-226	BXTE		0	7/1/2006 5:54:00 PM	**6.0055E-01**	2.624E-01	2.692E-01	8.065E-01	PCI/SA	0.941	1.0E+0	2.463E-1
U-234	7YSR		0	7/8/2006 9:31:21 AM	**3.2796E-01**	2.129E-01	2.146E-01	6.537E-01	PCI/SA	0.857	1.0E+0	6.16E-2
U-235	7YSR		0	7/8/2006 9:31:21 AM	**-1.9591E-02**	1.385E-02	1.395E-02	5.593E-01	PCI/SA	0.857	1.0E+0	6.16E-2
U-238	7YSR		0	7/8/2006 9:31:21 AM	**0.0E+00**	0.0E+00	1.499E-01	3.317E-01	PCI/SA	0.857	1.0E+0	6.16E-2
31902	**9H7DXP10**			**J6F14027010**	P-0648	FILTER	6/14/2006 10:00:00		5/24/2006 10:20:00 AM			
RA-226	BXTE		0	7/1/2006 5:58:00 PM	**2.4791E-01**	1.56E-01	1.581E-01	5.186E-01	PCI/SA	0.957	1.0E+0	2.481E-1
U-234	7YSR		0	7/8/2006 9:31:31 AM	**2.2422E-01**	1.998E-01	2.007E-01	7.923E-01	PCI/SA	1.112	1.0E+0	6.211E-2
U-235	7YSR		0	7/8/2006 9:31:31 AM	**1.4018E-01**	1.402E-01	1.407E-01	3.799E-01	PCI/SA	1.112	1.0E+0	6.211E-2
U-238	7YSR		0	7/8/2006 9:31:31 AM	**0.0E+00**	0.0E+00	1.717E-01	3.799E-01	PCI/SA	1.112	1.0E+0	6.211E-2
31902	**9H7DXQ10**			**J6F14027011**	P-0649	FILTER	6/14/2006 10:00:00		5/24/2006 11:10:00 AM			
RA-226	BXTE		0	7/1/2006 5:55:00 PM	**-1.0043E-01**	2.029E-01	2.032E-01	8.745E-01	PCI/SA	0.836	1.0E+0	2.48E-1

6167169, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 42 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JNL1AA=> , mat:FILTER | Air *wo:H7JNL1AA=> , mat:FILTER | Air *wo:H7JNL1AC=> , mat:FILTER | Air *wo:H7JNL1AC=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot uncert	Sample Date / MDA	Units	Expected	Yield	Volumes	
U-234	7YSR	0		7/8/2006 9:31:32 AM	**-4.2646E-02**	3.016E-02	3.035E-02	6.021E-01	PCI/SA		1.031	1.0E+0	6.194E-2
U-235	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	6.194E-2
U-238	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	6.194E-2
31902	**9H7DXV10**			**J6F14027012**	P-0651	FILTER	6/14/2006 10:00:00	5/24/2006 7:35:00 AM					
RA-226	BXTE	0		7/1/2006 5:52:00 PM	**-2.0083E-01**	2.26E-01	2.27E-01	9.441E-01	PCI/SA		0.898	1.0E+0	2.478E-1
U-234	7YSR	0		7/8/2006 1:10:30 PM	**-2.0063E-02**	2.006E-02	2.013E-02	4.801E-01	PCI/SA		0.992	1.0E+0	6.227E-2
U-235	7YSR	0		7/8/2006 1:10:30 PM	**0.0E+00**	0.0E+00	1.227E-01	2.716E-01	PCI/SA		0.992	1.0E+0	6.227E-2
U-238	7YSR	0		7/8/2006 1:10:30 PM	**6.0099E-02**	1.042E-01	1.043E-01	5.665E-01	PCI/SA		0.992	1.0E+0	6.227E-2
31902	**H7JNL1AB**			**J6F160000169**	INTRA-LAB BLANK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
U-234	7YSR	0	B	7/8/2006 1:10:38 PM	**-2.4567E-03**	1.737E-03	1.747E-03	3.47E-02	PCI/SA		1.007	1.0E+0	1.0E+0
U-235	7YSR	0	B	7/8/2006 1:10:38 PM	**0.0E+00**	0.0E+00	7.52E-03	1.664E-02	PCI/SA		1.007	1.0E+0	1.0E+0
U-238	7YSR	0	B	7/8/2006 1:10:38 PM	**-2.4567E-03**	1.737E-03	1.747E-03	3.47E-02	PCI/SA		1.007	1.0E+0	1.0E+0
31902	**H7JNL1CS**			**J6F160000169**	INTRA-LAB CHECK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
U-234	7YSR	0	S	7/8/2006 1:10:48 PM	**1.0543E+00**	8.346E-02	1.17E-01	3.16E-02	PCI/SA	9.7501E-01	0.924	1.0E+0	1.0E+0
U-235	7YSR	0	S	7/8/2006 1:10:48 PM	**2.6389E-02**	1.319E-02	1.335E-02	1.788E-02	PCI/SA	4.4486E-02	0.924	1.0E+0	1.0E+0
U-238	7YSR	0	S	7/8/2006 1:10:48 PM	**1.0661E+00**	8.399E-02	1.181E-01	3.729E-02	PCI/SA	1.0211E+00	0.924	1.0E+0	1.0E+0

6167169, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 42 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JNL1AA=> , mat:FILTER | Air *wo:H7JNL1AA=> , mat:FILTER | Air *wo:H7JNL1AC=> , mat:FILTER | Air *wo:H7JNL1AC=> , mat:FILTER | Air.

7/10/2006 3:30:23 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/10/2005, 7/15/2006, Batch: '6167169', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6167169						
AC		**InCalc**	**HansenM**	6/26/2006 8:41:40		
SC			wagarr	IsBatched	6/16/2006 4:55:22 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	6/26/2006 8:41:40 AM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	6/26/2006 8:42:11 AM	RICH-RC-5016 REVISION 5
SC			AndersonE	Sep1C	7/7/2006 9:31:08 AM	RICH-RC-5067 REV 6
SC			ManisD	Sep2C	7/7/2006 4:43:33 PM	RICH-RC-5039 REV 5
SC			DAWKINSO	InCnt1	7/7/2006 6:10:23 PM	RICH-RD-0008 REVISION 4
SC			DAWKINSO	InCalc	7/9/2006 3:10:14 PM	RICH-RD-0008 REVISION 4
AC			**HansenM**	6/26/2006 8:42:11		
AC			**AndersonE**	7/7/2006 9:31:08 AM		
AC			**ManisD**	7/7/2006 4:43:33 PM		
AC			**DAWKINSO**	7/7/2006 6:10:23 PM		
AC			**DAWKINSO**	7/9/2006 3:10:14 PM		

AC: Accepting Entry; SC: Status Change

6/23/2006 4:55:53 PM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167169 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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 H7DWT-1-AG J6F140270-1-SAMP 05/24/2006 07:40	0.833g	~~505.76g~~ MH 6-23-06		0.00E00g AmtRec: FILTER #Containers: 1		200		Scr:	Alpha:	Beta:
2 H7DXC-1-AG J6F140270-2-SAMP 05/24/2006 08:10	0.833sa,g	501.98sa,g	37.61g,in	0.0624g AmtRec: FILTER #Containers: 1	UITC15772 05/24/06,pd 01/20/04,r			Scr:	Alpha:	Beta:
3 H7DXD-1-AG J6F140270-3-SAMP 05/24/2006 10:30	0.833sa,g	502.56sa,g	37.55g,in	0.0622g AmtRec: FILTER #Containers: 1	UITC15773 05/24/06,pd 01/20/04,r			Scr:	Alpha:	Beta:
4 H7DXF-1-AG J6F140270-4-SAMP 05/24/2006 11:20	0.833sa,g	500.58sa,g	37.62g,in	0.0626g AmtRec: FILTER #Containers: 1	UITC15774 05/24/06,pd 01/20/04,r			Scr:	Alpha:	Beta:
5 H7DXH-1-AG J6F140270-5-SAMP 05/24/2006 09:15	0.833sa,g	501.49sa,g	37.57g,in	0.0624g AmtRec: FILTER #Containers: 1	UITC15775 05/24/06,pd 01/20/04,r			Scr:	Alpha:	Beta:
6 H7DXJ-1-AG J6F140270-6-SAMP 05/24/2006 07:30	0.833sa,g	500.55sa,g	37.47g,in	0.0624g AmtRec: FILTER #Containers: 1	UITC15776 05/24/06,pd 01/20/04,r			Scr:	Alpha:	Beta:
7 H7DXK-1-AG J6F140270-7-SAMP 05/24/2006 08:00	0.833sa,g	500.16sa,g	37.63g,in	0.0627g AmtRec: FILTER #Containers: 1	UITC15777 05/24/06,pd 01/20/04,r			Scr:	Alpha:	Beta:

6/23/2006 4:55:54 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167169 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
8 **H7DXL-1-AG** J6F140270-8-SAMP 05/24/2006 08:30	0.833sa,g	504.49sa,g	37.75g,in	0.0623g	UITC15778 05/24/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
9 **H7DXM-1-AG** J6F140270-9-SAMP 05/24/2006 09:00	0.833sa,g	507.47sa,g	37.53g,in	0.0616g	UITC15779 05/24/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
10 **H7DXP-1-AG** J6F140270-10-SAMP 05/24/2006 10:20	0.833sa,g	506.00sa,g	37.73g,in	0.0621g	UITC15780 05/24/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
11 **H7DXQ-1-AG** J6F140270-11-SAMP 05/24/2006 11:10	0.833sa	505.01sa	37.55g,in	0.0619g	UITC15781 05/24/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
12 **H7DXV-1-AG** J6F140270-12-SAMP 05/24/2006 07:35	0.833sa,g	504.85sa,g	37.74g,in	0.0623g	UITC15782 05/24/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
13 **H7DX0-1-AG** J6F140270-13-SAMP 05/24/2006 08:15	0.833sa,g	512.80sa,g	37.65g,in	0.0612g	UITC15783 05/24/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
14 **H7JNL-1-AA-B** J6F160000-169-BLK 05/24/2006 07:40			1.00sa,in	1.00sa	UITC15784 05/24/06,pd 01/20/04,r					
		AmtRec:		#Containers: 1			Scr:	Alpha:		Beta:

6/23/2006 4:55:55 PM

Sample Preparation/Analysis

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167169 **pCi/sampl**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
15H7JNL-1-AC-C J6F160000-169-LCS			1.00sa,in	1.00sa	UISF0459 06/15/06,pd 01/20/04,r					

05/24/2006 07:40 AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AG-SAMP Constituent List:

U-232	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	U-234	RDL:1	pCi/sam	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/sam	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/sam	LCL:	UCL:	RPD:

H7JNL1AA-BLK:

U-232	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	U-234	RDL:1	pCi/sam	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/sam	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/sam	LCL:	UCL:	RPD:

H7JNL1AC-LCS:

U-232	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	Uranium	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20

H7DWT1AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JNL1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JNL1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

Batch Nbr: 6167169

Alpha Spec, UIso by ALP , Results

7/9/2006 12:09:37 PM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	MLcC	MDC	QC	Yield	RYld
UIso by ALP				Richland Standard AlpIso Wo Blk Subt.										
Calc	SR	FILTER	H7DXC1AG	U-234	0.00E+00	(1.13E-01)	U4	PCI/SA	R		2.50E-01		100%	
Calc	SR	FILTER	H7DXC1AG	U-235	-1.85E-02	(1.85E-02)	U4	PCI/SA	R	9.61E-02	4.42E-01		100%	
Calc	SR	FILTER	H7DXC1AG	U-238	0.00E+00	(1.13E-01)	U4	PCI/SA	R		2.50E-01		100%	
Calc	SR	FILTER	H7DXD1AG	U-234	1.16E+00	(3.52E-01)		PCI/SA	R	1.02E-01	4.69E-01		104%	
Calc	SR	FILTER	H7DXD1AG	U-235	0.00E+00	(1.20E-01)	U4	PCI/SA	R		2.66E-01		104%	
Calc	SR	FILTER	H7DXD1AG	U-238	5.68E-01	(2.45E-01)		PCI/SA	R	1.02E-01	4.69E-01		104%	
Calc	SR	FILTER	H7DXF1AG	U-234	1.78E-01	(1.27E-01)	U4	PCI/SA	R		2.42E-01		98%	
Calc	SR	FILTER	H7DXF1AG	U-235	7.14E-02	(9.12E-02)	U4	PCI/SA	R	9.28E-02	4.27E-01		98%	
Calc	SR	FILTER	H7DXF1AG	U-238	-3.57E-02	(2.54E-02)	U4	PCI/SA	R	1.31E-01	5.04E-01		98%	
Calc	SR	FILTER	H7DXH1AG	U-234	1.11E-01	(1.12E-01)	U4	PCI/SA	R		3.02E-01		88%	
Calc	SR	FILTER	H7DXH1AG	U-235	0.00E+00	(1.36E-01)	U4	PCI/SA	R		3.02E-01		88%	
Calc	SR	FILTER	H7DXH1AG	U-238	-2.23E-02	(2.24E-02)	U4	PCI/SA	R	1.16E-01	5.33E-01		88%	
Calc	SR	FILTER	H7DXJ1AG	U-234	1.67E-01	(1.50E-01)	U4	PCI/SA	R	1.54E-01	5.90E-01		92%	
Calc	SR	FILTER	H7DXJ1AG	U-235	7.94E-02	(1.06E-01)	U4	PCI/SA	R	1.19E-01	5.21E-01		92%	
Calc	SR	FILTER	H7DXJ1AG	U-238	1.42E-01	(1.50E-01)	U4	PCI/SA	R	1.94E-01	6.72E-01		92%	
Calc	SR	FILTER	H7DXK1AG	U-234	7.47E-02	(9.95E-02)	U4	PCI/SA	R	1.12E-01	4.91E-01		105%	
Calc	SR	FILTER	H7DXK1AG	U-235	6.69E-02	(9.97E-02)	U4	PCI/SA	R	1.29E-01	5.25E-01		105%	
Calc	SR	FILTER	H7DXK1AG	U-238	-3.15E-02	(1.59E-02)	U4	PCI/SA	R	1.29E-01	5.25E-01		105%	
Calc	SR	FILTER	H7DXL1AG	U-234	-4.32E-02	(1.97E-02)	U4	PCI/SA	R	1.59E-01	6.11E-01		96%	
Calc	SR	FILTER	H7DXL1AG	U-235	-1.73E-02	(1.23E-02)	U4	PCI/SA	R	1.01E-01	4.94E-01		96%	
Calc	SR	FILTER	H7DXL1AG	U-238	-5.19E-02	(2.16E-02)	U4	PCI/SA	R	1.74E-01	6.41E-01		96%	
Calc	SR	FILTER	H7DXM1AG	U-234	3.28E-01	(2.15E-01)	U4	PCI/SA	R	1.61E-01	6.54E-01		86%	
Calc	SR	FILTER	H7DXM1AG	U-235	-1.96E-02	(1.39E-02)	U4	PCI/SA	R	1.14E-01	5.59E-01		86%	
Calc	SR	FILTER	H7DXM1AG	U-238	0.00E+00	(1.50E-01)	U4	PCI/SA	R		3.32E-01		86%	
Calc	SR	FILTER	H7DXP1AG	U-234	2.24E-01	(2.01E-01)	U4	PCI/SA	R	2.06E-01	7.92E-01		111%	
Calc	SR	FILTER	H7DXP1AG	U-235	1.40E-01	(1.41E-01)	U4	PCI/SA	R		3.80E-01		111%	
Calc	SR	FILTER	H7DXP1AG	U-238	0.00E+00	(1.72E-01)	U4	PCI/SA	R		3.80E-01		111%	
Calc	SR	FILTER	H7DXQ1AG	U-234	-4.26E-02	(3.04E-02)	U4	PCI/SA	R	1.57E-01	6.02E-01		103%	
Calc	SR	FILTER	H7DXQ1AG	U-235	0.00E+00	(1.30E-01)	U4	PCI/SA	R		2.89E-01		103%	
Calc	SR	FILTER	H7DXQ1AG	U-238	0.00E+00	(1.30E-01)	U4	PCI/SA	R		2.89E-01		103%	
Calc	SR	FILTER	H7DXV1AG	U-234	-2.01E-02	(2.01E-02)	U4	PCI/SA	R	1.04E-01	4.80E-01		99%	
Calc	SR	FILTER	H7DXV1AG	U-235	0.00E+00	(1.23E-01)	U4	PCI/SA	R		2.72E-01		99%	
Calc	SR	FILTER	H7DXV1AG	U-238	6.01E-02	(1.04E-01)	U4	PCI/SA	R	1.48E-01	5.66E-01		99%	
Calc	SR	FILTER	H7DX01AG	U-234	0.00E+00	(1.16E-01)	U4	PCI/SA	R		2.56E-01		100%	
Calc	SR	FILTER	H7DX01AG	U-235	-1.89E-02	(1.90E-02)	U4	PCI/SA	R	9.82E-02	4.52E-01		100%	
Calc	SR	FILTER	H7DX01AG	U-238	0.00E+00	(1.16E-01)	U4	PCI/SA	R		2.56E-01		100%	
Calc	SR	FILTER	H7JNL1AA	U-234	-2.46E-03	(1.75E-03)	U4	PCI/SA	R	9.04E-03	3.47E-02	B	101%	

ok
7/10/06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:51
RADCALC v4.8.18
STL Richland

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	SR	FILTER	**H7JNL1AA**	U-235	**0.00E+00**	**(7.52E-03)**	**U4**	PCI/SA	R		1.66E-02	**B**	101%	
Calc	SR	FILTER	**H7JNL1AA**	U-238	**-2.46E-03**	**(1.75E-03)**	**U4**	PCI/SA	R	9.04E-03	3.47E-02	**B**	101%	
Calc	SR	FILTER	**H7JNL1AC**	U-234	**1.05E+00**	**(1.17E-01)**		PCI/SA	R	6.87E-03	3.16E-02	**S**	92%	108%
Calc	SR	FILTER	**H7JNL1AC**	U-235	**2.64E-02**	**(1.34E-02)**		PCI/SA	R		1.79E-02	**S**	92%	59%
Calc	SR	FILTER	**H7JNL1AC**	U-238	**1.07E+00**	**(1.18E-01)**		PCI/SA	R	9.71E-03	3.73E-02	**S**	92%	104%

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:56
RADCALC v4.8.18
STL Richland

Batch Nbr: 6167169

Alpha Spec, UIso by ALP , Calculated Results

7/9/2006 12:09:38 PM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXC1AG**	**PCI/SA**		05/24/06 08:10	07/08/06 09:30			1	1.00 Sa	
536403,000474					,J6F140270-2 v4.8.18		FILTER					UITC15772 Alq		0.062411 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:50	U-232	789	5	ALP8	ED	Y	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)						(0.000E+00)	16.022788		
1	07/08/06 07:50	U-234	0	0	ALP8	ED	N	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)			5%			(0.000E+00)	16.022788		
2	07/08/06 07:50	U-235	0	1	ALP8	ED	N	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)			5%			(0.000E+00)	16.022788		
3	07/08/06 07:50	U-238	0	0	ALP8	ED	N	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)			5%			(0.000E+00)	16.022788		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**72.790252**		3.93803E+00	10.085294	10.085294	1.00 Sa	100%				
				(5.384004)		(1.4039E-01)	(0.469911)	(0.469911)	(0.028284)					
	07/09/06	U-234	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	100%		0.250332		
				(0.113134)		(0.0000E+00)	(0.015675)	(0.015675)	(0.028284)					
	07/09/06	U-235	R	**-0.01848**	**U4**	-9.99783E-04	-0.00256	-0.00256	1.00 Sa	100%		0.442454		
				(0.018539)		(9.9978E-04)	(0.002564)	(0.002564)	(0.028284)			0.096118		
	07/09/06	U-238	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	100%		0.250332		
				(0.113134)		(0.0000E+00)	(0.015675)	(0.015675)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXD1AG**	**PCI/SA**		05/24/06 10:30	07/08/06 09:30			1	1.00 Sa	
536403,000477					,J6F140270-3 v4.8.18		FILTER					UITC15773 Alq		0.06224 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:50	U-232	771	3	ALP10	ED	Y	N	3.6914E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0333333	1000.3166			Y		(1.107E-02)						(0.000E+00)	16.066933		
1	07/08/06 07:50	U-234	12	1	ALP10	ED	N	N	3.6914E-01		N	104%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0333333	1000.3166			Y		(1.107E-02)			5%			(0.000E+00)	16.066933		
2	07/08/06 07:50	U-235	0	0	ALP10	ED	N	N	3.6914E-01		N	104%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0333333	1000.3166			Y		(1.107E-02)			5%			(0.000E+00)	16.066933		
3	07/08/06 07:50	U-238	6	1	ALP10	ED	N	N	3.6914E-01		N	104%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0333333	1000.3166			Y		(1.107E-02)			5%			(0.000E+00)	16.066933		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.18

STL Richland

Batch Nbr: 6167169 Alpha Spec, Uiso by ALP , Calculated Results 7/9/2006 12:09:38 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**75.509662**		3.85136E+00	10.43333	10.43333	1.00 Sa	104%				
				(5.599559)		(1.3882E-01)	(0.489282)	(0.489282)	(0.028284)					
	07/09/06	U-234	R	**1.156563**		5.89903E-02	0.159805	0.159805	1.00 Sa	104%		0.469425		
				(0.352454)		(1.7346E-02)	(0.047826)	(0.047826)	(0.028284)			0.101965		
	07/09/06	U-235	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	104%		0.265617		
				(0.120042)		(0.0000E+00)	(0.016586)	(0.016586)	(0.028284)					
	07/09/06	U-238	R	**0.568482**		2.89953E-02	0.078548	0.078548	1.00 Sa	104%		0.469425		
				(0.245137)		(1.2286E-02)	(0.033569)	(0.033569)	(0.028284)			0.101965		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXF1AG**	**PCI/SA**		05/24/06 11:20	07/08/06 09:30			1	1.00 Sa	
536403,000478					,J6F140270-4 v4.8.18		FILTER					UITC15774 Alq		0.062602 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:50	U-232	810	9	ALP11	ED	Y	N	4.0933E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.2833			Y		(1.228E-02)						(0.000E+00)	15.973854		
1	07/08/06 07:50	U-234	2	0	ALP11	ED	N	N	4.0933E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.2833			Y		(1.228E-02)			5%			(0.000E+00)	15.973854		
2	07/08/06 07:50	U-235	1	1	ALP11	ED	N	N	4.0933E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.2833			Y		(1.228E-02)			5%			(0.000E+00)	15.973854		
3	07/08/06 07:50	U-238	0	2	ALP11	ED	N	N	4.0933E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.2833			Y		(1.228E-02)			5%			(0.000E+00)	15.973854		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**70.97515**		4.03763E+00	9.863931	9.863931	1.00 Sa	98%				
				(5.235171)		(1.4222E-01)	(0.456374)	(0.456374)	(0.028284)					
	07/09/06	U-234	R	**0.178429**	U4	9.99167E-03	0.024798	0.024798	1.00 Sa	98%		0.241772		
				(0.126966)		(7.0652E-03)	(0.017588)	(0.017588)	(0.028284)					
	07/09/06	U-235	R	**0.071362**	U4	3.99612E-03	0.009918	0.009918	1.00 Sa	98%		0.427348		
				(0.091161)		(5.0949E-03)	(0.012656)	(0.012656)	(0.028284)			0.092843		
	07/09/06	U-238	R	**-0.035705**	U4	-1.99943E-03	-0.004962	-0.004962	1.00 Sa	98%		0.504217		
				(0.025407)		(1.4138E-03)	(0.003519)	(0.003519)	(0.028284)			0.131301		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXH1AG**	**PCI/SA**		05/24/06 09:15	07/08/06 09:31			1	1.00 Sa	
536403,000479					,J6F140270-5 v4.8.18		FILTER					UITC15775 Alq		0.062406 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:50	U-232	651	6	ALP12	ED	Y	N	3.6724E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2333333	1000.2333			Y		(1.102E-02)						(0.000E+00)	16.02419		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4 RADCALC v4.8.18
STL Richland

Batch Nbr: 6167169 Alpha Spec, UIso by ALP , Calculated Results 7/9/2006 12:09:38 PM

1	07/08/06 07:50	U-234	1	0	ALP12	ED	N	N	3.6724E-01	N	88%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2333333	1000.2333			Y		(1.102E-02)		4%		(0.000E+00)	16.02419	
2	07/08/06 07:50	U-235	0	0	ALP12	ED	N	N	3.6724E-01	N	88%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2333333	1000.2333			Y		(1.102E-02)		4%		(0.000E+00)	16.02419	
3	07/08/06 07:50	U-238	0	1	ALP12	ED	N	N	3.6724E-01	N	88%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2333333	1000.2333			Y		(1.102E-02)		4%		(0.000E+00)	16.02419	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**63.784168**		3.24521E+00	8.836702	8.836702	1.00 Sa	88%				
				(4.833456)		(1.2745E-01)	(0.436711)	(0.436711)	(0.028284)					
	07/09/06	U-234	R	**0.111334**	**U4**	4.99417E-03	0.015424	0.015424	1.00 Sa	88%		0.301715		
				(0.111703)		(4.9942E-03)	(0.01545)	(0.01545)	(0.028284)					
	07/09/06	U-235	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	88%		0.301715		
				(0.136355)		(0.0000E+00)	(0.018891)	(0.018891)	(0.028284)					
	07/09/06	U-238	R	**-0.022288**	**U4**	-9.99767E-04	-0.003088	-0.003088	1.00 Sa	88%		0.533346		
				(0.022361)		(9.9977E-04)	(0.003093)	(0.003093)	(0.028284)			0.115884		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXJ1AG**	**PCI/SA**		05/24/06 07:30	07/08/06 09:31			1	1.00 Sa	
536403,P-0644					,J6F140270-6 v4.8.18		FILTER					UITC15776 Alq		0.062356 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:51	U-232	695	26	ALP69	ED	Y	N	3.7411E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.15	2500.0166			Y		(1.122E-02)						(0.000E+00)	16.036839		
1	07/08/06 07:51	U-234	2	5	ALP69	ED	N	N	3.7411E-01		N	92%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.15	2500.0166			Y		(1.122E-02)			4%			(0.000E+00)	16.036839		
2	07/08/06 07:51	U-235	1	3	ALP69	ED	N	N	3.7411E-01		N	92%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.15	2500.0166			Y		(1.122E-02)			4%			(0.000E+00)	16.036839		
3	07/08/06 07:51	U-238	2	8	ALP69	ED	N	N	3.7411E-01		N	92%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.15	2500.0166			Y		(1.122E-02)			4%			(0.000E+00)	16.036839		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**66.848375**		3.46200E+00	9.253915	9.253915	1.00 Sa	92%				
				(5.023803)		(1.3173E-01)	(0.448395)	(0.448395)	(0.028284)					
	07/09/06	U-234	R	**0.167117**	**U4**	7.99252E-03	0.023134	0.023134	1.00 Sa	92%		0.590452		
				(0.149531)		(7.1222E-03)	(0.020657)	(0.020657)	(0.028284)			0.153764		
	07/09/06	U-235	R	**0.079377**	**U4**	3.79626E-03	0.010988	0.010988	1.00 Sa	92%		0.521175		
				(0.105663)		(5.0441E-03)	(0.014613)	(0.014613)	(0.028284)			0.119105		
	07/09/06	U-238	R	**0.142026**	**U4**	6.79253E-03	0.019661	0.019661	1.00 Sa	92%		0.671871		
				(0.150062)		(7.1558E-03)	(0.020743)	(0.020743)	(0.028284)			0.194497		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:6

RADCALC v4.8.18

STL Richland

Batch Nbr: 6167169 Alpha Spec, Uiso by ALP , Calculated Results 7/9/2006 12:09:38 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXK1AG**	**PCI/SA**		05/24/06 08:00	07/08/06 09:31			1	1.00 Sa	
536403,P-0645					,J6F140270-7 v4.8.18		FILTER					UITC15777 Alq		0.062672 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:51	U-232	771	31	ALP71	ED	Y	N	3.6536E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	2500.0333			Y		(1.096E-02)						(0.000E+00)	15.95621		
1	07/08/06 07:51	U-234	1	3	ALP71	ED	N	N	3.6536E-01		N	105%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	2500.0333			Y		(1.096E-02)			5%			(0.000E+00)	15.95621		
2	07/08/06 07:51	U-235	1	4	ALP71	ED	N	N	3.6536E-01		N	105%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	2500.0333			Y		(1.096E-02)			5%			(0.000E+00)	15.95621		
3	07/08/06 07:51	U-238	0	4	ALP71	ED	N	N	3.6536E-01		N	105%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	2500.0333			Y		(1.096E-02)			5%			(0.000E+00)	15.95621		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**75.57313**		3.84164E+00	10.51456	10.51456	1.00 Sa	105%				
				(5.607577)		(1.3882E-01)	(0.493819)	(0.493819)	(0.028284)					
	07/09/06	U-234	R	**0.07473**	**U4**	3.79877E-03	0.010397	0.010397	1.00 Sa	105%		0.490529		
				(0.099456)		(5.0465E-03)	(0.013825)	(0.013825)	(0.028284)			0.112086		
	07/09/06	U-235	R	**0.066861**	**U4**	3.39877E-03	0.009302	0.009302	1.00 Sa	105%		0.525188		
				(0.099731)		(5.0624E-03)	(0.013865)	(0.013865)	(0.028284)			0.129425		
	07/09/06	U-238	R	**-0.031475**	**U4**	-1.59998E-03	-0.004379	-0.004379	1.00 Sa	105%		0.525188		
				(0.015938)		(7.9999E-04)	(0.002203)	(0.002203)	(0.028284)			0.129425		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXL1AG**	**PCI/SA**		05/24/06 08:30	07/08/06 09:31			1	1.00 Sa	
536403,P-0646					,J6F140270-8 v4.8.18		FILTER					UITC15778 Alq		0.062332 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:51	U-232	672	23	ALP83	ED	Y	N	3.4771E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	2500.0333			Y		(1.043E-02)						(0.000E+00)	16.043185		
1	07/08/06 07:51	U-234	0	5	ALP83	ED	N	N	3.4771E-01		N	96%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	2500.0333			Y		(1.043E-02)			5%			(0.000E+00)	16.043185		
2	07/08/06 07:51	U-235	0	2	ALP83	ED	N	N	3.4771E-01		N	96%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	2500.0333			Y		(1.043E-02)			5%			(0.000E+00)	16.043185		
3	07/08/06 07:51	U-238	0	6	ALP83	ED	N	N	3.4771E-01		N	96%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	2500.0333			Y		(1.043E-02)			5%			(0.000E+00)	16.043185		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**69.584393**		3.34800E+00	9.628855	9.628855	1.00 Sa	96%				
				(5.251945)		(1.2952E-01)	(0.471383)	(0.471383)	(0.028284)					
	07/09/06	U-234	R	**-0.043242**	U4	-1.99997E-03	-0.005984	-0.005984	1.00 Sa	96%		0.61052		
				(0.019655)		(8.9442E-04)	(0.002698)	(0.002698)	(0.028284)			0.158993		
	07/09/06	U-235	R	**-0.017297**	U4	-7.99989E-04	-0.002393	-0.002393	1.00 Sa	96%		0.493715		
				(0.012311)		(5.6568E-04)	(0.001698)	(0.001698)	(0.028284)			0.100556		
	07/09/06	U-238	R	**-0.05189**	U4	-2.39997E-03	-0.00718	-0.00718	1.00 Sa	96%		0.640852		
				(0.021599)		(9.7978E-04)	(0.00296)	(0.00296)	(0.028284)			0.174168		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXM1AG**	**PCI/SA**		05/24/06 09:00	07/08/06 09:31			1	1.00 Sa	
536403,P-0647					,J6F140270-9 v4.8.18		FILTER					UITC15779 Alq		0.061605 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:51	U-232	600	19	ALP84	ED	Y	N	3.4843E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	2500.15			Y		(1.045E-02)						(0.000E+00)	16.232552		
1	07/08/06 07:51	U-234	3	4	ALP84	ED	N	N	3.4843E-01		N	86%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	2500.15			Y		(1.045E-02)			4%			(0.000E+00)	16.232552		
2	07/08/06 07:51	U-235	0	2	ALP84	ED	N	N	3.4843E-01		N	86%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	2500.15			Y		(1.045E-02)			4%			(0.000E+00)	16.232552		
3	07/08/06 07:51	U-238	0	0	ALP84	ED	N	N	3.4843E-01		N	86%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	2500.15			Y		(1.045E-02)			4%			(0.000E+00)	16.232552		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**62.759735**		2.99065E+00	8.58317	8.58317	1.00 Sa	86%				
				(4.810642)		(1.2242E-01)	(0.43559)	(0.43559)	(0.028284)					
	07/09/06	U-234	R	**0.32796**	U4	1.33914E-02	0.044853	0.044853	1.00 Sa	86%		0.65365		
				(0.214578)		(8.6921E-03)	(0.029233)	(0.029233)	(0.028284)			0.161095		
	07/09/06	U-235	R	**-0.019591**	U4	-7.99952E-04	-0.002679	-0.002679	1.00 Sa	86%		0.559339		
				(0.013947)		(5.6565E-04)	(0.001901)	(0.001901)	(0.028284)			0.113911		
	07/09/06	U-238	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	86%		0.331651		
				(0.149885)		(0.0000E+00)	(0.020499)	(0.020499)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXP1AG**	**PCI/SA**		05/24/06 10:20	07/08/06 09:31			1	1.00 Sa	
536403,P-0648					,J6F140270-10 v4.8.18		FILTER					UITC15780 Alq		0.062113 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:51	U-232	578	42	ALP85	ED	Y	N	2.5840E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.1166			Y		(7.752E-03)						(0.000E+00)	16.099734		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6167169 Alpha Spec, UIso by ALP , Calculated Results 7/9/2006 12:09:38 PM

1	07/08/06 07:51	U-234	2	5	ALP85	ED	N	N	2.5840E-01	N	111%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	2500.1166			Y		(7.752E-03)		6%		(0.000E+00)	16.099734	
2	07/08/06 07:51	U-235	1	0	ALP85	ED	N	N	2.5840E-01	N	111%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	2500.1166			Y		(7.752E-03)		6%		(0.000E+00)	16.099734	
3	07/08/06 07:51	U-238	0	0	ALP85	ED	N	N	2.5840E-01	N	111%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	2500.1166			Y		(7.752E-03)		6%		(0.000E+00)	16.099734	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**80.550689**		2.87007E+00	11.107184	11.107184	1.00 Sa	111%				
				(6.214021)		(1.2011E-01)	(0.57191)	(0.57191)	(0.028284)					
	07/09/06	U-234	R	**0.224225**	**U4**	7.98927E-03	0.030918	0.030918	1.00 Sa	111%		0.792341		
				(0.200683)		(7.1198E-03)	(0.027615)	(0.027615)	(0.028284)			0.206354		
	07/09/06	U-235	R	**0.140177**	**U4**	4.99459E-03	0.019329	0.019329	1.00 Sa	111%		0.379879		
				(0.140656)		(4.9946E-03)	(0.019363)	(0.019363)	(0.028284)					
	07/09/06	U-238	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	111%		0.379879		
				(0.171681)		(0.0000E+00)	(0.023673)	(0.023673)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7DXQ1AG**	**PCI/SA**		05/24/06 11:10	07/08/06 09:31			1	1.00 Sa	
536403,P-0649					,J6F140270-11 v4.8.18		FILTER					UITC15781 Alq		0.061938 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 07:51	U-232	707	8	ALP87	ED	Y	N	3.4106E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.0166			Y		(1.023E-02)						(0.000E+00)	16.14526		
1	07/08/06 07:51	U-234	0	2	ALP87	ED	N	N	3.4106E-01		N	103%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.0166			Y		(1.023E-02)			5%			(0.000E+00)	16.14526		
2	07/08/06 07:51	U-235	0	0	ALP87	ED	N	N	3.4106E-01		N	103%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.0166			Y		(1.023E-02)			5%			(0.000E+00)	16.14526		
3	07/08/06 07:51	U-238	0	0	ALP87	ED	N	N	3.4106E-01		N	103%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1666666	1000.0166			Y		(1.023E-02)			5%			(0.000E+00)	16.14526		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**75.144723**		3.52406E+00	10.332534	10.332534	1.00 Sa	103%				
				(5.634101)		(1.3287E-01)	(0.497842)	(0.497842)	(0.028284)					
	07/09/06	U-234	R	**-0.042646**	**U4**	-1.99997E-03	-0.005864	-0.005864	1.00 Sa	103%		0.602109		
				(0.030351)		(1.4142E-03)	(0.00416)	(0.00416)	(0.028284)			0.156802		
	07/09/06	U-235	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	103%		0.288691		
				(0.13047)		(0.0000E+00)	(0.01794)	(0.01794)	(0.028284)					
	07/09/06	U-238	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	103%		0.288691		
				(0.13047)		(0.0000E+00)	(0.01794)	(0.01794)	(0.028284)					

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:11 RADCALC v4.8.18 STL Richland

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H7DXV1AG	PCI/SA		05/24/06 07:35	07/08/06 13:10			1	1.00 Sa	
536403,P-0651					,J6F140270-12 v4.8.18		FILTER					UITC15782 Alq		0.062271 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 11:30	U-232	725	1	ALP7	ED	Y	N	3.6324E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	1000.1166			Y		(1.090E-02)						(0.000E+00)	16.058888		
1	07/08/06 11:30	U-234	0	1	ALP7	ED	N	N	3.6324E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	1000.1166			Y		(1.090E-02)			5%			(0.000E+00)	16.058888		
2	07/08/06 11:30	U-235	0	0	ALP7	ED	N	N	3.6324E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	1000.1166			Y		(1.090E-02)			5%			(0.000E+00)	16.058888		
3	07/08/06 11:30	U-238	1	2	ALP7	ED	N	N	3.6324E-01		N	99%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	1000.1166			Y		(1.090E-02)			5%			(0.000E+00)	16.058888		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**72.097843**		3.62038E+00	9.966903	9.966903	1.00 Sa	99%				
				(5.385737)		(1.3450E-01)	(0.475929)	(0.475929)	(0.028284)					
	07/09/06	U-234	R	**-0.020063**	**U4**	-9.99883E-04	-0.002773	-0.002773	1.00 Sa	99%		0.480122		
				(0.020128)		(9.9988E-04)	(0.002778)	(0.002778)	(0.028284)			0.104319		
	07/09/06	U-235	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	99%		0.271608		
				(0.122749)		(0.0000E+00)	(0.016969)	(0.016969)	(0.028284)					
	07/09/06	U-238	R	**0.060099**	**U4**	2.99524E-03	0.008308	0.008308	1.00 Sa	99%		0.566491		
				(0.104275)		(5.1913E-03)	(0.014407)	(0.014407)	(0.028284)			0.147529		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H7DX01AG	PCI/SA		05/24/06 08:15	07/08/06 13:10			1	1.00 Sa	
536403,P-0652					,J6F140270-13 v4.8.18		FILTER					UITC15783 Alq		0.061159 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 11:30	U-232	787	5	ALP8	ED	Y	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.2166			Y		(1.171E-02)						(0.000E+00)	16.350763		
1	07/08/06 11:30	U-234	0	0	ALP8	ED	N	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.2166			Y		(1.171E-02)			5%			(0.000E+00)	16.350763		
2	07/08/06 11:30	U-235	0	1	ALP8	ED	N	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.2166			Y		(1.171E-02)			5%			(0.000E+00)	16.350763		
3	07/08/06 11:30	U-238	0	0	ALP8	ED	N	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.2166			Y		(1.171E-02)			5%			(0.000E+00)	16.350763		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**74.079335**		3.92738E+00	10.058019	10.058019	1.00 Sa	100%				
				(5.480974)		(1.4019E-01)	(0.468989)	(0.468989)	(0.028284)					
	07/09/06	U-234	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	100%		0.255859		
				(0.115632)		(0.0000E+00)	(0.0157)	(0.0157)	(0.028284)					
	07/09/06	U-235	R	**-0.018891**	U4	-9.99783E-04	-0.002565	-0.002565	1.00 Sa	100%		0.452239		
				(0.018951)		(9.9978E-04)	(0.002569)	(0.002569)	(0.028284)			0.098248		
	07/09/06	U-238	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	100%		0.255859		
				(0.115632)		(0.0000E+00)	(0.0157)	(0.0157)	(0.028284)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7JNL1AA**	**PCI/SA**	**B**	05/24/06 07:40	07/08/06 13:10			1	1.00 Sa	
0,INTRA-LAB BLANK					,J6F160000-169		FILTER					UITC15784 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 11:30	U-232	744	4	ALP9	ED	Y	N	3.6670E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0666666	1000.0333			Y		(1.100E-02)						(0.000E+00)	1.00		
1	07/08/06 11:30	U-234	0	2	ALP9	ED	N	N	3.6670E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0666666	1000.0333			Y		(1.100E-02)			5%			(0.000E+00)	1.00		
2	07/08/06 11:30	U-235	0	0	ALP9	ED	N	N	3.6670E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0666666	1000.0333			Y		(1.100E-02)			5%			(0.000E+00)	1.00		
3	07/08/06 11:30	U-238	0	2	ALP9	ED	N	N	3.6670E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0666666	1000.0333			Y		(1.100E-02)			5%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**4.563127**		3.71476E+00	10.130152	10.130152	1.00 Sa	101%				
				(0.324183)		(1.3635E-01)	(0.480224)	(0.480224)	(0.017321)					
	07/09/06	U-234	R	**-0.002457**	U4	-1.99993E-03	-0.005454	-0.005454	1.00 Sa	101%		0.034698		
				(0.001747)		(1.4142E-03)	(0.003869)	(0.003869)	(0.017321)			0.009035		
	07/09/06	U-235	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 Sa	101%		0.016639		
				(0.00752)		(0.0000E+00)	(0.016694)	(0.016694)	(0.017321)					
	07/09/06	U-238	R	**-0.002457**	U4	-1.99993E-03	-0.005454	-0.005454	1.00 Sa	101%		0.034698		
				(0.001747)		(1.4142E-03)	(0.003869)	(0.003869)	(0.017321)			0.009035		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H7JNL1AC**	**PCI/SA**	**S**	05/24/06 07:40	07/08/06 13:10		UISF0459	1	1.00 Sa	
0,INTRA-LAB CHECK					,J6F160000-169		FILTER					UISF0459 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/08/06 11:30	U-232	689	4	ALP10	ED	Y	N	3.6914E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	1000.3166			Y		(1.107E-02)						(0.000E+00)	1.00		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14 RADCALC v4.8.18
STL Richland

Batch Nbr: 6167169 Alpha Spec, Uiso by ALP , Calculated Results 7/9/2006 12:09:39 PM

1	07/08/06 11:30	U-234	160	1	ALP10	ED	N	N	3.6914E-01	N	92%	N		1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	1000.3166			Y		(1.107E-02)		4%			(0.000E+00)	1.00	
2	07/08/06 11:30	U-235	4	0	ALP10	ED	N	N	3.6914E-01	N	92%	N		1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	1000.3166			Y		(1.107E-02)		4%			(0.000E+00)	1.00	
3	07/08/06 11:30	U-238	162	2	ALP10	ED	N	N	3.6914E-01	N	92%	N		1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	1000.3166			Y		(1.107E-02)		4%			(0.000E+00)	1.00	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/09/06	U-232	R	**4.194398**		3.43727E+00	9.311573	9.311573	1.00 Sa	92%				
				(0.301154)		(1.3112E-01)	(0.451884)	(0.451884)	(0.017321)					
	07/09/06	U-234	R	**1.054257**		7.98135E-01	2.340452	2.340452	1.00 Sa	92%	108%	0.031604		
				(0.117029)		(6.3185E-02)	(0.228388)	(0.228388)	(0.017321)			0.006866		
	07/09/06	U-235	R	**0.026389**		1.99784E-02	0.058585	0.058585	1.00 Sa	92%	59%	0.017879		
				(0.013354)		(9.9892E-03)	(0.029482)	(0.029482)	(0.017321)					
	07/09/06	U-238	R	**1.066131**		8.07124E-01	2.366813	2.366813	1.00 Sa	92%	104%	0.037289		
				(0.118055)		(6.3586E-02)	(0.230223)	(0.230223)	(0.017321)			0.009711		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14 RADCALC v4.8.18
STL Richland

SEVERN TRENT STL

URANIUM ISOTOPIC COUNTING REQUEST

11 10

C.R. Technician LS

Date Counted 7/8/06

Counting Time
Sample 200 Minutes
Background See Alpha Regions Report
BRC 5/24/06

SOP's
Operating: RICHRD008
Review: RICHRD0016
6167169

WorkOrder #	U-232 (5320 KeV) Tracer	TOTAL COUNTS U-238 (4196 KeV)	U-235 (4396 KeV)	U-234 (4776 KeV)	Det #	Comments/Edits
H7DXC1AG	See Counting Room Printout for ROI information				8	
H7DXD1AG	See Counting Room Printout for ROI information				10	
H7DXF1AG	See Counting Room Printout for ROI information				11	
H7DXH1AG	See Counting Room Printout for ROI information				12	
H7DXJ1AG	See Counting Room Printout for ROI information				69	
H7DXK1AG	See Counting Room Printout for ROI information				71	
H7DXL1AG	See Counting Room Printout for ROI information				83	
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					

Comments:

Form No: RC-011, 7/02, Rev 8

Approved by: S

Date: 7/8/06

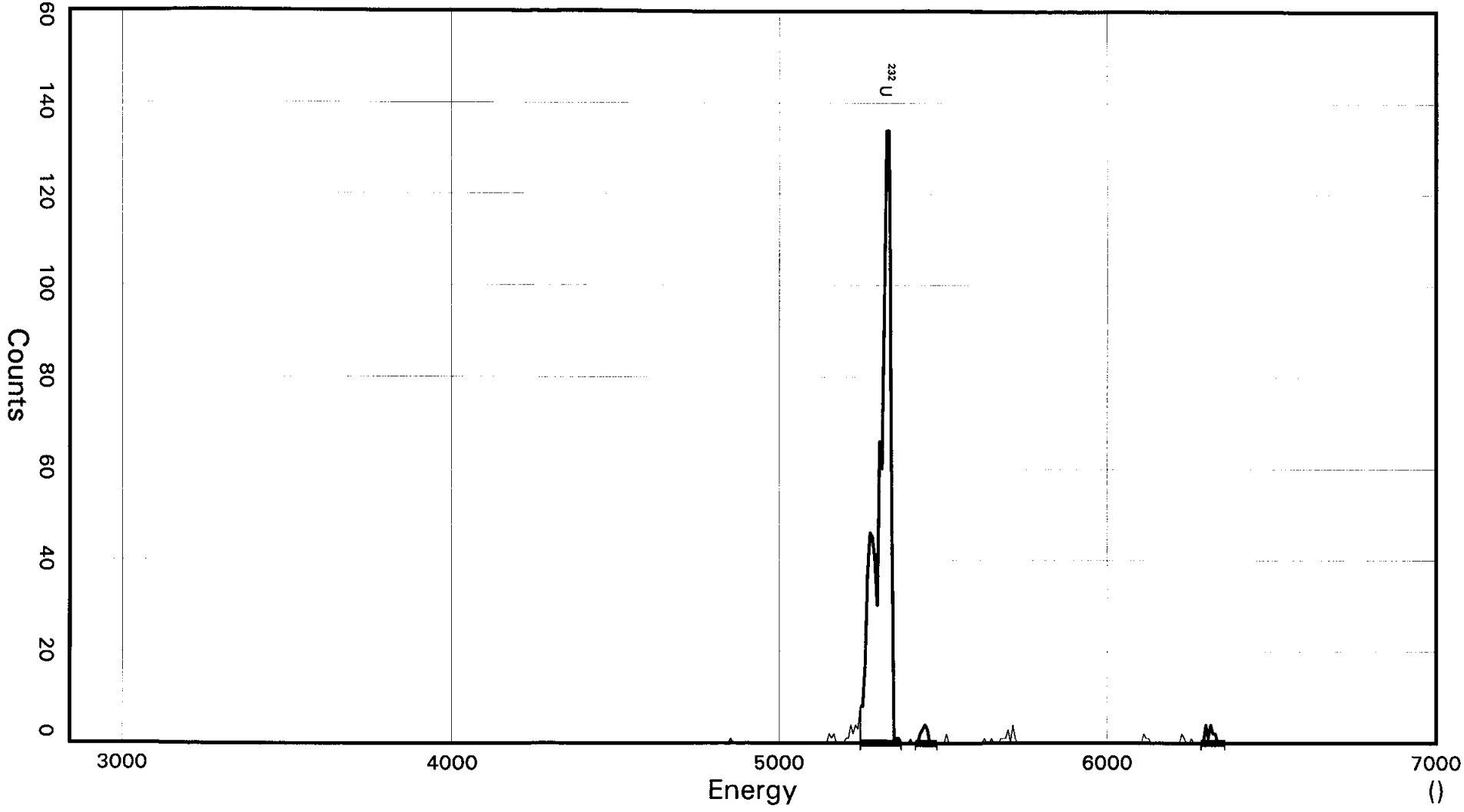
STL Richland WA.

U BRC

Sample ID: H7DXC1AG

Detector ID: ALP8 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:50:30.08

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:06.00

Energy Coefficients:

Offset: 2.81875E+03

Slope: 7.34392E+00

Quadrature: -9.54142E-05

SAMPLE IDENTIITY: H7DXC1AG

TITLE : U BRC

DETECTOR : ALP8 1
CONFIGURATION NAME : $DISK1:[ALP8.SAMPLE]H7DXC1AG_080760750.CNF;1

ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:00

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:50:30 CALIB DATE : 06-JUL-2006 01:19:45

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:06

OFFSET : 2818.75 keV CONSTANT FWHM : 8.66667 Channels
SLOPE : 7.34392 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : -.954142E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXC1AG

Detector: ALP8 1
Report Date: 08-Jul-06 11:10 AM
Acquire Date: 8-JUL-2006 07:50:30.08
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	789	5	0	3.938	5323.5	123.7	332	349	0.00	0.00	P
U-234	0	0	0	0.000	4777.9	124.0	257	274	0.00	0.00	
U-235	0	1	0	-0.001	4401.1	116.8	206	222	0.00	0.00	
U-238	0	0	0	0.000	4201.3	124.2	178	195	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXC1AG
Detector: ALP8 1
Report Date: 08-Jul-06 11:10 AM
Acquire Date: 8-JUL-2006 07:50:30.08

Flags Key
Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	0		201	0		251	0		301	0		351	0		401	2		451	0		501
		2	0		52	0		102	0		152	0		202	0		252	0		302	0		352	0		402	1		452	0		502
0		3	0		53	0		103	0		153	0		203	0		253	0		303	1		353	0		403	1		453	0		503
0		4	0		54	0		104	0		154	0		204	0		254	0		304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0		205	0		255	0		305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	0		256	0		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0		157	0	+	207	0	+	257	0		307	2		357	0		407	0		457	0		507
0		8	0		58	0		108	0		158	0	+	208	0	+	258	0		308	3		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	0	+	209	0	+	259	0		309	4		359	0		409	0		459	0		509
0		10	0		60	0		110	0		160	0	+	210	0	+	260	0		310	3		360	0		410	0		460	0		510
0		11	0		61	0		111	0		161	0	+	211	0	+	261	0		311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0		162	0	+	212	0	+	262	0		312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0		163	0	+	213	0	+	263	0		313	0		363	0		413	0		463			
0		14	0		64	0		114	0		164	0	+	214	0	+	264	0		314	0		364	0		414	0		464			
0		15	0		65	0		115	0		165	0	+	215	0	+	265	0		315	0		365	0		415	0		465			
0		16	0		66	0		116	0		166	0	+	216	0	+	266	0		316	0		366	0		416	0		466			
0		17	0		67	0		117	0		167	0	+	217	0	+	267	0		317	0		367	0		417	2		467			
0		18	0		68	0		118	0		168	0	+	218	0	+	268	0		318	2		368	0		418	1		468			
0		19	0		69	0		119	0		169	0	+	219	0	+	269	2		319	0		369	0		419	0		469			
0		20	0		70	0		120	0		170	0	+	220	0	+	270	1		320	0		370	0		420	0		470			
0		21	0		71	0		121	0		171	0	+	221	0	+	271	2		321	0		371	0		421	1		471			
0		22	0		72	0		122	0		172	0	+	222	0	+	272	0		322	0		372	0		422	0		472			
0		23	0		73	0		123	0		173	0		223	0	+	273	0		323	0		373	0		423	0		473			
0		24	0		74	0		124	0		174	0		224	0	+	274	0		324	0		374	0		424	0		474			
0		25	0		75	0		125	0		175	0		225	0		275	0		325	0		375	0		425	0		475			
0		26	0		76	0		126	0		176	0		226	0		276	1		326	0		376	0		426	0		476			
0		27	0		77	0		127	0		177	0		227	0		277	1		327	0		377	0		427	4		477			
0		28	0		78	0		128	0	+	178	0		228	1		278	4		328	0		378	0		428	1		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	2		329	0		379	0		429	4		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	4		330	0		380	0		430	2		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	3		331	0		381	0		431	2		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	8	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	8	+	333	0		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	17	+	334	1		384	0		434	0		484			
0		35	0		85	0		135	0	+	185	0		235	0		285	37	+	335	0		385	0		435	0		485			
0		36	0		86	0		136	0	+	186	0		236	0		286	46	+	336	0		386	0		436	0		486			
0		37	0		87	0		137	0	+	187	0		237	0		287	45	+	337	1		387	0		437	0		487			
0		38	0		88	0		138	0	+	188	0		238	0		288	40	+	338	0		388	0		438	0		488			
0		39	0		89	0		139	0	+	189	0		239	0		289	30	+	339	0		389	0		439	0		489			
0		40	0		90	0		140	0	+	190	0		240	0		290	66	+	340	0		390	0		440	0		490			
0		41	0		91	0		141	0	+	191	0		241	0		291	60	+	341	1		391	0		441	0		491			
0		42	0		92	0		142	0	+	192	0		242	0		292	98	+	342	1		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0		243	0		293	134	+	343	1		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	0		244	0		294	134	+	344	3		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0		245	0		295	50	+	345	0		395	0		445	0		495			
0		46	0		96	0		146	0		196	0		246	0		296	1	+	346	4		396	0		446	0		496			
0		47	0		97	0		147	0		197	0		247	0		297	1	+	347	1		397	0		447	0		497			
0		48	0		98	0		148	0		198	0		248	0		298	1	+	348	0		398	0		448	0		498			
0		49	0		99	0		149	0		199	0		249	0		299	0		349	0		399	0		449	0		499			
0		50	0		100	0		150	0		200	0		250	0		300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:10:54

Configuration : $DISK1:[ALP8.SAMPLE]H7DXC1AG_080760750.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:30
Sample ID : H7DXC1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP8 Detector geometry:
Elapsed live time: 0 03:20:06.00 Elapsed real time: 0 03:20:06.00 0.0%
Start energy : 2840.79 End energy : 6553.83
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5323.49	789	0	44.06	342.59	332	17	6.57E-02	3.6	
2	0	5439.29	12	0	29.38	358.50	355	9	1.00E-03	28.9	
3	0	6310.97	13	0	29.38	478.50	475	10	1.08E-03	27.7	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 11:10:57

Configuration : $DISK1:[ALP8.SAMPLE]H7DXC1AG_080760750.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:30
Sample ID : H7DXC1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP8 Detector geometry:
Elapsed live time: 0 03:20:06.00 Elapsed real time: 0 03:20:06.00 0.0%
Energy tolerance : 40.00 Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 60.00

Summary of Nuclide Activity

Total number of lines in spectrum	3	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	1	33.33%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP8.SAMPLE]H7DXC1AG_080760750.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5323.49	332	349	789	776	0.46		
5439.28	355	364	12	12	0.00		
6310.97	475	485	13	13	0.00		

End of Report

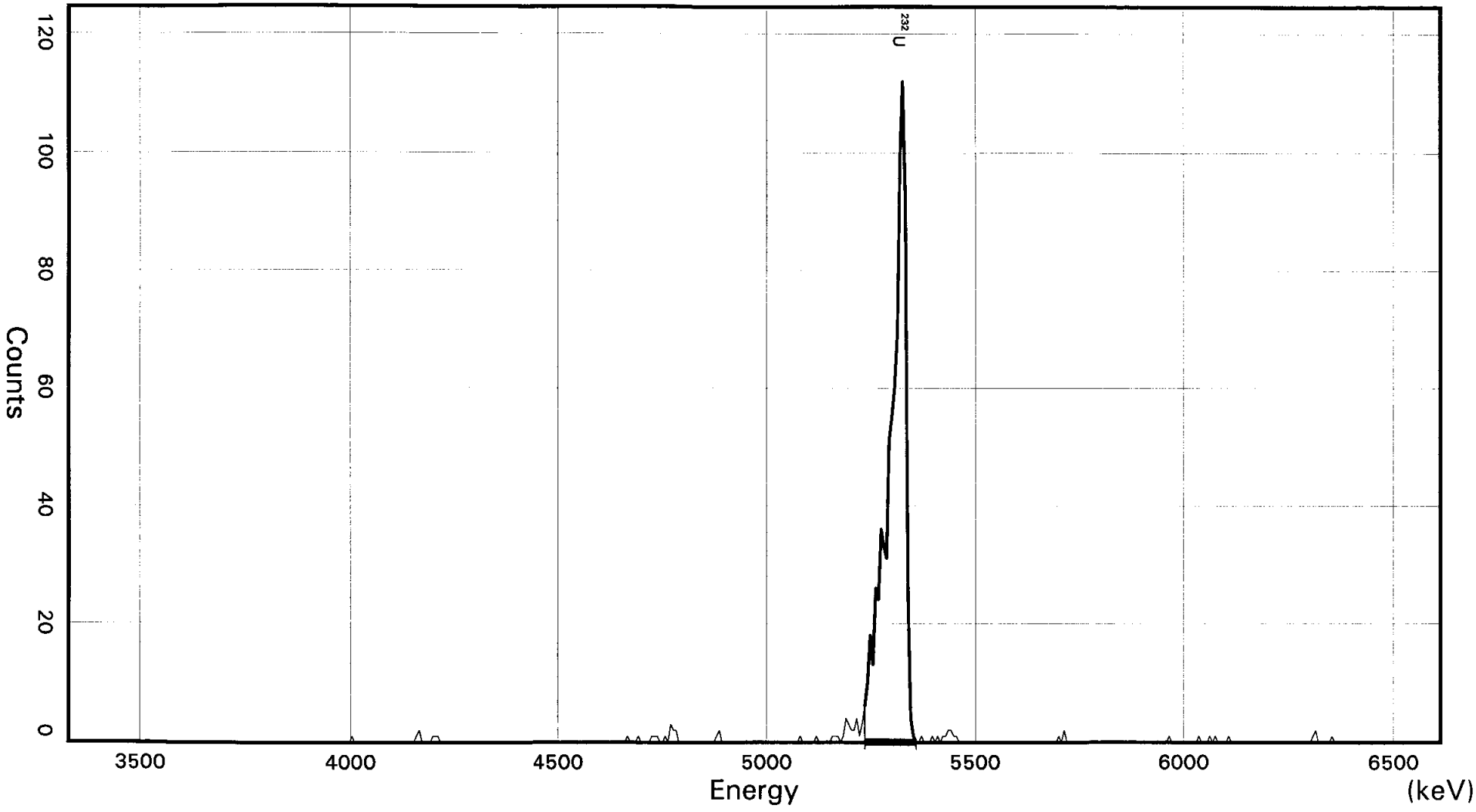
STL Richland WA.

U BRC

Sample ID: H7DXD1AG

Detector ID: ALP10 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:50:36.29

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:02.00

Energy Coefficients:

Offset: 3.30961E+03

Slope: 6.42195E+00

Quadrature: 5.74933E-05

SAMPLE IDENTIITY: H7DXD1AG

TITLE : U BRC

DETECTOR : ALP10 1
CONFIGURATION NAME : $DISK1:[ALP10.SAMPLE]H7DXD1AG_080760750.CNF;
1
ACQUIRE DATE of BACKGROUND: 06-JUL-2006 06:57:25

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:50:36 CALIB DATE : 06-JUL-2006 01:19:51

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:02

OFFSET : 3309.61 keV CONSTANT FWHM : 7.00000 Channels
SLOPE : 6.42195 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : 5.749330E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXD1AG

Detector: ALP10 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:50:36.29
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	771	3	0	3.851	5317.4	122.7	299	318	0.00	0.00	P
U-234	12	1	0	0.059	4771.8	122.5	214	233	0.00	0.00	
U-235	0	0	0	0.000	4395.0	122.4	156	175	0.00	0.00	
U-238	6	1	0	0.029	4195.2	122.3	125	144	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXD1AG
Detector: ALP10 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:50:36.29

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1		0	51		0	101		0	151		0	201		0	251	18	+	301		0	351		0	401		0	451		0	501
		2		0	52		0	102		0	152		0	202		0	252	13	+	302		0	352		0	402		0	452		0	502
	0	3		0	53		0	103		0	153		0	203		0	253	26	+	303		0	353		0	403		0	453		0	503
	0	4		0	54		0	104		0	154		0	204		0	254	24	+	304		0	354		0	404		0	454		0	504
	0	5		0	55		0	105		0	155		0	205		0	255	36	+	305		0	355		0	405		0	455		0	505
	0	6		0	56		0	106		0	156		0	206		0	256	33	+	306		0	356		0	406		0	456		0	506
	0	7		0	57		0	107		0	157		0	207		0	257	31	+	307		0	357		0	407		0	457		0	507
	0	8		0	58		1	108		0	158		0	208		0	258	51	+	308		0	358		0	408		0	458		0	508
	0	9		0	59		0	109		0	159		0	209		0	259	55	+	309		0	359		0	409		0	459		0	509
	0	10		0	60		0	110		0	160		0	210		0	260	60	+	310		0	360		0	410		0	460		0	510
	0	11		0	61		0	111		0	161		1	211		0	261	69	+	311		0	361		0	411		0	461		0	511
	0	12		0	62		0	112		0	162		0	212		0	262	99	+	312		0	362		1	412		0	462		0	512
	0	13		0	63		0	113		0	163		0	213		0	263	112	+	313		0	363		0	413		0	463			
	0	14		0	64		0	114		0	164		0	214		0	264	92	+	314		0	364		0	414		0	464			
	0	15		0	65		0	115		0	165		1	215		0	265	24	+	315		0	365		0	415		1	465			
	0	16		0	66		0	116		0	166		0	216		0	266	4	+	316		0	366		0	416		2	466			
	0	17		0	67		0	117		0	167		0	217		0	267	1	+	317		0	367		0	417		0	467			
	0	18		0	68		0	118		0	168		0	218		0	268	0		318		0	368		0	418		0	468			
	0	19		0	69		0	119		0	169		0	219		0	269	0		319		0	369		0	419		0	469			
	0	20		0	70		0	120		0	170		1	220		0	270	1		320		0	370		0	420		0	470			
	0	21		0	71		0	121		0	171		1	221		0	271	0		321		1	371		0	421		0	471			
	0	22		0	72		0	122		0	172		1	222		0	272	0		322		0	372		0	422		1	472			
	0	23		0	73		0	123		0	173		0	223		0	273	0		323		2	373		1	423		0	473			
	0	24		0	74		0	124		0	174		0	224		0	274	1		324		0	374		0	424		0	474			
	0	25		0	75		0	125		0	175		1	225		1	275	0		325		0	375		0	425		0	475			
	0	26		0	76		0	126		0	176		0	226		0	276	1		326		0	376		0	426		0	476			
	0	27		0	77		0	127		0	177		3	227		0	277	0		327		0	377		1	427		0	477			
	0	28		0	78		0	128		0	178		2	228		0	278	1		328		0	378		0	428		0	478			
	0	29		0	79		0	129		0	179		2	229		0	279	1		329		0	379		1	429		0	479			
	0	30		0	80		0	130		0	180		0	230		0	280	2		330		0	380		0	430		0	480			
	0	31		0	81		0	131		0	181		0	231		1	281	2		331		0	381		0	431		0	481			
	0	32		0	82		1	132		0	182		0	232		0	282	1		332		0	382		0	432		0	482			
	0	33		0	83		2	133		0	183		0	233		0	283	1		333		0	383		0	433		0	483			
	0	34		0	84		0	134		0	184		0	234		0	284	0		334		0	384		1	434		0	484			
	0	35		0	85		0	135		0	185		0	235		0	285	0		335		0	385		0	435		0	485			
	0	36		0	86		0	136		0	186		0	236		0	286	0		336		0	386		0	436		0	486			
	0	37		0	87		0	137		0	187		0	237		1	287	0		337		0	387		0	437		0	487			
	0	38		0	88		1	138		0	188		0	238		1	288	0		338		0	388		0	438		0	488			
	0	39		0	89		1	139		0	189		0	239		1	289	0		339		0	389		0	439		0	489			
	0	40		0	90		1	140		0	190		0	240		0	290	0		340		0	390		0	440		0	490			
	0	41		0	91		0	141		0	191		0	241		1	291	0		341		0	391		0	441		0	491			
	0	42		0	92		0	142		0	192		0	242		4	292	0		342		0	392		0	442		0	492			
	0	43		0	93		0	143		0	193		0	243		3	293	0		343		0	393		0	443		0	493			
	0	44		0	94		0	144		0	194		1	244		2	294	0		344		0	394		0	444		0	494			
	0	45		0	95		0	145		0	195		2	245		2	295	0		345		0	395		0	445		0	495			
	0	46		0	96		0	146		0	196		0	246		4	296	0		346		0	396		0	446		0	496			
	0	47		0	97		0	147		0	197		0	247		1	297	0		347		0	397		0	447		0	497			
	0	48		0	98		0	148		0	198		0	248		3	298	0		348		0	398		0	448		0	498			
	0	49		0	99		0	149		0	199		0	249		6	+ 299	0		349		0	399		0	449		0	499			
	0	50		0	100		0	150		0	200		0	250		10	+ 300	0		350		0	400		0	450		0	500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:00

Configuration : $DISK1:[ALP10.SAMPLE]H7DXD1AG_080760750.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:36
Sample ID : H7DXD1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP10 Detector geometry:
Elapsed live time: 0 03:20:02.00 Elapsed real time: 0 03:20:02.00 0.0%
Start energy : 3328.88 keV End energy : 6612.72 keV
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5317.40	771	0	38.53	311.77	299	19	6.42E-02	3.6	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 11:11:01

Configuration : $DISK1:[ALP10.SAMPLE]H7DXD1AG_080760750.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:36
Sample ID : H7DXD1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP10 Detector geometry:
Elapsed live time: 0 03:20:02.00 Elapsed real time: 0 03:20:02.00 0.0%
Energy tolerance : 40.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 60.00

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP10.SAMPLE]H7DXD1AG_080760750.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5317.40	299	318	771	764	0.25		

End of Report

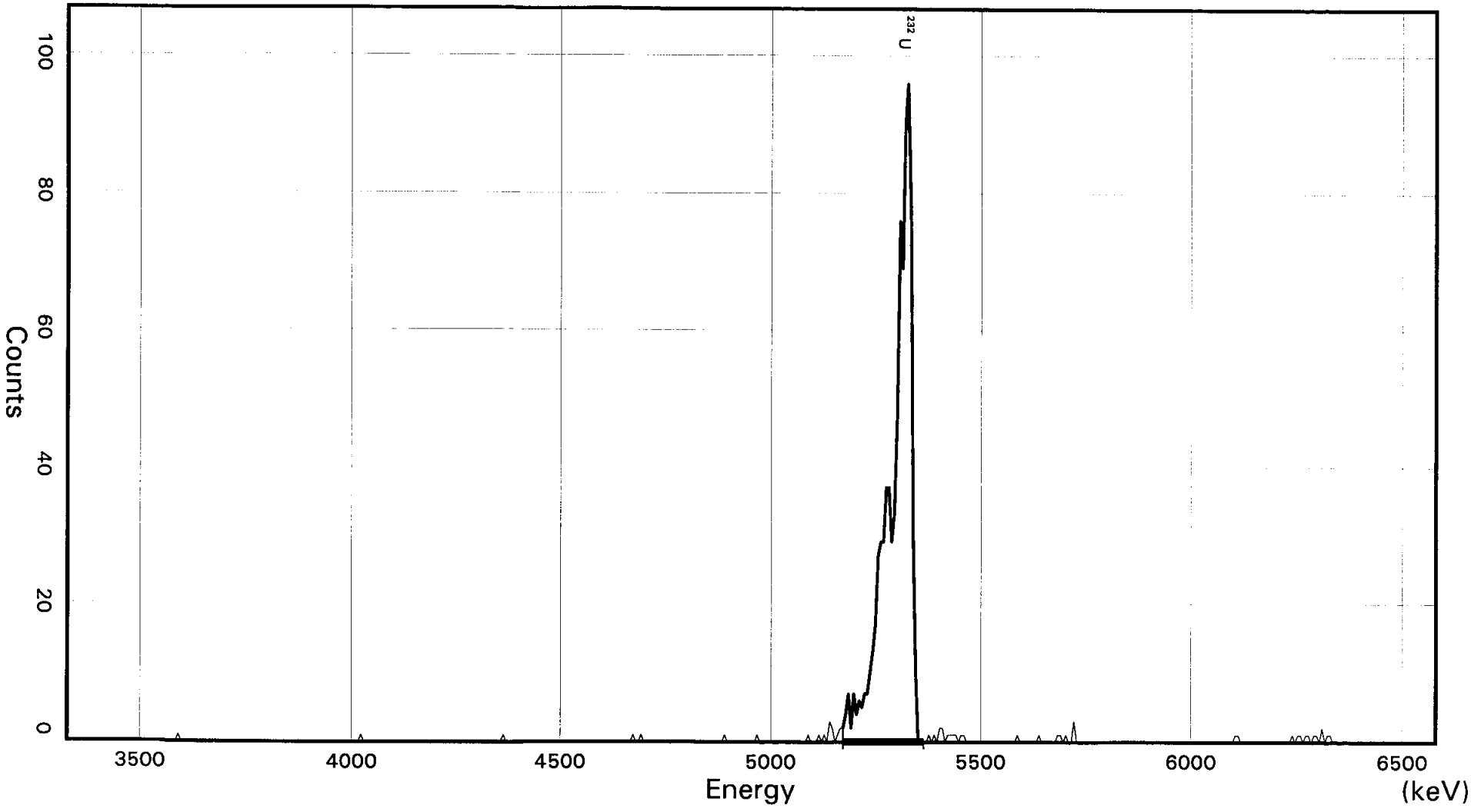
STL Richland WA.

U BRC

Sample ID: H7DXF1AG

Detector ID: ALP11 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:50:42.13

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:10.00

Energy Coefficients:

Offset: 3.30819E+03

Slope: 6.37367E+00

Quadrature: 2.86048E-05

SAMPLE IDENTIITY: H7DXF1AG

TITLE : U BRC

DETECTOR : ALP11 1
CONFIGURATION NAME : $DISK1:[ALP11.SAMPLE]H7DXF1AG_080760750.CNF;
1
ACQUIRE DATE of BACKGROUND: 06-JUL-2006 06:57:28

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:50:42 CALIB DATE : 06-JUL-2006 01:20:09

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:10

OFFSET : 3308.19 keV CONSTANT FWHM : 8.50000 Channels
SLOPE : 6.37367 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : 2.860480E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXF1AG

Detector: ALP11 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:50:42.13
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	810	9	0	4.038	5316.4	191.7	292	322	0.00	0.00	P
U-234	2	0	0	0.010	4770.9	191.6	207	237	0.00	0.00	
U-235	1	1	0	0.004	4394.1	191.5	148	178	0.00	0.00	
U-238	0	2	0	-0.002	4194.3	191.4	116	146	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXF1AG
Detector: ALP11 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:50:42.13

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0	+	151	0		201	0		251	7	+	301	0		351	0		401	0		451	0		501
		2	0		52	0		102	0	+	152	0		202	0		252	10	+	302	0		352	0		402	0		452	0		502
0		3	0		53	0		103	0	+	153	0		203	0		253	13	+	303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0	+	154	0		204	0		254	17	+	304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0	+	155	0		205	0		255	27	+	305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0	+	156	0		206	0		256	29	+	306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0	+	157	0	+	207	0		257	29	+	307	1		357	0		407	0		457	0		507
0		8	0		58	0		108	0	+	158	0	+	208	0		258	37	+	308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0	+	159	0	+	209	0		259	37	+	309	0		359	0		409	1		459	0		509
0		10	0		60	0		110	0	+	160	0	+	210	1		260	29	+	310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0	+	161	0	+	211	0		261	33	+	311	0		361	0		411	1		461	0		511
0		12	0		62	1		112	0	+	162	0	+	212	0		262	47	+	312	0		362	0		412	1		462	0		512
0		13	0		63	0		113	0	+	163	0	+	213	0		263	76	+	313	0		363	0		413	0		463			
0		14	0		64	0		114	0	+	164	1	+	214	0		264	69	+	314	0		364	0		414	1		464			
0		15	0		65	0		115	1	+	165	0	+	215	0		265	90	+	315	1		365	0		415	1		465			
0		16	0		66	0	+	116	0	+	166	0	+	216	0		266	96	+	316	0		366	0		416	0		466			
0		17	0		67	0	+	117	0	+	167	1	+	217	0		267	78	+	317	0		367	0		417	1		467			
0		18	0		68	0	+	118	0	+	168	0	+	218	0		268	29	+	318	0		368	0		418	1		468			
0		19	0		69	0	+	119	0	+	169	0	+	219	0		269	10	+	319	0		369	0		419	0		469			
0		20	0		70	0	+	120	0	+	170	0	+	220	0		270	0	+	320	0		370	0		420	2		470			
0		21	0		71	0	+	121	0	+	171	0	+	221	0		271	0	+	321	0		371	0		421	0		471			
0		22	0		72	0	+	122	0	+	172	0	+	222	0		272	0		322	1		372	0		422	1		472			
0		23	0		73	0	+	123	0	+	173	0	+	223	0		273	0		323	1		373	0		423	1		473			
0		24	0		74	0	+	124	0	+	174	0	+	224	0		274	1		324	0		374	0		424	0		474			
0		25	0		75	0	+	125	0	+	175	0	+	225	0		275	0		325	1		375	0		425	0		475			
0		26	0		76	0	+	126	0	+	176	0	+	226	0		276	1		326	0		376	0		426	0		476			
0		27	0		77	0	+	127	0	+	177	0	+	227	0		277	0		327	0		377	0		427	0		477			
0		28	0		78	0	+	128	0	+	178	0	+	228	0		278	2		328	3		378	0		428	0		478			
0		29	0		79	0	+	129	0		179	0	+	229	1		279	2		329	0		379	0		429	0		479			
0		30	0		80	0	+	130	0		180	0	+	230	0		280	0		330	0		380	0		430	0		480			
0		31	0		81	0	+	131	0		181	0	+	231	0		281	1		331	0		381	0		431	0		481			
0		32	0		82	0	+	132	0		182	0	+	232	0		282	1		332	0		382	0		432	0		482			
0		33	0		83	0	+	133	0		183	0	+	233	1		283	1		333	0		383	0		433	0		483			
0		34	0		84	0	+	134	0		184	0	+	234	0		284	1		334	0		384	0		434	0		484			
0		35	0		85	0	+	135	0		185	0	+	235	1		285	0		335	0		385	0		435	0		485			
0		36	0		86	0	+	136	0		186	0	+	236	0		286	1		336	0		386	0		436	0		486			
0		37	0		87	0	+	137	0		187	0	+	237	3		287	1		337	0		387	0		437	0		487			
0		38	0		88	0	+	138	0		188	0		238	2		288	0		338	0		388	1		438	0		488			
0		39	0		89	0	+	139	0		189	0		239	0		289	0		339	0		389	1		439	0		489			
0		40	0		90	0	+	140	0		190	0		240	1		290	0		340	0		390	0		440	0		490			
0		41	0		91	0	+	141	0		191	0		241	2		291	0		341	0		391	0		441	0		491			
0		42	0		92	0	+	142	0		192	0		242	2	+	292	0		342	0		392	0		442	0		492			
0		43	0		93	0	+	143	0		193	0		243	4	+	293	0		343	0		393	0		443	0		493			
1		44	0		94	0	+	144	0		194	0		244	7	+	294	0		344	0		394	0		444	0		494			
0		45	0		95	0	+	145	0		195	0		245	2	+	295	0		345	0		395	0		445	0		495			
0		46	0		96	0	+	146	0		196	0		246	7	+	296	0		346	0		396	0		446	0		496			
0		47	0		97	0		147	0		197	0		247	4	+	297	0		347	0		397	0		447	0		497			
0		48	0		98	0	+	148	0		198	1		248	6	+	298	0		348	0		398	0		448	0		498			
0		49	0		99	0	+	149	0		199	0		249	5	+	299	0		349	0		399	0		449	0		499			
0		50	0		100	0	+	150	0		200	0		250	7	+	300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:07

Configuration : $DISK1:[ALP11.SAMPLE]H7DXF1AG_080760750.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:42
Sample ID : H7DXF1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP11 Detector geometry:
Elapsed live time: 0 03:20:10.00 Elapsed real time: 0 03:20:10.00 0.0%
Start energy : 3327.31 keV End energy : 6579.00 keV
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5316.44	810	0	38.24	314.64	292	30	6.74E-02	3.5	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 11:11:09

Configuration : $DISK1:[ALP11.SAMPLE]H7DXF1AG_080760750.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:42
Sample ID : H7DXF1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP11 Detector geometry:
Elapsed live time: 0 03:20:10.00 Elapsed real time: 0 03:20:10.00 0.0%
Energy tolerance : 40.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 60.00

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP11.SAMPLE]H7DXF1AG_080760750.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5316.44	292	322	810	807	0.11		

End of Report

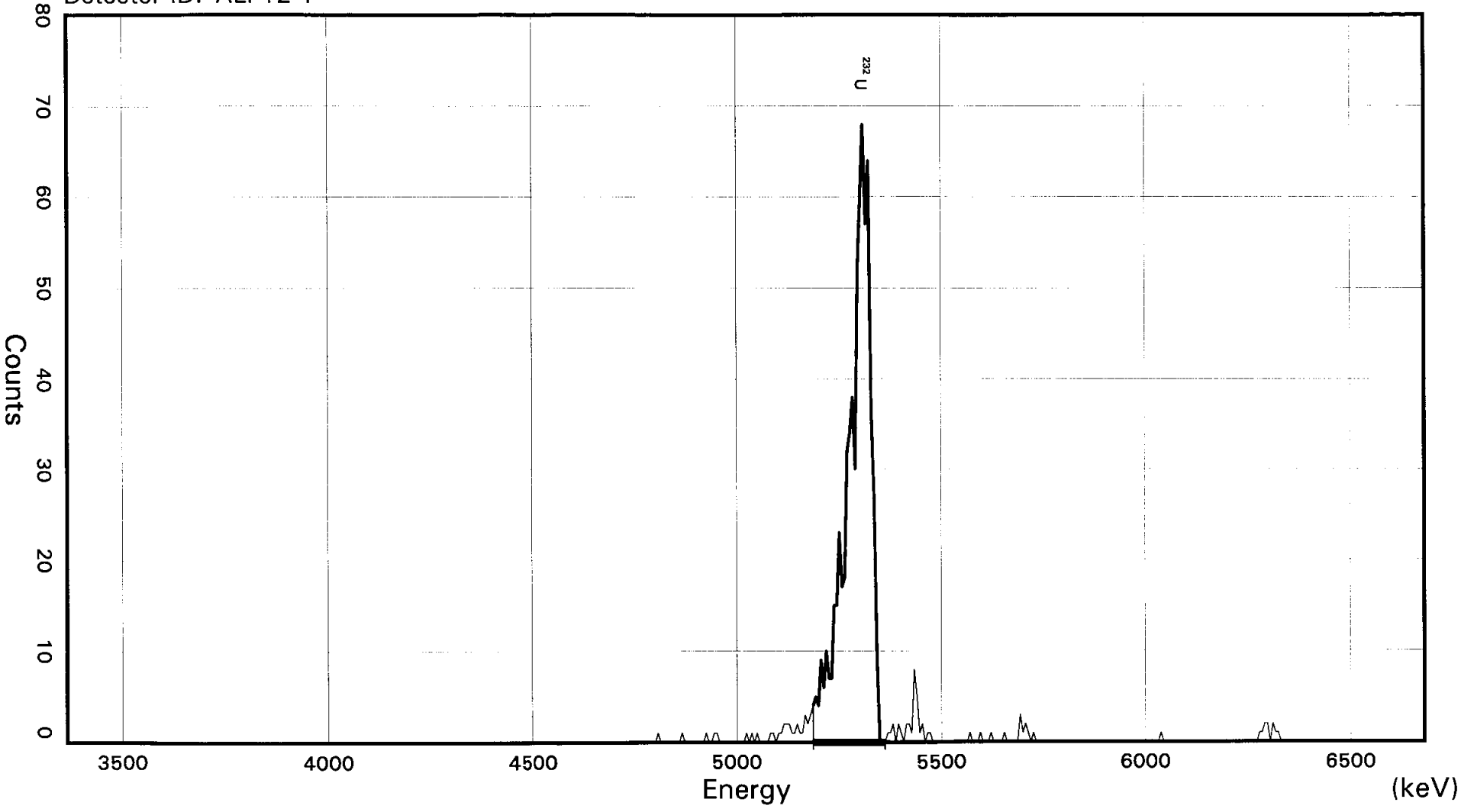
STL Richland WA.

U BRC

Sample ID: H7DXH1AG

Detector ID: ALP12 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:50:53.45

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:14.00

Energy Coefficients:

Offset: 3.34637E+03

Slope: 6.53599E+00

Quadrature: -4.70662E-05

SAMPLE IDENTIITY: H7DXH1AG

TITLE : U BRC

DETECTOR : ALP12 1
CONFIGURATION NAME : $DISK1:[ALP12.SAMPLE]H7DXH1AG_080760750.CNF;
1
ACQUIRE DATE of BACKGROUND: 06-JUL-2006 06:57:31

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:50:53 CALIB DATE : 06-JUL-2006 01:20:03

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:14

OFFSET : 3346.37 keV CONSTANT FWHM : 7.16667 Channels
SLOPE : 6.53599 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : -.470662E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXH1AG

Detector: ALP12 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:50:53.45
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	651	6	0	3.245	5307.4	175.7	282	309	0.00	0.00	P
U-234	1	0	0	0.005	4761.9	175.9	198	225	0.00	0.00	
U-235	0	0	0	0.000	4385.1	176.1	140	167	0.00	0.00	
U-238	0	1	0	-0.001	4185.3	176.2	110	137	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXH1AG
Detector: ALP12 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:50:53.45

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0	+	151	0	+	201	0		251	68	+	301	0		351	0		401	1		451	0		501
		2	0		52	0		102	0	+	152	0	+	202	0		252	57	+	302	0		352	0		402	2		452	0		502
0		3	0		53	0		103	0	+	153	0	+	203	0		253	64	+	303	0		353	0		403	2		453	0		503
0		4	0		54	0		104	0	+	154	0	+	204	0		254	37	+	304	1		354	0		404	0		454	0		504
0		5	0		55	0		105	0	+	155	0	+	205	0		255	27	+	305	0		355	0		405	2		455	0		505
0		6	0		56	0		106	0	+	156	0	+	206	0		256	9	+	306	0		356	0		406	1		456	0		506
0		7	0		57	0		107	0	+	157	0	+	207	1		257	0	+	307	0		357	0		407	1		457	0		507
0		8	0		58	0		108	0	+	158	0	+	208	0		258	0	+	308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0	+	159	0	+	209	1		259	0		309	0		359	0		409	0		459	0		509
0		10	0		60	0	+	110	0	+	160	0	+	210	0		260	1		310	3		360	0		410	0		460	0		510
0		11	0		61	0	+	111	0	+	161	0	+	211	1		261	1		311	1		361	0		411	0		461	0		511
0		12	0		62	0	+	112	0	+	162	0	+	212	0		262	2		312	2		362	0		412	0		462	0		512
0		13	0		63	0	+	113	0	+	163	0	+	213	0		263	0		313	1		363	1		413	0		463			
0		14	0		64	0	+	114	0	+	164	0	+	214	0		264	2		314	0		364	0		414	0		464			
0		15	0		65	0	+	115	0	+	165	0	+	215	0		265	1		315	1		365	0		415	0		465			
0		16	0		66	0	+	116	0	+	166	0	+	216	1		266	0		316	0		366	0		416	0		466			
0		17	0		67	0	+	117	0	+	167	0	+	217	1		267	2		317	0		367	0		417	0		467			
0		18	0		68	0	+	118	0		168	0	+	218	0		268	2		318	0		368	0		418	0		468			
0		19	0		69	0	+	119	0		169	0	+	219	1		269	1		319	0		369	0		419	0		469			
0		20	0		70	0	+	120	0		170	0	+	220	1		270	8		320	0		370	0		420	0		470			
0		21	0		71	0	+	121	0		171	0	+	221	2		271	5		321	0		371	0		421	0		471			
0		22	0		72	0	+	122	0		172	0	+	222	2		272	1		322	0		372	0		422	0		472			
0		23	0		73	0	+	123	0		173	0	+	223	2		273	2		323	0		373	0		423	0		473			
0		24	0		74	0	+	124	0		174	1	+	224	1		274	0		324	0		374	0		424	0		474			
0		25	0		75	0	+	125	0		175	0	+	225	1		275	1		325	0		375	0		425	0		475			
0		26	0		76	0	+	126	0		176	0		226	2		276	1		326	0		376	0		426	0		476			
0		27	0		77	0	+	127	0		177	0		227	1		277	0		327	0		377	0		427	0		477			
0		28	0		78	0	+	128	0		178	0		228	1		278	0		328	0		378	0		428	0		478			
0		29	0		79	0	+	129	0		179	0		229	3		279	0		329	0		379	0		429	0		479			
0		30	0		80	0	+	130	0		180	0		230	2		280	0		330	0		380	0		430	0		480			
0		31	0		81	0	+	131	0		181	0		231	3		281	0		331	0		381	0		431	0		481			
0		32	0		82	0	+	132	0		182	0		232	4	+	282	0		332	0		382	0		432	0		482			
0		33	0		83	0	+	133	0		183	1		233	5	+	283	0		333	0		383	0		433	0		483			
0		34	0		84	0	+	134	0		184	0		234	4	+	284	0		334	0		384	0		434	0		484			
0		35	0		85	0	+	135	0		185	0		235	9	+	285	0		335	0		385	0		435	0		485			
0		36	0		86	0	+	136	0		186	0		236	6	+	286	0		336	0		386	0		436	0		486			
0		37	0		87	0	+	137	0		187	0		237	10	+	287	0		337	0		387	0		437	0		487			
0		38	0		88	0		138	0		188	0		238	7	+	288	0		338	0		388	0		438	0		488			
0		39	0		89	0		139	0		189	0		239	7	+	289	0		339	0		389	0		439	0		489			
0		40	0		90	0	+	140	0		190	0		240	15	+	290	0		340	0		390	0		440	0		490			
0		41	0		91	0	+	141	0		191	0		241	15	+	291	1		341	0		391	0		441	0		491			
0		42	0		92	0	+	142	0		192	1		242	23	+	292	0		342	0		392	0		442	0		492			
0		43	0		93	0	+	143	0		193	0		243	17	+	293	0		343	0		393	0		443	0		493			
0		44	0		94	0	+	144	0		194	0		244	18	+	294	0		344	0		394	0		444	0		494			
0		45	0		95	0	+	145	0		195	1		245	32	+	295	1		345	0		395	0		445	0		495			
0		46	0		96	0	+	146	0		196	1		246	34	+	296	0		346	0		396	0		446	0		496			
0		47	0		97	0	+	147	0		197	0		247	38	+	297	0		347	0		397	0		447	0		497			
0		48	0		98	0	+	148	0	+	198	0		248	30	+	298	0		348	0		398	0		448	0		498			
0		49	0		99	0	+	149	0	+	199	0		249	52	+	299	1		349	0		399	0		449	0		499			
0		50	0		100	0	+	150	0	+	200	0		250	60	+	300	0		350	0		400	1		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:22

Configuration : $DISK1:[ALP12.SAMPLE]H7DXH1AG_080760750.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:53
Sample ID : H7DXH1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP12 Detector geometry:
Elapsed live time: 0 03:20:14.00 Elapsed real time: 0 03:20:14.00 0.0%
Start energy : 3365.98 keV End energy : 6680.46 keV
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5307.45	651	0	52.29	300.69	282	27	5.42E-02	3.9	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 11:11:24

Configuration : $DISK1:[ALP12.SAMPLE]H7DXH1AG_080760750.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:50:53
Sample ID : H7DXH1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP12 Detector geometry:
Elapsed live time: 0 03:20:14.00 Elapsed real time: 0 03:20:14.00 0.0%
Energy tolerance : 40.00 keV Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 60.00

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP12.SAMPLE]H7DXH1AG_080760750.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5307.44	282	309	651	648	0.12		

End of Report

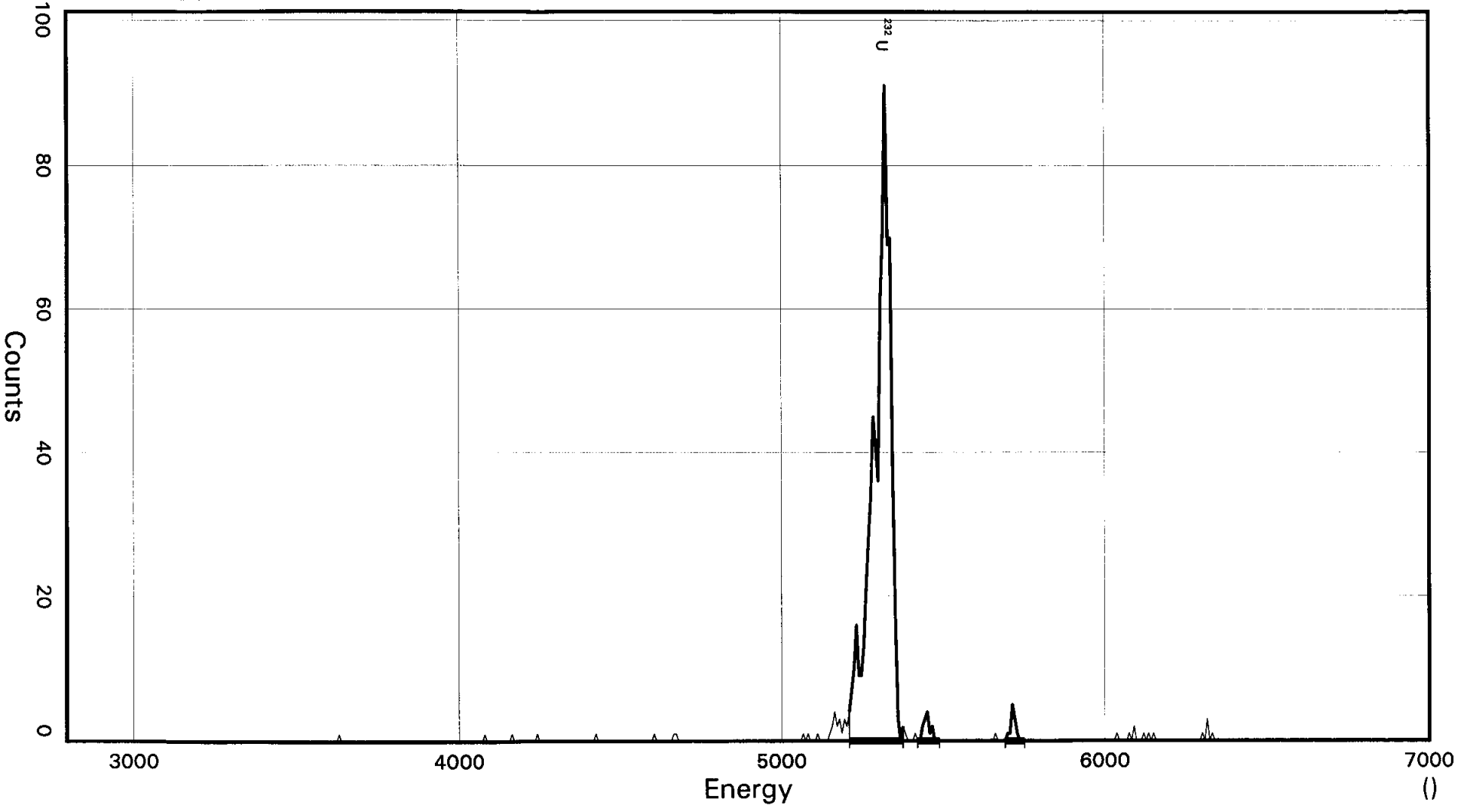
STL Richland WA.

U BRC

Sample ID: H7DXJ1AG

Detector ID: ALP69 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:51:00.68

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:09.00

Energy Coefficients:

Offset: 2.77160E+03

Slope: 7.51707E+00

Quadrature: 1.81482E-05

SAMPLE IDENTIITY: H7DXJ1AG

TITLE : U BRC

DETECTOR : ALP69 1
CONFIGURATION NAME : RDND06$DKA100:[ALP69.SAMPLE]H7DXJ1AG_0807607
51.CNF;1
ACQUIRE DATE of BACKGROUND: 12-JUN-2006 08:12:59

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:51:00 CALIB DATE : 12-JUN-2006 06:25:06

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:09

OFFSET : 2771.60 keV CONSTANT FWHM : 7.50000 Channels
SLOPE : 7.51707 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 1.814820E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXJ1AG

Detector: ALP69 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:00.68
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 2500 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	695	26	0	3.462	5317.0	165.6	324	346	0.00	0.00	P
U-234	2	5	0	0.008	4771.4	165.6	252	274	0.00	0.00	
U-235	1	3	0	0.004	4394.6	165.5	201	223	0.00	0.00	
U-238	2	8	0	0.007	4194.8	165.5	175	197	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXJ1AG
Detector: ALP69 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:00.68

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	0	+	201	0		251	0		301	1		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0	+	202	1	+	252	0		302	0		352	0		402	0		452	0		502
0		3	0		53	0		103	0		153	0	+	203	1	+	253	0		303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0	+	204	0	+	254	0		304	2		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0	+	205	0	+	255	1		305	3		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	0	+	256	0		306	4		356	0		406	0		456	0		506
0		7	0		57	0		107	0		157	0	+	207	0	+	257	1		307	1		357	0		407	0		457	0		507
0		8	0		58	0		108	0		158	0	+	208	0	+	258	0		308	2		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	0	+	209	0	+	259	0		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0		160	0	+	210	0	+	260	0		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0		161	0	+	211	0	+	261	1		311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0		162	0	+	212	0	+	262	0		312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0		163	0	+	213	0	+	263	0		313	0		363	0		413	0		463			
0		14	0		64	1		114	0		164	0	+	214	0	+	264	0		314	0		364	0		414	0		464			
0		15	0		65	0		115	0		165	0	+	215	0	+	265	0		315	0		365	0		415	0		465			
0		16	0		66	0		116	0		166	0	+	216	0	+	266	1		316	0		366	0		416	0		466			
0		17	0		67	0		117	0		167	0	+	217	0	+	267	2		317	0		367	0		417	0		467			
0		18	0		68	0		118	0		168	0	+	218	0	+	268	4		318	0		368	0		418	0		468			
0		19	0		69	0		119	0		169	0	+	219	0	+	269	2		319	0		369	0		419	1		469			
0		20	0		70	0		120	0		170	1	+	220	0	+	270	3		320	0		370	0		420	0		470			
0		21	0		71	0		121	0		171	0	+	221	0	+	271	1		321	0		371	0		421	3		471			
0		22	0		72	0		122	0		172	0	+	222	0	+	272	3		322	0		372	0		422	0		472			
0		23	0		73	0		123	0		173	0	+	223	0	+	273	2		323	0		373	0		423	1		473			
0		24	0		74	0		124	1		174	0		224	0	+	274	4	+	324	0		374	0		424	0		474			
0		25	0		75	0		125	0	+	175	0		225	0		275	7	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0		226	0		276	10	+	326	0		376	0		426	0		476			
0		27	0		77	0		127	0	+	177	0		227	0		277	16	+	327	0		377	0		427	0		477			
0		28	0		78	0		128	0	+	178	0		228	0		278	9	+	328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	9	+	329	0		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	13	+	330	0		380	0		430	0		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	21	+	331	0		381	0		431	0		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	28	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	34	+	333	0		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	45	+	334	1		384	1		434	0		484			
0		35	0		85	0		135	1	+	185	0		235	0		285	41	+	335	0		385	0		435	0		485			
0		36	0		86	0		136	0	+	186	0		236	0		286	36	+	336	0		386	0		436	0		486			
0		37	0		87	0		137	0	+	187	0		237	0		287	61	+	337	0		387	0		437	0		487			
0		38	0		88	0		138	0	+	188	0		238	0		288	71	+	338	0		388	0		438	0		488			
0		39	0		89	0		139	0	+	189	0		239	0		289	91	+	339	1		389	1		439	0		489			
0		40	0		90	0		140	0	+	190	0		240	0		290	69	+	340	1		390	0		440	0		490			
0		41	0		91	0		141	0	+	191	0		241	0		291	70	+	341	5		391	2		441	0		491			
0		42	0		92	0		142	0	+	192	0		242	0		292	37	+	342	3		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0		243	0		293	17	+	343	1		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	1		244	0		294	3	+	344	0		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0		245	0		295	0	+	345	0		395	1		445	0		495			
0		46	0		96	0		146	1	+	196	0		246	0		296	2		346	0		396	0		446	0		496			
0		47	0		97	0		147	0	+	197	0		247	0		297	1		347	0		397	1		447	0		497			
0		48	0		98	0		148	0		198	0		248	0		298	0		348	0		398	0		448	0		498			
0		49	0		99	0		149	0		199	0		249	0		299	0		349	0		399	1		449	0		499			
0		50	0		100	0		150	0		200	0		250	0		300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:26

Configuration : RDND06$DKA100:[ALP69.SAMPLE]H7DXJ1AG_080760751.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:00
Sample ID : H7DXJ1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP69 Detector geometry:
Elapsed live time: 0 03:20:09.00 Elapsed real time: 0 03:20:09.00 0.0%
Start energy : 2794.15 End energy : 6625.10
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5316.98	695	0	52.62	338.34	324	22	5.79E-02	3.8	
2	0	5446.21	12	0	30.07	355.50	352	9	9.99E-04	28.9	
3	0	5717.32	11	0	30.07	391.50	388	8	9.16E-04	30.2	

VMS Nuclide Identification Report V3.1 Generated 8-JUL-2006 11:11:29

Configuration : RDND06$DKA100:[ALP69.SAMPLE]H7DXJ1AG_080760751.CNF;1
Analyses by : ALPHA V1.8,PEAKEFF V2.2,NID V3.4
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:00
Sample ID : H7DXJ1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP69 Detector geometry:
Elapsed live time: 0 03:20:09.00 Elapsed real time: 0 03:20:09.00 0.0%
Energy tolerance : 80.00 Half life ratio : 1.00
Errors propagated: No Systematic Error : 0.00 %
Efficiency type : Spline Efficiencies at : Peak Energy
Abundance limit : 60.00

Summary of Nuclide Activity

Total number of lines in spectrum 3
Number of unidentified lines 2
Number of lines tentatively identified by NID 1 33.33%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: RDND06$DKA100:[ALP69.SAMPLE]H7DXJ1AG_080760751.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5316.98	324	346	695	694	0.04		
5446.21	352	361	12	12	0.00		
5717.31	388	396	11	11	0.00		

End of Report

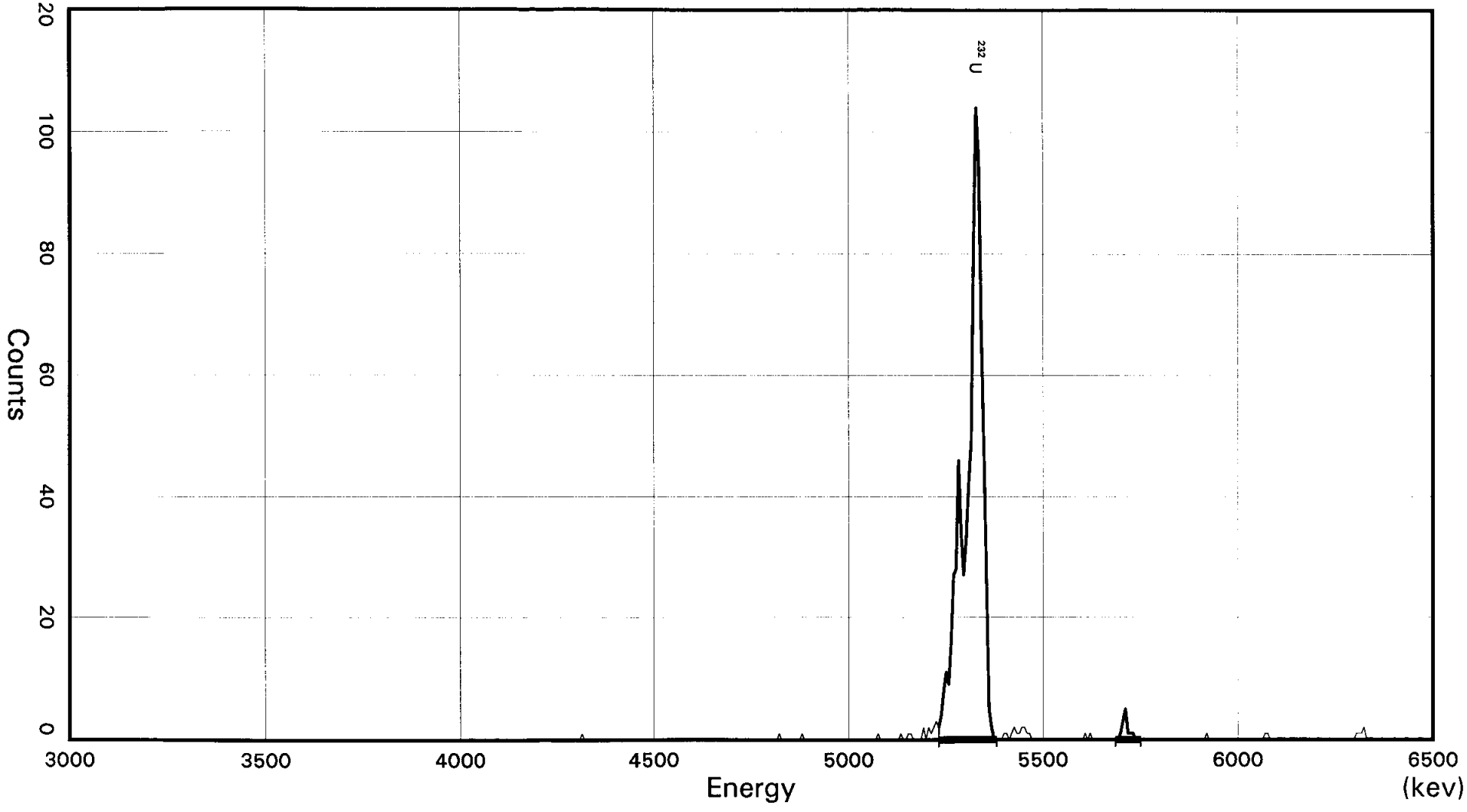
STL Richland WA.

U BRC

Sample ID: H7DXK1AG

Detector ID: ALP71 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:51:06.74

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:03.00

Energy Coefficients:

Offset: 3.14844E+03

Slope: 6.47574E+00

Quadrature: 3.38252E-05

SAMPLE IDENTIITY: H7DXK1AG

TITLE : U BRC

DETECTOR : ALP71 1
CONFIGURATION NAME : RDND06$DKA100:[ALP71.SAMPLE]H7DXK1AG_0807607
51.CNF;1
ACQUIRE DATE of BACKGROUND: 12-JUN-2006 08:13:05

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:51:06 CALIB DATE : 12-JUN-2006 06:25:11

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:03

OFFSET : 3148.44 keV CONSTANT FWHM : 8.66667 Channels
SLOPE : 6.47574 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 3.382520E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXK1AG

Detector: ALP71 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:06.74
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 2500 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	771	31	0	3.842	5328.7	149.5	321	344	0.00	0.00	P
U-234	1	3	0	0.004	4783.2	149.3	237	260	0.00	0.00	
U-235	1	4	0	0.003	4406.4	149.2	179	202	0.00	0.00	
U-238	0	4	0	-0.002	4206.6	149.2	148	171	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXK1AG
Detector: ALP71 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:06.74

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0	+	151	0	+	201	0	+	251	0		301	2		351	0		401	1		451	0		501
		2	0		52	0		102	0	+	152	0	+	202	0	+	252	0		302	1		352	0		402	0		452	0		502
0		3	0		53	0		103	0	+	153	0		203	0	+	253	0		303	1		353	0		403	0		453	0		503
0		4	0		54	0		104	0	+	154	0		204	0	+	254	0		304	2		354	0		404	0		454	0		504
0		5	0		55	0		105	0	+	155	0		205	0	+	255	0		305	2		355	0		405	0		455	0		505
0		6	0		56	0		106	0	+	156	0		206	0	+	256	1		306	1		356	0		406	0		456	0		506
0		7	0		57	0		107	0	+	157	0		207	0	+	257	0		307	1		357	0		407	0		457	0		507
0		8	0		58	0		108	0	+	158	0		208	1	+	258	0		308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0	+	159	0		209	0	+	259	1		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0	+	160	0		210	0	+	260	1		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0	+	161	0		211	0		261	0		311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0	+	162	0		212	0		262	0		312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0	+	163	0		213	0		263	0		313	0		363	0		413	0		463			
0		14	0		64	0		114	0	+	164	0		214	0		264	0		314	0		364	0		414	0		464			
0		15	0		65	0		115	0	+	165	0		215	0		265	2		315	0		365	0		415	0		465			
0		16	0		66	0		116	0	+	166	0		216	0		266	0		316	0		366	0		416	0		466			
0		17	0		67	0		117	0	+	167	0		217	1		267	2		317	0		367	0		417	0		467			
0		18	0		68	0		118	0	+	168	0		218	0		268	1		318	0		368	0		418	0		468			
0		19	0		69	0		119	0	+	169	0		219	0		269	2		319	0		369	0		419	0		469			
0		20	0		70	0		120	0	+	170	0		220	0		270	3		320	0		370	0		420	0		470			
0		21	0		71	0		121	0	+	171	0		221	0		271	2	+	321	0		371	0		421	0		471			
0		22	0		72	0		122	0		172	0		222	0		272	4	+	322	0		372	0		422	0		472			
0		23	0		73	0		123	0		173	0		223	0		273	8	+	323	0		373	0		423	0		473			
0		24	0		74	0		124	0		174	0		224	0		274	11	+	324	0		374	0		424	0		474			
0		25	0		75	0		125	0		175	0		225	0		275	9	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0		176	0		226	0		276	16	+	326	0		376	0		426	0		476			
0		27	0		77	0		127	0		177	0		227	0		277	27	+	327	0		377	1		427	0		477			
0		28	0		78	0		128	0		178	0		228	0		278	28	+	328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	46	+	329	1		379	0		429	0		479			
0		30	0		80	0		130	1	+	180	0		230	0		280	34	+	330	0		380	0		430	0		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	27	+	331	1		381	0		431	0		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	33	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	42	+	333	0		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	49	+	334	0		384	0		434	0		484			
0		35	0		85	0		135	0	+	185	0		235	0		285	82	+	335	0		385	0		435	0		485			
0		36	0		86	0		136	0	+	186	0		236	0		286	104	+	336	0		386	0		436	1		486			
0		37	0		87	0		137	0	+	187	0	+	237	0		287	96	+	337	0		387	0		437	1		487			
0		38	0		88	0		138	0	+	188	0	+	238	0		288	67	+	338	0		388	0		438	1		488			
0		39	0		89	0		139	0	+	189	0	+	239	0		289	48	+	339	0		389	0		439	2		489			
0		40	0		90	0		140	0	+	190	0	+	240	0		290	26	+	340	0		390	0		440	0		490			
0		41	0		91	0		141	0	+	191	0	+	241	0		291	5	+	341	0		391	0		441	0		491			
0		42	0		92	0		142	0	+	192	0	+	242	0		292	2	+	342	0		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0	+	243	0		293	0	+	343	1		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	0	+	244	0		294	0		344	3		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0	+	245	0		295	0		345	5		395	0		445	0		495			
0		46	0		96	0		146	0	+	196	0	+	246	0		296	0		346	1		396	0		446	0		496			
0		47	0		97	0		147	0	+	197	0	+	247	1		297	1		347	1		397	0		447	0		497			
0		48	0		98	0	+	148	0	+	198	0	+	248	0		298	1		348	1		398	0		448	0		498			
0		49	0		99	0	+	149	0	+	199	0	+	249	0		299	0		349	0		399	0		449	0		499			
0		50	0		100	0	+	150	0	+	200	0	+	250	0		300	1		350	0		400	1		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:31

Configuration : RDND06$DKA100:[ALP71.SAMPLE]H7DXK1AG_080760751.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:06
Sample ID : H7DXK1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP71 Detector geometry:
Elapsed live time: 0 03:20:03.00 Elapsed real time: 0 03:20:03.00 0.0%
Start energy : 3167.87 kev End energy : 6472.89 kev
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5328.73	771	0	45.33	336.10	321	23	6.42E-02	3.6	
2	0	5711.63	13	0	32.38	395.00	391	10	1.08E-03	27.7	

VMS Nuclide Identification Report V3.1 Generated 8-JUL-2006 11:11:32

Configuration	: RDND06$DKA100:[ALP71.SAMPLE]H7DXK1AG_080760751.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.4		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 07:51:06
Sample ID	: H7DXK1AG	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP71	Detector geometry	:
Elapsed live time	: 0 03:20:03.00	Elapsed real time	: 0 03:20:03.00 0.0%
Energy tolerance	: 80.00 kev	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 60.00		

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: RDND06$DKA100:[ALP71.SAMPLE]H7DXK1AG_080760751.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5328.72	321	344	771	766	0.18		
5711.63	391	401	13	12	0.28		

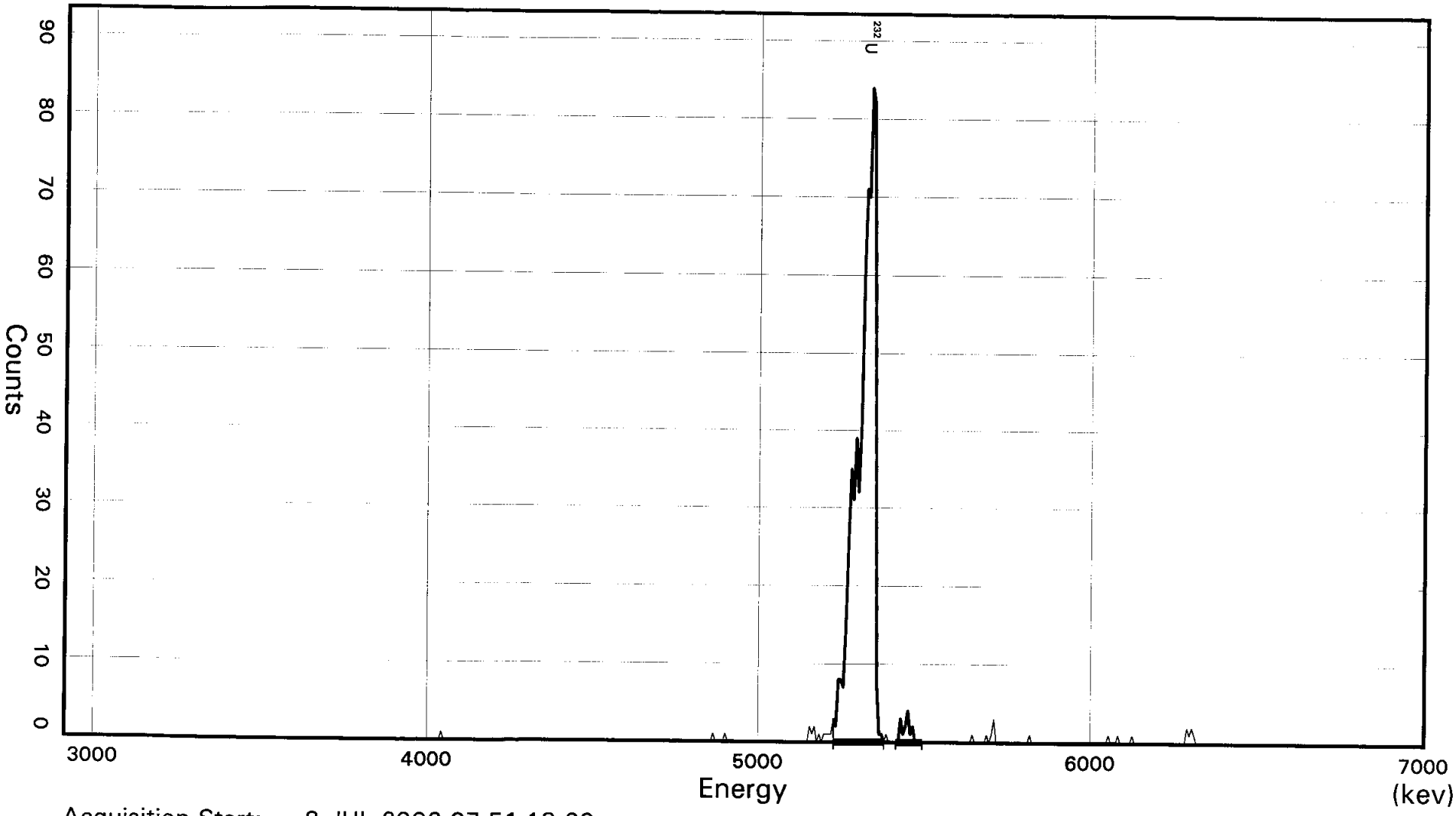
End of Report

STL Richland WA.

U BRC

Sample ID: H7DXL1AG
Detector ID: ALP83 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:51:13.99
Preset Live Time: 0 03:20:00.00
Elapsed Live Time: 0 03:20:10.00

Energy Coefficients:
Offset: 2.89305E+03
Slope: 7.36477E+00
Quadrature: -2.22552E-04

SAMPLE IDENTIITY: H7DXL1AG

TITLE : U BRC

DETECTOR : ALP83 1
CONFIGURATION NAME : RDND06$DKA100:[ALP83.SAMPLE]H7DXL1AG_0807607
51.CNF;1
ACQUIRE DATE of BACKGROUND: 09-JUN-2006 06:58:07

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:51:13 CALIB DATE : 09-JUN-2006 06:21:49

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:10

OFFSET : 2893.05 keV CONSTANT FWHM : 9.00000 Channels
SLOPE : 7.36477 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.222552E-03 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXL1AG

Detector: ALP83 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:13.99
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 2500 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	672	23	0	3.348	5325.8	151.6	320	341	0.00	0.00	P
U-234	0	5	0	-0.002	4780.2	152.3	245	266	0.00	0.00	
U-235	0	2	0	-0.001	4403.4	152.8	193	214	0.00	0.00	
U-238	0	6	0	-0.002	4203.6	153.0	165	186	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXL1AG
Detector: ALP83 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:13.99

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	0	+	201	0	+	251	0		301	4		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0	+	202	0	+	252	0		302	1		352	1		402	0		452	0		502
0		3	0		53	0		103	0		153	0	+	203	0	+	253	0		303	2		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0	+	204	0	+	254	0		304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0	+	205	0	+	255	0		305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	0	+	256	0		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	1		157	0	+	207	0	+	257	0		307	0		357	0		407	0		457	0		507
0		8	0		58	0		108	0		158	0	+	208	0	+	258	0		308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	0	+	209	0	+	259	0		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0		160	0	+	210	0	+	260	2		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0		161	0	+	211	0	+	261	1		311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0		162	0	+	212	0	+	262	2		312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0		163	0	+	213	0	+	263	0		313	0		363	0		413	0		463			
0		14	0		64	0		114	0		164	0	+	214	0	+	264	1		314	0		364	0		414	0		464			
0		15	0		65	0		115	0	+	165	0		215	0	+	265	0		315	0		365	0		415	0		465			
0		16	0		66	0		116	0	+	166	0		216	0	+	266	1		316	0		366	0		416	0		466			
0		17	0		67	0		117	0	+	167	0		217	0		267	1		317	0		367	0		417	0		467			
0		18	0		68	0		118	0	+	168	0		218	0		268	1		318	0		368	0		418	2		468			
0		19	0		69	0		119	0	+	169	0		219	0		269	1		319	0		369	0		419	1		469			
0		20	0		70	0		120	0	+	170	0		220	1		270	3	+	320	0		370	0		420	2		470			
0		21	0		71	0		121	0	+	171	0		221	0		271	2	+	321	0		371	0		421	1		471			
0		22	0		72	0		122	0	+	172	0		222	0		272	8	+	322	0		372	0		422	0		472			
0		23	0		73	0		123	0	+	173	0		223	0		273	8	+	323	0		373	0		423	0		473			
0		24	0		74	0		124	0	+	174	0		224	0		274	7	+	324	0		374	0		424	0		474			
0		25	0		75	0		125	0	+	175	0		225	1		275	15	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0		226	0		276	26	+	326	0		376	0		426	0		476			
0		27	0		77	0		127	0	+	177	0		227	0		277	35	+	327	0		377	0		427	0		477			
0		28	0		78	0		128	0	+	178	0		228	0		278	31	+	328	1		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	39	+	329	0		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	32	+	330	0		380	0		430	0		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	41	+	331	0		381	0		431	0		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	61	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	71	+	333	0		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	70	+	334	1		384	0		434	0		484			
0		35	0		85	0		135	0	+	185	0		235	0		285	84	+	335	0		385	1		435	0		485			
0		36	0		86	0		136	0	+	186	0		236	0		286	82	+	336	1		386	0		436	0		486			
0		37	0		87	0		137	0		187	0		237	0		287	42	+	337	3		387	0		437	0		487			
0		38	0		88	0		138	0		188	0		238	0		288	7	+	338	0		388	0		438	0		488			
0		39	0		89	0		139	0		189	0		239	0		289	1	+	339	0		389	1		439	0		489			
0		40	0		90	0		140	0		190	0		240	0		290	1	+	340	0		390	0		440	0		490			
0		41	0		91	0		141	0		191	0		241	0		291	0		341	0		391	0		441	0		491			
0		42	0		92	0		142	0		192	0		242	0		292	1		342	0		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0		243	0		293	0		343	0		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	0		244	0		294	0		344	0		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0	+	245	0		295	0		345	0		395	1		445	0		495			
0		46	0		96	0		146	0	+	196	0	+	246	0		296	0		346	0		396	0		446	0		496			
0		47	0		97	0		147	0	+	197	0	+	247	0		297	0		347	0		397	0		447	0		497			
0		48	0		98	0		148	0	+	198	0	+	248	0		298	3		348	0		398	0		448	0		498			
0		49	0		99	0		149	0	+	199	0	+	249	0		299	1		349	0		399	0		449	0		499			
0		50	0		100	0		150	0	+	200	0	+	250	0		300	2		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:37

Configuration : RDND06$DKA100:[ALP83.SAMPLE]H7DXL1AG_080760751.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:13
Sample ID : H7DXL1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP83 Detector geometry:
Elapsed live time: 0 03:20:10.00 Elapsed real time: 0 03:20:10.00 0.0%
Start energy : 2915.14 kev End energy : 6605.47 kev
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5325.81	672	0	58.92	333.69	320	21	5.60E-02	3.9	
2	0	5442.73	12	0	44.19	349.90	346	11	9.99E-04	28.9	

VMS Nuclide Identification Report V3.1 Generated 8-JUL-2006 11:11:39

Configuration	: RDND06$DKA100:[ALP83.SAMPLE]H7DXL1AG_080760751.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.4		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 07:51:13
Sample ID	: H7DXL1AG	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP83	Detector geometry	:
Elapsed live time	: 0 03:20:10.00	Elapsed real time	: 0 03:20:10.00 0.0%
Energy tolerance	: 80.00 kev	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 70.00		

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
		Total Activity :	0.000E+00	0.000E+00			
		Grand Total Activity :	0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: RDND06$DKA100:[ALP83.SAMPLE]H7DXL1AG_080760751.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5325.80	320	341	672	666	0.23		
5442.73	346	357	12	13	-0.29		

End of Report

SEVERN TRENT STL

URANIUM ISOTOPIC COUNTING REQUEST

1111

C.R. Technician CS

Date Counted 7/8/06

Counting Time
Sample 200 Minutes
Background See Alpha Regions Report

SOP's
Operating: RICHRD008
Review: RICHRD0016

BRC 5/24 6/6/7/6 9

WorkOrder #	U-232 (5320 KeV) Tracer	TOTAL COUNTS U-238 (4196 KeV)	U-235 (4396 KeV)	U-234 (4776 KeV)	Det #	Comments/Edits
H7DXM1AG	See Counting Room Printout for ROI information				84	FWHM > 100
H7DXP1AG	See Counting Room Printout for ROI information				85	
H7DXQ1AG	See Counting Room Printout for ROI information				87	
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					

Comments:

Form No: RC-011, 7/02, Rev 8

Approved by: S

Date: 7/8/06

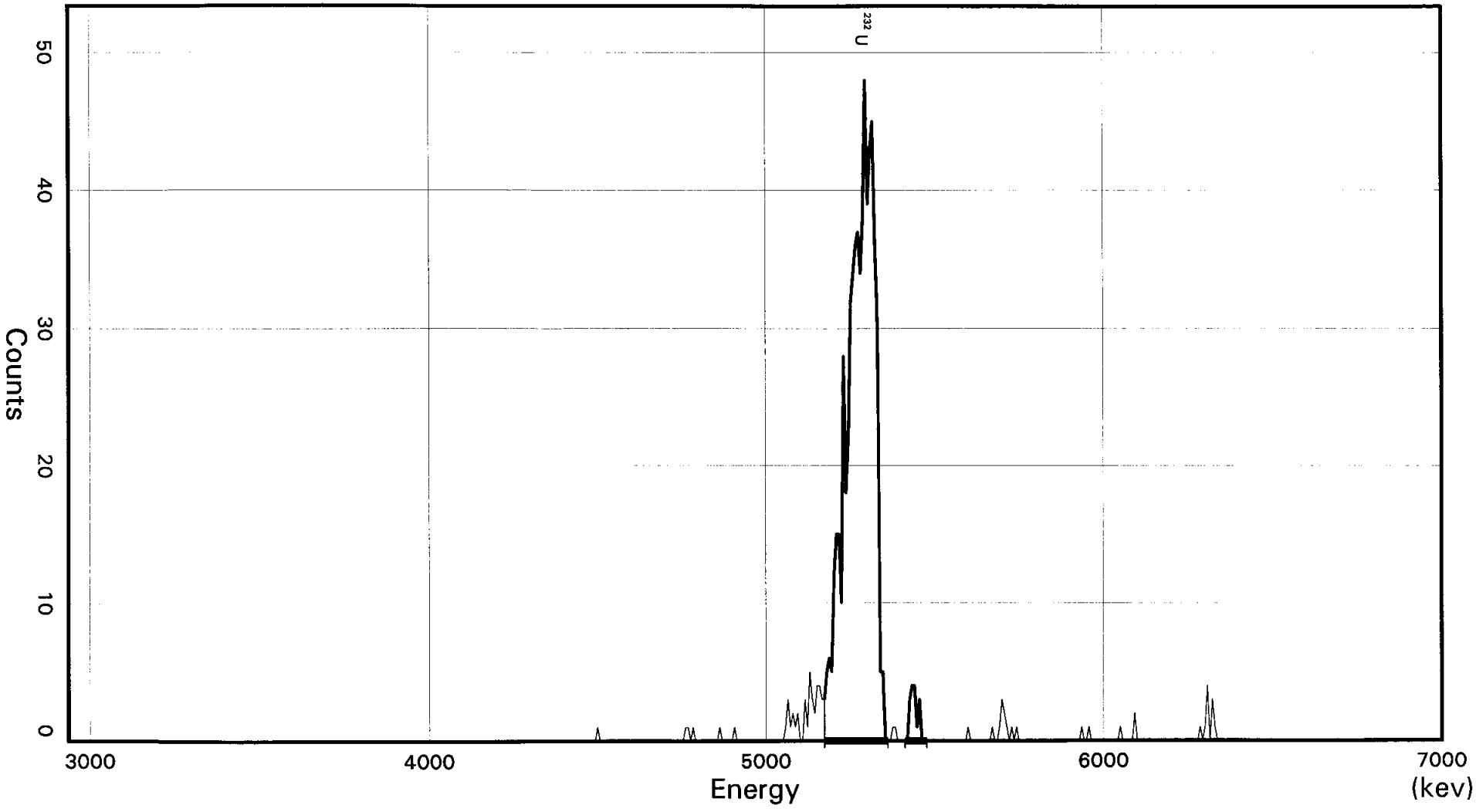
STL Richland WA.

U BRC

Sample ID: H7DXM1AG

Detector ID: ALP84 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:51:17.05

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:07.00

Energy Coefficients:

Offset: 2.91475E+03

Slope: 7.27474E+00

Quadrature: -1.17694E-04

SAMPLE IDENTIITY: H7DXM1AG

TITLE : U BRC

DETECTOR : ALP84 1
CONFIGURATION NAME : RDND06$DKA100:[ALP84.SAMPLE]H7DXM1AG_080760751.CNF;1
ACQUIRE DATE of BACKGROUND: 09-JUN-2006 06:58:10

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:51:17 CALIB DATE : 09-JUN-2006 06:21:40

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:07

OFFSET : 2914.75 keV CONSTANT FWHM : 5.00000 Channels
SLOPE : 7.27474 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : -.117694E-03 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXM1AG

Detector: ALP84 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:17.05
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 2500 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	600	19	0	2.991	5287.7	187.2	312	338	0.00	0.00	P
U-234	3	4	0	0.013	4742.2	187.6	236	262	0.00	0.00	
U-235	0	2	0	-0.001	4365.4	187.9	184	210	0.00	0.00	
U-238	0	0	0	0.000	4165.6	180.9	157	182	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXM1AG
Detector: ALP84 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:17.05

Flags Key
Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	0	+	201	0	+	251	2		301	3		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0	+	202	0	+	252	0		302	0		352	0		402	0		452	0		502
0		3	0		53	0		103	0		153	0	+	203	0	+	253	0		303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0	+	204	0	+	254	3		304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0	+	205	1	+	255	1		305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	1	+	256	5		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0	+	157	0	+	207	0	+	257	3		307	0		357	0		407	0		457	0		507
0		8	0		58	0		108	0	+	158	0	+	208	1	+	258	2		308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0	+	159	0	+	209	0	+	259	4		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0	+	160	0	+	210	0	+	260	4		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0	+	161	0		211	0	+	261	3		311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0	+	162	0		212	0	+	262	3	+	312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0	+	163	0		213	0		263	5	+	313	0		363	0		413	0		463			
0		14	0		64	0		114	0	+	164	0		214	0		264	6	+	314	0		364	0		414	0		464			
0		15	0		65	0		115	0	+	165	0		215	0		265	5	+	315	0		365	0		415	0		465			
0		16	0		66	0		116	0	+	166	0		216	0		266	12	+	316	0		366	0		416	0		466			
0		17	0		67	0		117	0	+	167	0		217	0		267	15	+	317	0		367	0		417	1		467			
0		18	0		68	0		118	0	+	168	0		218	0		268	15	+	318	0		368	1		418	0		468			
0		19	0		69	0		119	0	+	169	1		219	1		269	10	+	319	0		369	0		419	1		469			
0		20	0		70	0		120	0	+	170	0		220	0		270	28	+	320	0		370	0		420	4		470			
0		21	0		71	0		121	0	+	171	0		221	0		271	18	+	321	1		371	1		421	0		471			
0		22	0		72	0		122	0	+	172	0		222	0		272	22	+	322	0		372	0		422	3		472			
0		23	0		73	0		123	0	+	173	0		223	0		273	32	+	323	0		373	0		423	1		473			
0		24	0		74	0		124	0	+	174	0		224	0		274	34	+	324	0		374	0		424	0		474			
0		25	0		75	0		125	0	+	175	0		225	1		275	36	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0		226	0		276	37	+	326	0		376	0		426	0		476			
0		27	0		77	0		127	0	+	177	0		227	0		277	34	+	327	0		377	0		427	0		477			
0		28	0		78	0		128	0	+	178	0		228	0		278	38	+	328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	48	+	329	0		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	39	+	330	0		380	0		430	0		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	43	+	331	1		381	0		431	0		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	45	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0		183	0		233	0		283	36	+	333	0		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	30	+	334	1		384	1		434	0		484			
0		35	0		85	0		135	0	+	185	0		235	0		285	5	+	335	3		385	0		435	0		485			
0		36	0		86	0		136	0	+	186	0	+	236	0		286	5	+	336	2		386	0		436	0		486			
0		37	0		87	0		137	0	+	187	0	+	237	0		287	0	+	337	1		387	0		437	0		487			
0		38	0		88	0		138	0	+	188	0	+	238	0		288	0		338	0		388	0		438	0		488			
0		39	0		89	0		139	0	+	189	0	+	239	0		289	0		339	1		389	0		439	0		489			
0		40	0		90	0		140	0	+	190	0	+	240	0		290	1		340	0		390	2		440	0		490			
0		41	0		91	0		141	0	+	191	0	+	241	0		291	1		341	1		391	0		441	0		491			
0		42	0		92	0		142	0	+	192	0	+	242	0		292	0		342	0		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0	+	243	0		293	0		343	0		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	0	+	244	0		294	0		344	0		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0	+	245	0		295	0		345	0		395	0		445	0		495			
0		46	0		96	0		146	0	+	196	0	+	246	1		296	0		346	0		396	0		446	0		496			
0		47	0		97	0		147	0	+	197	0	+	247	3		297	3		347	0		397	0		447	0		497			
0		48	0		98	0		148	0	+	198	0	+	248	1		298	4		348	0		398	0		448	0		498			
0		49	0		99	0		149	0	+	199	0	+	249	2		299	4		349	0		399	0		449	0		499			
0		50	0		100	0		150	0	+	200	0	+	250	1		300	1		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:34

Configuration : RDND06$DKA100:[ALP84.SAMPLE]H7DXM1AG_080760751.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:17
Sample ID : H7DXM1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP84 Detector geometry:
Elapsed live time: 0 03:20:07.00 Elapsed real time: 0 03:20:07.00 0.0%
Start energy : 2936.57 kev End energy : 6608.56 kev
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5287.74	600	0	101.85	327.94	312	26	5.00E-02	4.1	
2	0	5436.30	15	0	29.10	348.58	345	9	1.25E-03	25.8	

VMS Nuclide Identification Report V3.1 Generated 8-JUL-2006 11:11:35

Configuration	: RDND06$DKA100:[ALP84.SAMPLE]H7DXM1AG_080760751.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.4		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 07:51:17
Sample ID	: H7DXM1AG	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP84	Detector geometry	:
Elapsed live time	: 0 03:20:07.00	Elapsed real time	: 0 03:20:07.00 0.0%
Energy tolerance	: 80.00 kev	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 70.00		

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: RDND06$DKA100:[ALP84.SAMPLE]H7DXM1AG_080760751.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5287.74	312	338	600	601	-0.04		
5436.29	345	354	15	15	0.00		

End of Report

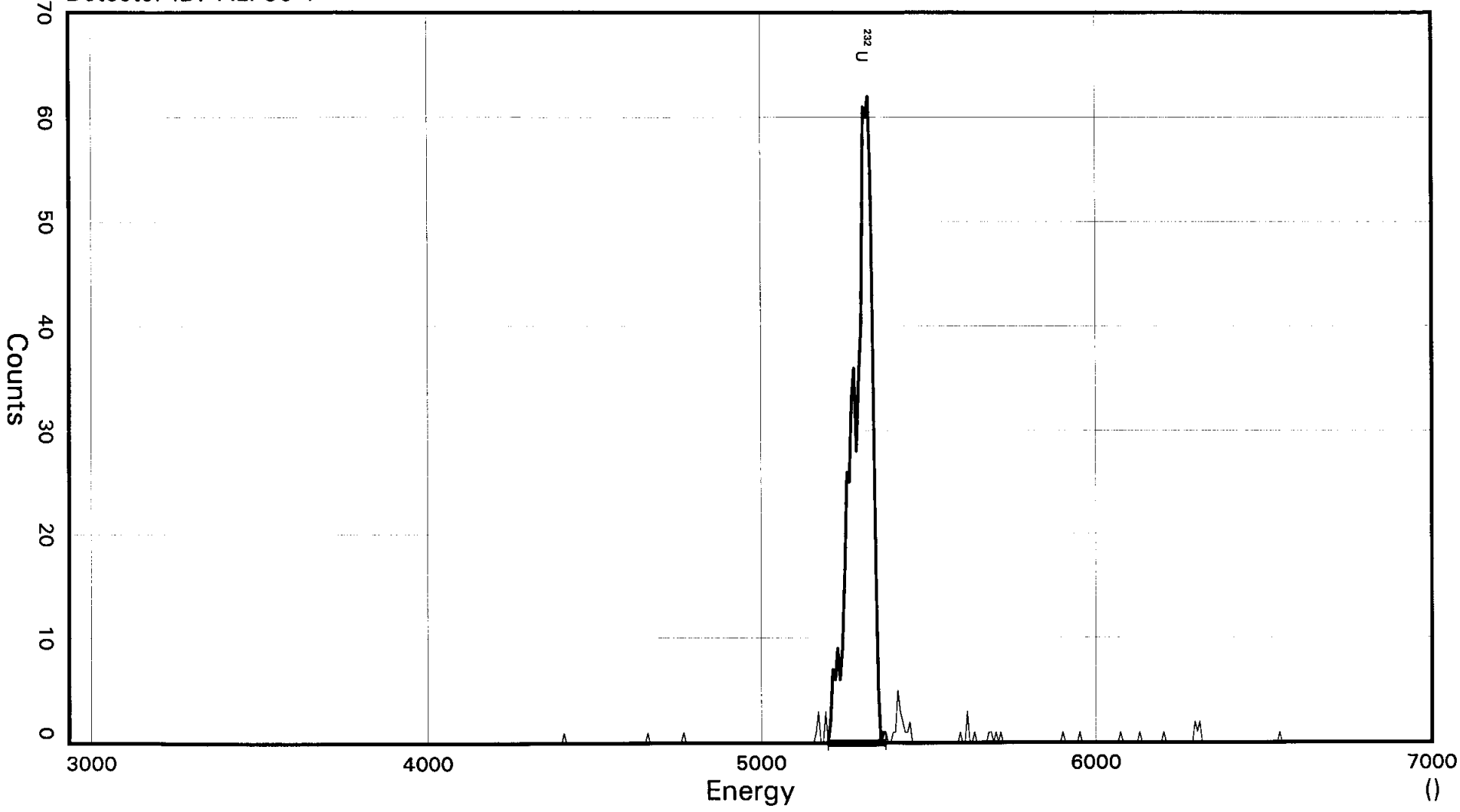
STL Richland WA.

U BRC

Sample ID: H7DXP1AG

Detector ID: ALP85 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 07:51:24.51

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:13.00

Energy Coefficients:

Offset: 2.91304E+03

Slope: 7.16241E+00

Quadrature: 6.93387E-06

SAMPLE IDENTIITY: H7DXP1AG

TITLE : U BRC

DETECTOR : ALP85 1
CONFIGURATION NAME : RDND06$DKA100:[ALP85.SAMPLE]H7DXP1AG_0807607
51.CNF;1
ACQUIRE DATE of BACKGROUND: 09-JUN-2006 06:58:12

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:51:24 CALIB DATE : 09-JUN-2006 06:21:45

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:13

OFFSET : 2913.04 keV CONSTANT FWHM : 9.83333 Channels
SLOPE : 7.16241 keV/C SENSITIVITY : 3.00000 Std Dev's
QUAD COEFF : 6.933870E-06 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXP1AG

Detector: ALP85 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:24.51
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 2500 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	578	42	0	2.870	5305.6	172.0	319	343	0.00	0.00	P
U-234	2	5	0	0.008	4760.0	172.0	243	267	0.00	0.00	
U-235	1	0	0	0.005	4383.2	172.0	190	214	0.00	0.00	
U-238	0	0	0	0.000	4183.4	172.0	162	186	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXP1AG
Detector: ALP85 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:24.51

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	0	+	201	0	+	251	0		301	1		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0	+	202	0	+	252	0		302	1		352	0		402	0		452	0		502
0		3	0		53	0		103	0		153	0	+	203	0	+	253	0		303	2		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0	+	204	0	+	254	0		304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0	+	205	0	+	255	0		305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	0	+	256	0		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0		157	0	+	207	0	+	257	0		307	0		357	0		407	0		457	1		507
0		8	0		58	0		108	0		158	0	+	208	0	+	258	0		308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	1	+	209	1	+	259	0		309	0		359	0		409	1		459	0		509
0		10	0		60	0		110	0		160	0	+	210	0	+	260	0		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0		161	0	+	211	0	+	261	0		311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0	+	162	0	+	212	0	+	262	0		312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0	+	163	0	+	213	0	+	263	0		313	0		363	0		413	0		463			
0		14	0		64	0		114	0	+	164	0	+	214	0	+	264	1		314	0		364	0		414	0		464			
0		15	0		65	0		115	0	+	165	0		215	0	+	265	3		315	0		365	0		415	0		465			
0		16	0		66	0		116	0	+	166	0		216	0	+	266	0		316	0		366	0		416	0		466			
0		17	0		67	0		117	0	+	167	0		217	0	+	267	0		317	0		367	1		417	0		467			
0		18	0		68	0		118	0	+	168	0		218	0		268	3		318	0		368	0		418	0		468			
0		19	0		69	0		119	0	+	169	0		219	0		269	0	+	319	0		369	0		419	0		469			
0		20	0		70	0		120	0	+	170	0		220	0		270	2	+	320	0		370	0		420	0		470			
0		21	0		71	0		121	0	+	171	0		221	0		271	7	+	321	0		371	0		421	0		471			
0		22	0		72	0		122	0	+	172	0		222	0		272	6	+	322	0		372	0		422	2		472			
0		23	0		73	0		123	0	+	173	0		223	0		273	9	+	323	0		373	0		423	1		473			
0		24	0		74	0		124	0	+	174	0		224	0		274	6	+	324	1		374	1		424	2		474			
0		25	0		75	0		125	0	+	175	0		225	0		275	9	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0		226	0		276	16	+	326	0		376	0		426	0		476			
0		27	0		77	0		127	0	+	177	0		227	0		277	26	+	327	3		377	0		427	0		477			
0		28	0		78	0		128	0	+	178	0		228	0		278	25	+	328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	33	+	329	0		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	36	+	330	1		380	0		430	0		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	28	+	331	0		381	0		431	0		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	35	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	40	+	333	0		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	61	+	334	0		384	0		434	0		484			
0		35	0		85	0		135	0	+	185	0		235	0		285	60	+	335	0		385	0		435	0		485			
0		36	0		86	0		136	0	+	186	0		236	0		286	62	+	336	1		386	0		436	0		486			
0		37	0		87	0		137	0		187	0		237	0		287	54	+	337	1		387	0		437	0		487			
0		38	0		88	0		138	0		188	0		238	0		288	36	+	338	0		388	0		438	0		488			
0		39	0		89	0		139	0		189	0		239	0		289	17	+	339	1		389	0		439	0		489			
0		40	0		90	0		140	0	+	190	0		240	0		290	5	+	340	0		390	0		440	0		490			
0		41	0		91	0		141	0	+	191	0		241	0		291	0	+	341	1		391	1		441	0		491			
0		42	0		92	0		142	0	+	192	0		242	0		292	1	+	342	0		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0	+	243	0		293	1		343	0		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	1	+	244	0		294	0		344	0		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0	+	245	0		295	0		345	0		395	0		445	0		495			
0		46	0		96	0		146	0	+	196	0	+	246	0		296	1		346	0		396	0		446	0		496			
0		47	0		97	0		147	0	+	197	0	+	247	0		297	1		347	0		397	0		447	0		497			
0		48	0		98	0		148	0	+	198	0	+	248	0		298	5		348	0		398	0		448	0		498			
0		49	0		99	0		149	0	+	199	0	+	249	0		299	3		349	0		399	1		449	0		499			
0		50	0		100	0		150	0	+	200	0	+	250	0		300	2		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:40

Configuration : RDND06$DKA100:[ALP85.SAMPLE]H7DXP1AG_080760751.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:24
Sample ID : H7DXP1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP85 Detector geometry:
Elapsed live time: 0 03:20:13.00 Elapsed real time: 0 03:20:13.00 0.0%
Start energy : 2934.52 End energy : 6582.01
Sensitivity : 3.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5305.58	578	0	71.62	333.93	319	24	4.81E-02	4.2	

VMS Nuclide Identification Report V3.1 Generated 8-JUL-2006 11:11:42

Configuration	: RDND06$DKA100:[ALP85.SAMPLE]H7DXP1AG_080760751.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.4		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 07:51:24
Sample ID	: H7DXP1AG	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP85	Detector geometry	:
Elapsed live time	: 0 03:20:13.00	Elapsed real time	: 0 03:20:13.00 0.0%
Energy tolerance	: 80.00	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 70.00		

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
		Total Activity :	0.000E+00	0.000E+00			
		Grand Total Activity :	0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: RDND06$DKA100:[ALP85.SAMPLE]H7DXP1AG_080760751.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5305.57	319	343	578	575	0.12		

End of Report

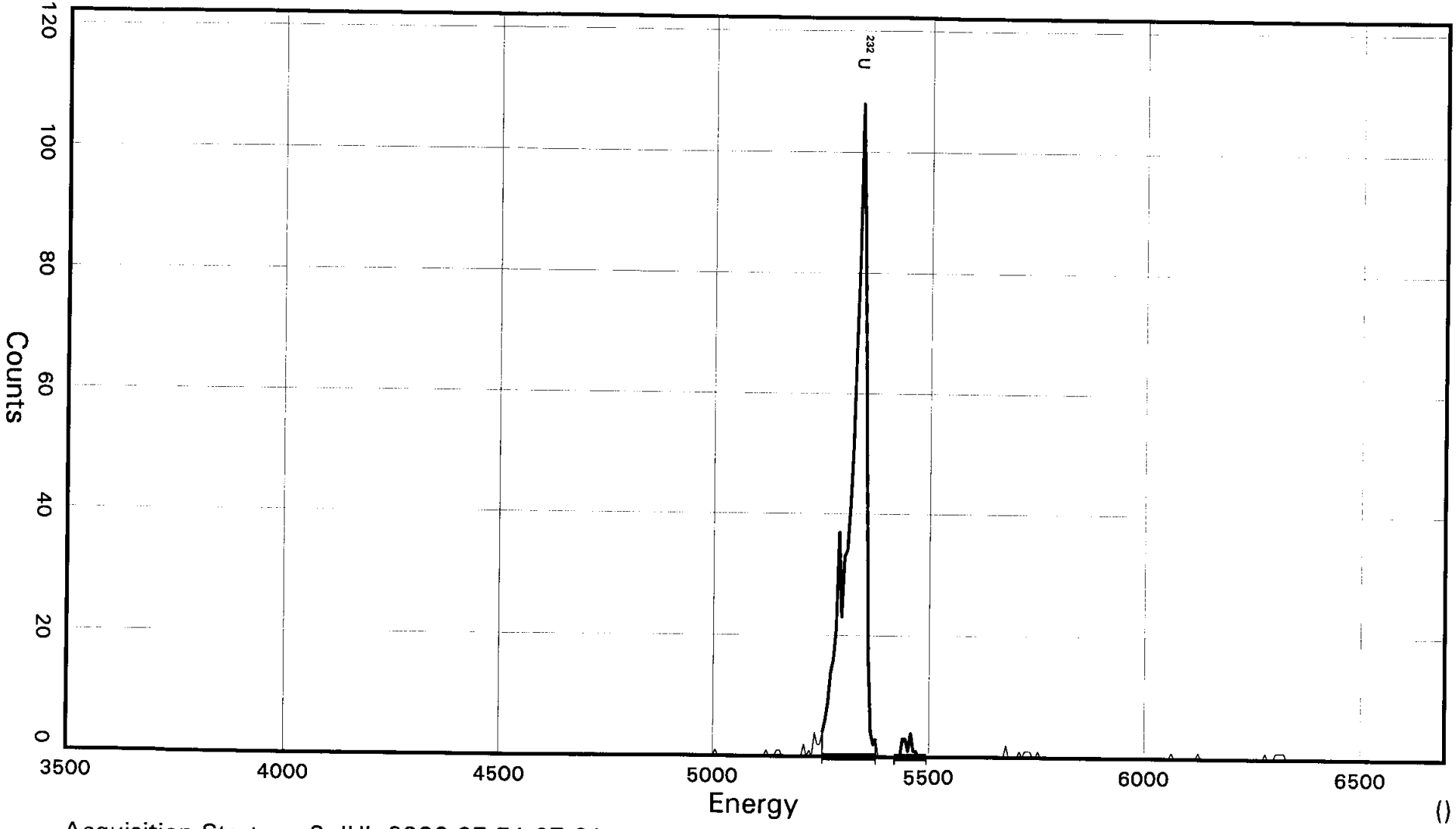
STL Richland WA.

U BRC

Sample ID: H7DXQ1AG

Detector ID: ALP87 1

Batch ID: 6167169



()

Acquisition Start: 8-JUL-2006 07:51:27.21

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:10.00

Energy Coefficients:

Offset: 3.52509E+03

Slope: 6.19894E+00

Quadrature: -2.09215E-05

SAMPLE IDENTIITY: H7DXQ1AG

TITLE : U BRC

DETECTOR : ALP87 1
CONFIGURATION NAME : RDND06$DKA100:[ALP87.SAMPLE]H7DXQ1AG_0807607
51.CNF;1
ACQUIRE DATE of BACKGROUND: 09-JUN-2006 06:58:13

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 07:51:27 CALIB DATE : 09-JUN-2006 06:21:54

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:10

OFFSET : 3525.09 keV CONSTANT FWHM : 9.33333 Channels
SLOPE : 6.19894 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : -.209215E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXQ1AG

Detector: ALP87 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:27.21
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	707	8	0	3.524	5336.4	123.7	279	299	0.00	0.00	P
U-234	0	2	0	-0.002	4790.9	123.8	191	211	0.00	0.00	
U-235	0	0	0	0.000	4414.1	123.9	130	150	0.00	0.00	
U-238	0	0	0	0.000	4214.3	123.9	98	118	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXQ1AG
Detector: ALP87 1
Report Date: 08-Jul-06 11:11 AM
Acquire Date: 8-JUL-2006 07:51:27.21

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0	+	101	0		151	0	+	201	0		251	0		301	0		351	0		401	1		451	0		501
		2	0		52	0	+	102	0		152	0	+	202	0		252	0		302	0		352	0		402	1		452	0		502
0		3	0		53	0	+	103	0		153	0	+	203	0		253	0		303	1		353	0		403	0		453	0		503
0		4	0		54	0	+	104	0		154	0	+	204	0		254	0		304	0		354	0		404	0		454	0		504
0		5	0		55	0	+	105	0		155	0	+	205	0		255	0		305	1		355	0		405	0		455	0		505
0		6	0		56	0	+	106	0		156	0	+	206	0		256	0		306	1		356	0		406	0		456	0		506
0		7	0		57	0	+	107	0		157	0	+	207	0		257	0		307	1		357	0		407	0		457	0		507
0		8	0		58	0	+	108	0		158	0	+	208	1		258	0		308	0		358	0		408	0		458	0		508
0		9	0		59	0	+	109	0		159	0	+	209	0		259	3		309	0		359	0		409	0		459	0		509
0		10	0		60	0	+	110	0		160	0	+	210	0		260	3		310	1		360	1		410	0		460	0		510
0		11	0		61	0	+	111	0		161	0	+	211	0		261	1		311	0		361	0		411	0		461	0		511
0		12	0		62	0	+	112	0		162	0		212	1		262	4		312	0		362	0		412	0		462	0		512
0		13	0		63	0	+	113	0		163	0		213	1		263	1		313	0		363	0		413	0		463			
0		14	0		64	0	+	114	0		164	0		214	0		264	1		314	0		364	0		414	0		464			
0		15	0		65	0	+	115	0		165	0		215	0		265	0		315	0		365	0		415	0		465			
0		16	0		66	0	+	116	0		166	0		216	0		266	0		316	0		366	0		416	0		466			
0		17	0		67	0	+	117	0		167	0		217	0		267	0		317	0		367	0		417	0		467			
0		18	0		68	0	+	118	0		168	0		218	0		268	0		318	0		368	0		418	0		468			
0		19	0		69	0		119	0		169	0		219	0		269	0		319	0		369	0		419	0		469			
0		20	0		70	0		120	0		170	0		220	0		270	0		320	0		370	1		420	0		470			
0		21	0		71	0		121	0		171	0		221	0		271	0		321	0		371	0		421	0		471			
0		22	0		72	0		122	0		172	0		222	2		272	0		322	0		372	0		422	0		472			
0		23	0		73	0		123	0		173	0		223	0		273	0		323	0		373	0		423	0		473			
0		24	0		74	0		124	0		174	0		224	1		274	0		324	0		374	0		424	0		474			
0		25	0		75	0		125	0		175	0		225	0		275	0		325	0		375	0		425	0		475			
0		26	0		76	0		126	0		176	0		226	4		276	0		326	0		376	0		426	0		476			
0		27	0		77	0		127	0		177	0		227	2		277	0		327	0		377	0		427	0		477			
0		28	0		78	0		128	0		178	0		228	2		278	0		328	0		378	0		428	0		478			
0		29	0		79	0		129	0		179	0		229	4	+	279	0		329	0		379	0		429	0		479			
0		30	0		80	0	+	130	0		180	0		230	6	+	280	0		330	0		380	0		430	0		480			
0		31	0		81	0	+	131	0		181	0		231	9	+	281	0		331	0		381	0		431	0		481			
0		32	0		82	0	+	132	0		182	0		232	14	+	282	0		332	0		382	0		432	0		482			
0		33	0		83	0	+	133	0		183	0		233	16	+	283	0		333	0		383	0		433	0		483			
0		34	0		84	0	+	134	0		184	0		234	21	+	284	0		334	0		384	0		434	0		484			
0		35	0		85	0	+	135	0		185	0		235	37	+	285	0		335	0		385	0		435	0		485			
0		36	0		86	0	+	136	0		186	0		236	23	+	286	0		336	0		386	0		436	0		486			
0		37	0		87	0	+	137	0		187	0		237	33	+	287	0		337	0		387	0		437	0		487			
0		38	0		88	0	+	138	0		188	0		238	34	+	288	0		338	0		388	0		438	0		488			
0		39	0		89	0	+	139	0		189	1		239	41	+	289	0		339	0		389	0		439	0		489			
0		40	0		90	0	+	140	0		190	0		240	51	+	290	0		340	0		390	0		440	0		490			
0		41	0		91	0	+	141	0	+	191	0		241	68	+	291	0		341	0		391	0		441	0		491			
0		42	0		92	0	+	142	0	+	192	0		242	83	+	292	0		342	0		392	0		442	0		492			
0		43	0		93	0	+	143	0	+	193	0		243	108	+	293	0		343	0		393	0		443	0		493			
0		44	0		94	0	+	144	0	+	194	0		244	84	+	294	0		344	0		394	0		444	0		494			
0		45	0		95	0	+	145	0	+	195	0		245	50	+	295	0		345	0		395	1		445	0		495			
0		46	0		96	0	+	146	0	+	196	0		246	16	+	296	0		346	0		396	0		446	0		496			
0		47	0		97	0	+	147	0	+	197	0		247	4	+	297	0		347	0		397	0		447	0		497			
0		48	0	+	98	0	+	148	0	+	198	0		248	2	+	298	2		348	0		398	0		448	0		498			
0		49	0	+	99	0	+	149	0	+	199	0		249	3		299	0		349	0		399	1		449	0		499			
0		50	0	+	100	0	+	150	0	+	200	0		250	0		300	0		350	0		400	1		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 11:11:44

Configuration : RDND06$DKA100:[ALP87.SAMPLE]H7DXQ1AG_080760751.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 07:51:27
Sample ID : H7DXQ1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP87 Detector geometry:
Elapsed live time: 0 03:20:10.00 Elapsed real time: 0 03:20:10.00 0.0%
Start energy : 3543.68 End energy : 6693.46
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5336.43	707	0	37.19	292.49	279	20	5.89E-02	3.8	
2	0	5450.93	15	0	30.99	311.00	306	12	1.25E-03	25.8	

VMS Nuclide Identification Report V3.1 Generated 8-JUL-2006 11:11:45

Configuration	: RDND06$DKA100:[ALP87.SAMPLE]H7DXQ1AG_080760751.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.4		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 07:51:27
Sample ID	: H7DXQ1AG	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP87	Detector geometry	:
Elapsed live time	: 0 03:20:10.00	Elapsed real time	: 0 03:20:10.00 0.0%
Energy tolerance	: 80.00	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 60.00		

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
	Total Activity :		0.000E+00	0.000E+00			
	Grand Total Activity :		0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: RDND06$DKA100:[ALP87.SAMPLE]H7DXQ1AG_080760751.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5336.42	279	299	707	707	0.00		
5450.93	306	318	15	13	0.52		

End of Report

SEVERN TRENT **STL**

URANIUM ISOTOPIC COUNTING REQUEST

1450

C.R. Technician CB

Date Counted 7/8/02

Counting Time
Sample 300 Minutes
Background **See Alpha Regions Report**

BFC 5/29

SOP's
Operating: RICHRD008
Review: RICHRD0016
6/6/7/6 9

WorkOrder #	U-232 (5320 KeV) Tracer	TOTAL COUNTS U-238 (4196 KeV)	U-235 (4396 KeV)	U-234 (4776 KeV)	Det #	Comments/Edits
H7DXV1AG	See Counting Room Printout for ROI information				7	
H7DX01AG	See Counting Room Printout for ROI information				8	
H7JN21AA	See Counting Room Printout for ROI information				9	
H7JN21AC	See Counting Room Printout for ROI information				10	
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					
	See Counting Room Printout for ROI information					

Comments:

Form No: RC-011, 7/02, Rev 8

Approved by: S

Date: 7/8/02

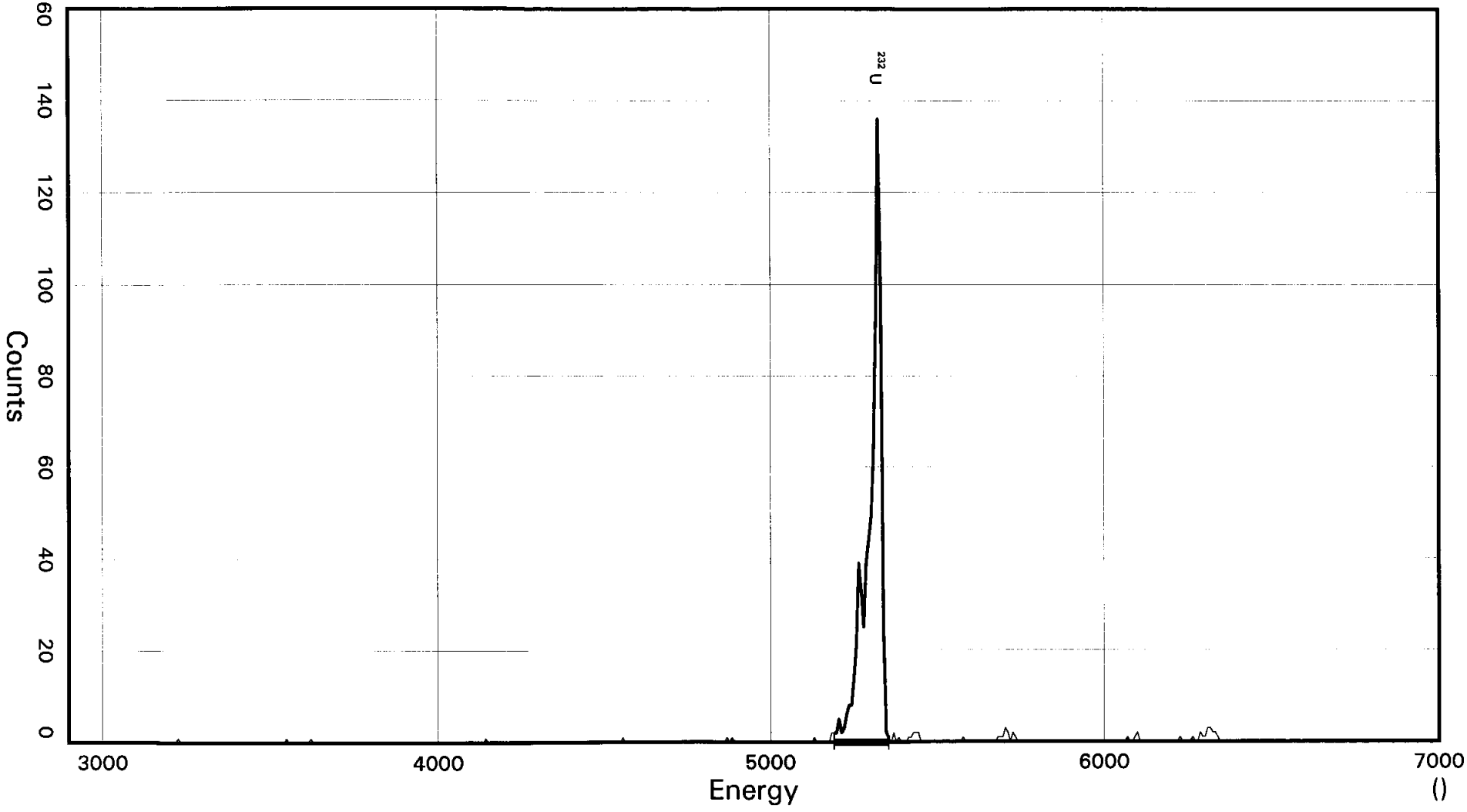
STL Richland WA.

U BRC

Sample ID: H7DXV1AG

Detector ID: ALP7 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 11:30:24.35

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:12.00

Energy Coefficients:

Offset: 2.87750E+03

Slope: 7.33452E+00

Quadrature: 1.65007E-04

SAMPLE IDENTIITY: H7DXV1AG

TITLE : U BRC

DETECTOR : ALP7 1
CONFIGURATION NAME : $DISK1:[ALP7.SAMPLE]H7DXV1AG_080761130.CNF;1

ACQUIRE DATE of BACKGROUND: 06-JUL-2006 06:57:16

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 11:30:24 CALIB DATE : 06-JUL-2006 01:19:10

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:12

OFFSET : 2877.50 keV CONSTANT FWHM : 6.66667 Channels
SLOPE : 7.33452 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : 1.650070E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DXV1AG

Detector: ALP7 1
Report Date: 08-Jul-06 02:51 PM
Acquire Date: 8-JUL-2006 11:30:24.35
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	725	1	0	3.620	5320.0	163.7	313	335	0.00	0.00	P
U-234	0	1	0	-0.001	4774.4	163.2	240	262	0.00	0.00	
U-235	0	0	0	0.000	4397.6	162.8	189	211	0.00	0.00	
U-238	1	2	0	0.003	4197.8	162.6	162	184	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DXV1AG
Detector: ALP7 1
Report Date: 08-Jul-06 02:51 PM
Acquire Date: 8-JUL-2006 11:30:24.35

Flags Key
Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	1		101	0		151	0	+	201	0	+	251	0		301	0		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0	+	202	0	+	252	0		302	0		352	0		402	1		452	0		502
0		3	0		53	0		103	0		153	0	+	203	0	+	253	0		303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0	+	204	0	+	254	0		304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0	+	205	0	+	255	1		305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	0	+	256	0		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0		157	0	+	207	0	+	257	0		307	0		357	0		407	1		457	0		507
0		8	0		58	0		108	0		158	0	+	208	0	+	258	0		308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	0	+	209	0	+	259	0		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0		160	0	+	210	0	+	260	0		310	0		360	0		410	2		460	0		510
0		11	0		61	0		111	0		161	0	+	211	0	+	261	0		311	0		361	0		411	1		461	0		511
0		12	0		62	0		112	0	+	162	0		212	0	+	262	2		312	0		362	0		412	1		462	0		512
0		13	0		63	0		113	0	+	163	0		213	0		263	2	+	313	0		363	0		413	3		463			
0		14	0		64	0		114	0	+	164	0		214	0		264	2	+	314	0		364	0		414	3		464			
0		15	0		65	0		115	0	+	165	0		215	0		265	5	+	315	1		365	0		415	2		465			
0		16	0		66	0		116	0	+	166	0		216	0		266	2	+	316	0		366	0		416	2		466			
0		17	0		67	0		117	0	+	167	0		217	0		267	3	+	317	0		367	0		417	1		467			
0		18	0		68	0		118	0	+	168	0		218	0		268	6	+	318	0		368	0		418	0		468			
0		19	0		69	0		119	0	+	169	0		219	0		269	8	+	319	0		369	0		419	0		469			
0		20	0		70	0		120	0	+	170	0		220	1		270	8	+	320	0		370	0		420	0		470			
0		21	0		71	0		121	0	+	171	0		221	0		271	14	+	321	0		371	0		421	0		471			
0		22	0		72	0		122	1	+	172	0		222	1		272	21	+	322	0		372	0		422	0		472			
0		23	0		73	0		123	0	+	173	0		223	0		273	39	+	323	0		373	0		423	0		473			
0		24	0		74	0		124	0	+	174	0		224	0		274	33	+	324	0		374	0		424	0		474			
0		25	0		75	0		125	0	+	175	0		225	0		275	25	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0		226	0		276	39	+	326	0		376	0		426	0		476			
0		27	0		77	0		127	0	+	177	0		227	0		277	44	+	327	0		377	0		427	0		477			
0		28	0		78	0		128	0	+	178	1		228	0		278	49	+	328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	63	+	329	1		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	93	+	330	1		380	0		430	0		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	136	+	331	1		381	1		431	0		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	98	+	332	3		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	25	+	333	2		383	0		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	2	+	334	0		384	1		434	0		484			
0		35	0		85	0		135	0		185	0		235	0		285	1		335	2		385	2		435	0		485			
0		36	0		86	0		136	0		186	0		236	0		286	0		336	1		386	0		436	0		486			
0		37	0		87	0		137	0		187	0		237	0		287	2		337	0		387	0		437	0		487			
0		38	0		88	0		138	0		188	0		238	0		288	0		338	0		388	0		438	0		488			
0		39	0		89	0		139	0	+	189	0		239	0		289	1		339	0		389	0		439	0		489			
0		40	0		90	0		140	0	+	190	0	+	240	0		290	0		340	0		390	0		440	0		490			
0		41	1		91	0		141	0	+	191	0	+	241	0		291	0		341	0		391	0		441	0		491			
0		42	0		92	0		142	0	+	192	0	+	242	0		292	0		342	0		392	0		442	0		492			
0		43	0		93	0		143	0	+	193	0	+	243	0		293	1		343	0		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	0	+	244	0		294	1		344	0		394	0		444	0		494			
0		45	0		95	0		145	0	+	195	0	+	245	0		295	2		345	0		395	0		445	0		495			
0		46	0		96	0		146	0	+	196	0	+	246	0		296	2		346	0		396	0		446	0		496			
1		47	0		97	0		147	0	+	197	0	+	247	0		297	2		347	0		397	0		447	0		497			
0		48	0		98	0		148	0	+	198	0	+	248	0		298	0		348	0		398	0		448	0		498			
0		49	0		99	0		149	0	+	199	0	+	249	0		299	0		349	0		399	0		449	0		499			
0		50	0		100	0		150	0	+	200	0	+	250	0		300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 14:50:59

Configuration : $DISK1:[ALP7.SAMPLE]H7DXV1AG_080761130.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 11:30:24
Sample ID : H7DXV1AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP7 Detector geometry:
Elapsed live time: 0 03:20:12.00 Elapsed real time: 0 03:20:12.00 0.0%
Start energy : 2899.51 End energy : 6676.03
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5320.01	725	0	29.34	330.56	313	22	6.04E-02	3.7	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 14:51:00

Configuration	: $DISK1:[ALP7.SAMPLE]H7DXV1AG_080761130.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.3		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 11:30:24
Sample ID	: H7DXV1AG	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP7	Detector geometry	:
Elapsed live time	: 0 03:20:12.00	Elapsed real time	: 0 03:20:12.00 0.0%
Energy tolerance	: 40.00	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 60.00		

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP7.SAMPLE]H7DXV1AG_080761130.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5320.00	313	335	725	718	0.26		

End of Report

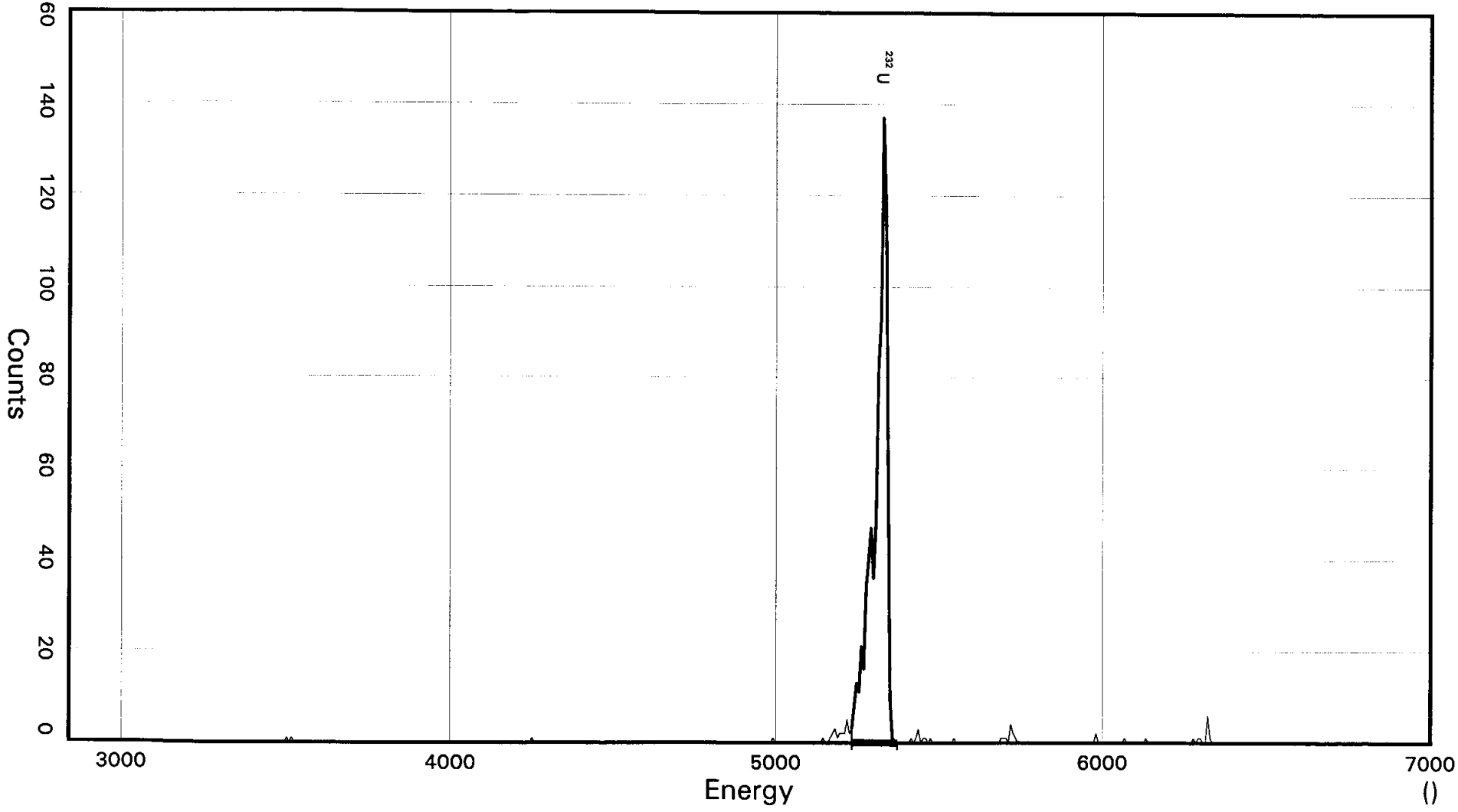
STL Richland WA.

U BRC

Sample ID: H7DX01AG

Detector ID: ALP8 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 11:30:28.87

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:08.00

Energy Coefficients:

Offset: 2.81875E+03

Slope: 7.34392E+00

Quadrature: -9.54142E-05

SAMPLE IDENTIITY: H7DX01AG

TITLE : U BRC

DETECTOR : ALP8 1
CONFIGURATION NAME : $DISK1:[ALP8.SAMPLE]H7DX01AG_080761130.CNF;1

ACQUIRE DATE of BACKGROUND: 07-JUL-2006 07:45:00

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 11:30:28 CALIB DATE : 06-JUL-2006 01:19:45

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:08

OFFSET : 2818.75 keV CONSTANT FWHM : 8.66667 Channels
SLOPE : 7.34392 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : -.954142E-04 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7DX01AG

Detector: ALP8 1
Report Date: 08-Jul-06 02:50 PM
Acquire Date: 8-JUL-2006 11:30:28.87
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	787	5	0	3.927	5323.3	138.3	330	349	0.00	0.00	P
U-234	0	0	0	0.000	4777.7	138.6	255	274	0.00	0.00	
U-235	0	1	0	-0.001	4400.9	131.5	204	222	0.00	0.00	
U-238	0	0	0	0.000	4201.1	138.9	176	195	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7DX01AG
Detector: ALP8 1
Report Date: 08-Jul-06 02:50 PM
Acquire Date: 8-JUL-2006 11:30:28.87

Flags Key
Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	0		201	0		251	0		301	0		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0		202	0		252	0		302	0		352	0		402	0		452	0		502
0		3	0		53	0		103	0		153	0		203	0		253	0		303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0	+	204	0		254	0		304	0		354	0		404	1		454	0		504
0		5	0		55	0		105	0		155	0	+	205	0	+	255	0		305	1		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0	+	206	0	+	256	0		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0		157	0	+	207	0	+	257	0		307	1		357	0		407	0		457	0		507
0		8	0		58	0		108	0		158	0	+	208	0	+	258	0		308	3		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	0	+	209	0	+	259	0		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0		160	0	+	210	0	+	260	0		310	1		360	0		410	0		460	0		510
0		11	0		61	0		111	0		161	0	+	211	0	+	261	0		311	1		361	0		411	0		461	0		511
0		12	0		62	0		112	0		162	0	+	212	0	+	262	0		312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0		163	0	+	213	0	+	263	0		313	1		363	0		413	0		463			
0		14	0		64	0		114	0		164	0	+	214	0	+	264	0		314	0		364	0		414	0		464			
0		15	0		65	0		115	0		165	0	+	215	0	+	265	0		315	0		365	0		415	0		465			
0		16	0		66	0		116	0		166	0	+	216	0	+	266	0		316	0		366	0		416	0		466			
0		17	0		67	0		117	0		167	0	+	217	0	+	267	0		317	0		367	0		417	0		467			
0		18	0		68	0		118	0		168	0	+	218	0	+	268	1		318	0		368	0		418	0		468			
0		19	0		69	0		119	0		169	0	+	219	0	+	269	0		319	0		369	0		419	0		469			
0		20	0		70	0		120	0		170	0	+	220	0	+	270	0		320	0		370	0		420	0		470			
0		21	0		71	0		121	0		171	0	+	221	0	+	271	1		321	0		371	0		421	0		471			
0		22	0		72	0		122	0		172	0	+	222	0	+	272	2		322	0		372	0		422	0		472			
0		23	0		73	0		123	0		173	0		223	0	+	273	3		323	1		373	0		423	0		473			
0		24	0		74	0		124	0		174	0		224	0	+	274	1		324	0		374	0		424	1		474			
0		25	0		75	0		125	0		175	0		225	0		275	2		325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0		226	0		276	2		326	0		376	0		426	1		476			
0		27	0		77	0		127	0	+	177	0		227	0		277	2		327	0		377	0		427	1		477			
0		28	0		78	0		128	0	+	178	0		228	0		278	5		328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0		229	0		279	2		329	0		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0		230	0		280	3	+	330	0		380	0		430	6		480			
0		31	0		81	0		131	0	+	181	0		231	0		281	8	+	331	0		381	0		431	1		481			
0		32	0		82	0		132	0	+	182	0		232	0		282	13	+	332	0		382	0		432	0		482			
0		33	0		83	0		133	0	+	183	0		233	0		283	11	+	333	0		383	2		433	0		483			
0		34	0		84	0		134	0	+	184	0		234	0		284	21	+	334	0		384	0		434	0		484			
0		35	0		85	0		135	0	+	185	0		235	0		285	16	+	335	0		385	0		435	0		485			
0		36	0		86	0		136	0	+	186	0		236	0		286	34	+	336	0		386	0		436	0		486			
0		37	0		87	0		137	0	+	187	0		237	0		287	40	+	337	0		387	0		437	0		487			
0		38	0		88	0		138	0	+	188	0		238	0		288	47	+	338	0		388	0		438	0		488			
0		39	0		89	0		139	0	+	189	0		239	0		289	36	+	339	0		389	0		439	0		489			
0		40	0		90	0		140	0	+	190	0		240	0		290	48	+	340	0		390	0		440	0		490			
0		41	0		91	0		141	0	+	191	0		241	0		291	82	+	341	0		391	0		441	0		491			
0		42	0		92	0		142	0	+	192	0		242	0		292	93	+	342	0		392	0		442	0		492			
0		43	1		93	0		143	0	+	193	0		243	0		293	137	+	343	1		393	0		443	0		493			
0		44	0		94	0		144	0	+	194	0		244	0		294	116	+	344	1		394	0		444	0		494			
0		45	1		95	0		145	0	+	195	0		245	0		295	60	+	345	1		395	1		445	0		495			
0		46	0		96	0		146	1		196	0		246	0		296	9	+	346	0		396	0		446	0		496			
0		47	0		97	0		147	0		197	0		247	1		297	1	+	347	4		397	0		447	0		497			
0		48	0		98	0		148	0		198	0		248	0		298	0	+	348	2		398	0		448	0		498			
0		49	0		99	0		149	0		199	0		249	0		299	0		349	1		399	0		449	0		499			
0		50	0		100	0		150	0		200	0		250	0		300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 14:50:52

Configuration : $DISK1:[ALP8.SAMPLE]H7DX01AG_080761130.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 11:30:28
Sample ID : H7DX01AG Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP8 Detector geometry:
Elapsed live time: 0 03:20:08.00 Elapsed real time: 0 03:20:08.00 0.0%
Start energy : 2840.79 End energy : 6553.83
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5323.28	787	0	44.06	342.56	330	19	6.55E-02	3.6	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 14:50:56

```
Configuration     : $DISK1:[ALP8.SAMPLE]H7DX01AG_080761130.CNF;1
Analyses by       : ALPHA V1.8,PEAKEFF V2.2,NID V3.3
Sample title      : U BRC
Sample date       : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 11:30:28
Sample ID         : H7DX01AG             Sample quantity  : 0.00000E+00 SAMPLE
Sample type       : disk                 Sample geometry  :
Detector name     : ALP8                 Detector geometry:
Elapsed live time: 0 03:20:08.00         Elapsed real time: 0 03:20:08.00   0.0%
Energy tolerance :    40.00              Half life ratio  :     1.00
Errors propagated: No                    Systematic Error :     0.00 %
Efficiency type  : Spline                Efficiencies at  : Peak Energy
Abundance limit  :    60.00
```

Summary of Nuclide Activity

```
 Total number of lines in spectrum                1
 Number of unidentified lines                     0
 Number of lines tentatively identified by NID    1      100.00%
```

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
		Total Activity :	0.000E+00	0.000E+00			
		Grand Total Activity :	0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP8.SAMPLE]H7DX01AG_080761130.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5323.27	330	349	787	775	0.43		

End of Report

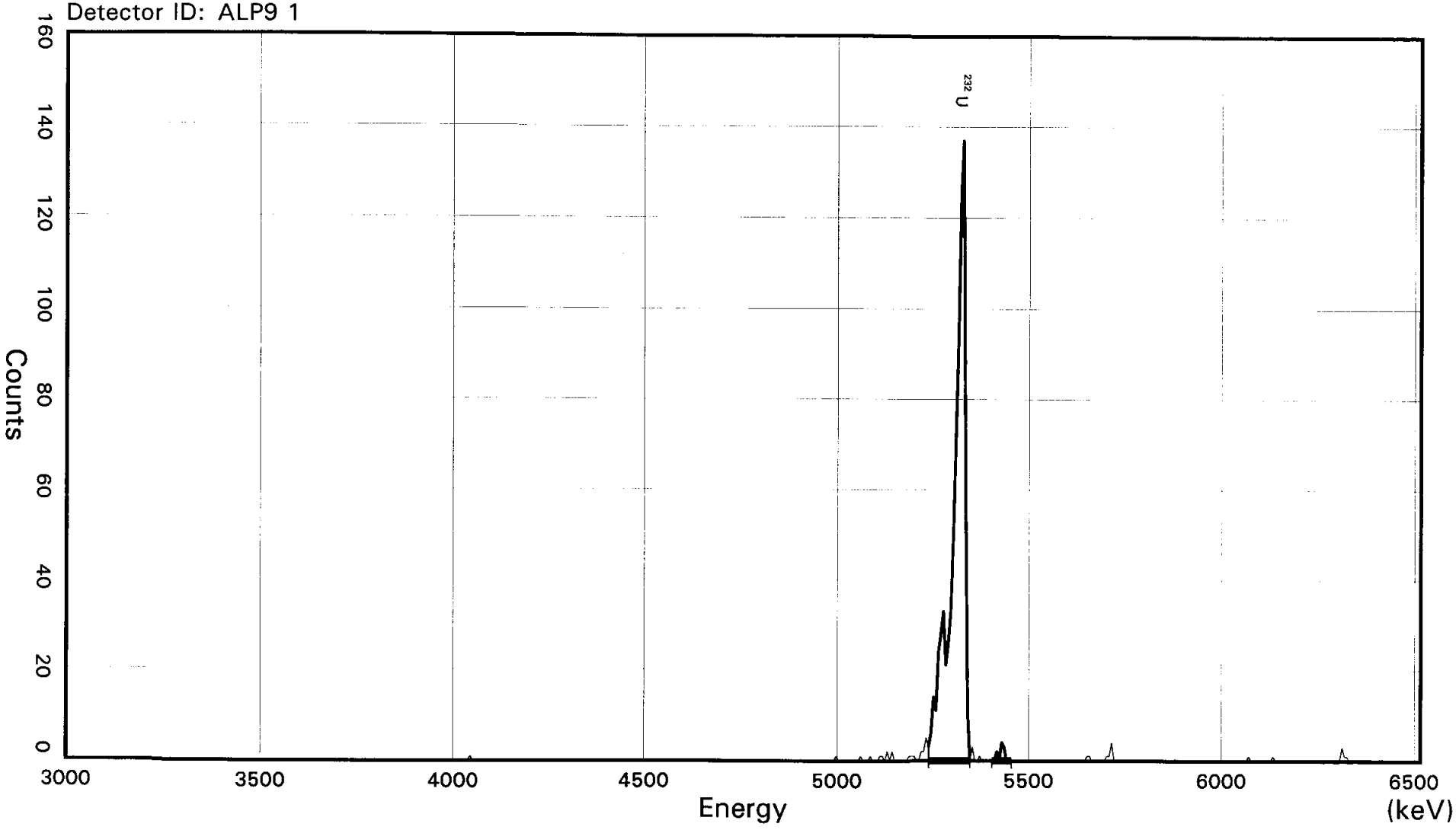
STL Richland WA.

U BRC

Sample ID: H7JNL1AA

Detector ID: ALP9 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 11:30:35.71

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:04.00

Energy Coefficients:

Offset: 3.26156E+03

Slope: 6.36004E+00

Quadrature: -7.79160E-06

SAMPLE IDENTIITY: H7JNL1AA

TITLE : U BRC

DETECTOR : ALP9 1
CONFIGURATION NAME : $DISK1:[ALP9.SAMPLE]H7JNL1AA_080761130.CNF;1

ACQUIRE DATE of BACKGROUND: 06-JUL-2006 06:57:23

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 11:30:35 CALIB DATE : 06-JUL-2006 01:19:57

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:04

OFFSET : 3261.56 keV CONSTANT FWHM : 5.83333 Channels
SLOPE : 6.36004 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : -.779160E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7JNL1AA

Detector: ALP9 1
Report Date: 08-Jul-06 02:51 PM
Acquire Date: 8-JUL-2006 11:30:35.71
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	744	4	0	3.715	5321.7	108.0	311	328	0.00	0.00	P
U-234	0	2	0	-0.002	4776.1	108.1	225	242	0.00	0.00	
U-235	0	0	0	0.000	4399.3	108.1	166	183	0.00	0.00	
U-238	0	2	0	-0.002	4199.5	108.1	134	151	0.00	0.00	

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7JNL1AA
Detector: ALP9 1
Report Date: 08-Jul-06 02:51 PM
Acquire Date: 8-JUL-2006 11:30:35.71

Flags Key

Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0	+	151	0		201	0		251	0		301	0		351	0		401	0		451	0		501
		2	0		52	0		102	0		152	0		202	0		252	0		302	0		352	0		402	1		452	0		502
0		3	0		53	0		103	0		153	0		203	0		253	1		303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0		154	0		204	0		254	1		304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0		155	0		205	0		255	1		305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0		156	0		206	0		256	0		306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0		157	0		207	0		257	0		307	0		357	0		407	0		457	0		507
0		8	0		58	0		108	0		158	0		208	0		258	2		308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	0		159	0		209	0		259	2		309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0		160	0		210	0		260	5		310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0		161	0		211	0		261	3	+	311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0		162	0		212	0		262	6	+	312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0		163	0		213	0		263	14	+	313	0		363	0		413	0		463			
0		14	0		64	0		114	0		164	0		214	0		264	11	+	314	0		364	0		414	0		464			
0		15	0		65	0		115	0		165	0		215	0		265	24	+	315	0		365	0		415	0		465			
0		16	0		66	0		116	0	+	166	0		216	0		266	28	+	316	0		366	0		416	0		466			
0		17	0		67	0		117	0	+	167	0		217	0		267	33	+	317	0		367	0		417	0		467			
0		18	0		68	0		118	0	+	168	0		218	0		268	21	+	318	0		368	0		418	0		468			
0		19	0		69	0		119	0	+	169	0		219	0		269	26	+	319	0		369	0		419	0		469			
0		20	0		70	0		120	0	+	170	0		220	0		270	33	+	320	0		370	0		420	0		470			
0		21	0		71	0		121	0	+	171	0		221	0		271	50	+	321	0		371	0		421	0		471			
0		22	0		72	0		122	0	+	172	0		222	0		272	71	+	322	0		372	0		422	0		472			
0		23	0		73	1		123	0	+	173	0		223	1		273	94	+	323	0		373	0		423	0		473			
0		24	0		74	0		124	0	+	174	0		224	0		274	124	+	324	0		374	0		424	0		474			
0		25	0		75	0		125	0	+	175	0	+	225	0		275	137	+	325	0		375	0		425	0		475			
0		26	0		76	0		126	0	+	176	0	+	226	0		276	58	+	326	1		376	0		426	0		476			
0		27	0		77	0		127	0	+	177	0	+	227	0		277	11	+	327	1		377	0		427	0		477			
0		28	0		78	0		128	0	+	178	0	+	228	0		278	0		328	0		378	0		428	0		478			
0		29	0		79	0		129	0	+	179	0	+	229	0		279	3		329	0		379	0		429	0		479			
0		30	0		80	0		130	0	+	180	0	+	230	0		280	0		330	0		380	0		430	3		480			
0		31	0		81	0		131	0	+	181	0	+	231	0		281	0		331	0		381	0		431	1		481			
0		32	0		82	0		132	0	+	182	0	+	232	0		282	1		332	0		382	0		432	1		482			
0		33	0		83	0		133	0	+	183	0	+	233	1		283	0		333	0		383	0		433	0		483			
0		34	0		84	0	+	134	0		184	0	+	234	0		284	0		334	1		384	0		434	0		484			
0		35	0		85	0	+	135	0		185	0	+	235	0		285	0		335	1		385	0		435	0		485			
0		36	0		86	0	+	136	0		186	0	+	236	0		286	0		336	4		386	0		436	0		486			
0		37	0		87	0	+	137	0		187	0	+	237	1		287	0		337	0		387	0		437	0		487			
0		38	0		88	0	+	138	0		188	0	+	238	0		288	0		338	0		388	0		438	0		488			
0		39	0		89	0	+	139	0		189	0	+	239	0		289	2		339	0		389	0		439	0		489			
0		40	0		90	0	+	140	0		190	0	+	240	0		290	0		340	0		390	0		440	0		490			
0		41	0		91	0	+	141	0		191	0	+	241	1		291	4		341	0		391	0		441	0		491			
0		42	0		92	0	+	142	0		192	0	+	242	1		292	3		342	0		392	1		442	0		492			
0		43	0		93	0	+	143	0		193	0		243	0		293	0		343	0		393	0		443	0		493			
0		44	0		94	0	+	144	0		194	0		244	2		294	0		344	0		394	0		444	0		494			
0		45	0		95	0	+	145	0		195	0		245	0		295	0		345	0		395	0		445	0		495			
0		46	0		96	0	+	146	0		196	0		246	2		296	0		346	0		396	0		446	0		496			
0		47	0		97	0	+	147	0		197	0		247	0		297	0		347	0		397	0		447	0		497			
0		48	0		98	0	+	148	0		198	0		248	0		298	0		348	0		398	0		448	0		498			
0		49	0		99	0	+	149	0		199	0		249	0		299	0		349	0		399	0		449	0		499			
0		50	0		100	0	+	150	0		200	0		250	0		300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 14:51:03

Configuration	: $DISK1:[ALP9.SAMPLE]H7JNL1AA_080761130.CNF;1		
Analyses by	: ALPHA V1.8		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 11:30:35
Sample ID	: H7JNL1AA	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP9	Detector geometry	:
Elapsed live time	: 0 03:20:04.00	Elapsed real time	: 0 03:20:04.00 0.0%
Start energy	: 3280.64 keV	End energy	: 6515.86 keV
Sensitivity	: 4.00	Sum Sensitivity	: 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	5321.66	744	0	31.80	324.04	311	17	6.20E-02	3.7	
2	0	5430.23	11	0	19.08	341.12	337	8	9.16E-04	30.2	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 14:51:05

Configuration	: $DISK1:[ALP9.SAMPLE]H7JNL1AA_080761130.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.3		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 11:30:35
Sample ID	: H7JNL1AA	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP9	Detector geometry	:
Elapsed live time	: 0 03:20:04.00	Elapsed real time	: 0 03:20:04.00 0.0%
Energy tolerance	: 40.00 keV	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 60.00		

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
		Total Activity :	0.000E+00	0.000E+00			
		Grand Total Activity :	0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP9.SAMPLE]H7JNL1AA_080761130.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
5321.66	311	328	744	744	0.00		
5430.22	337	345	11	9	0.60		

End of Report

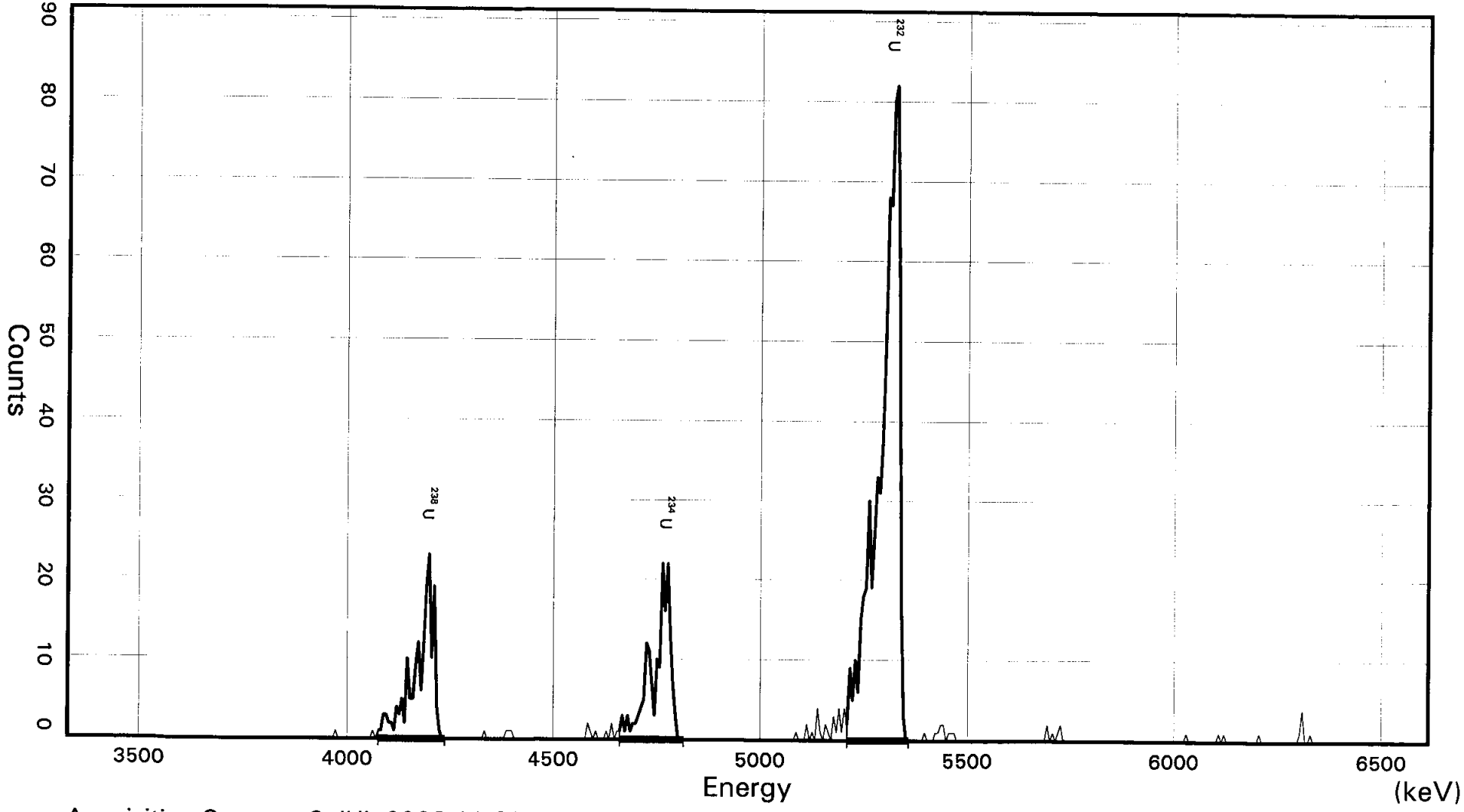
STL Richland WA.

U BRC

Sample ID: H7JNL1AC

Detector ID: ALP10 1

Batch ID: 6167169



Acquisition Start: 8-JUL-2006 11:30:41.36

Preset Live Time: 0 03:20:00.00

Elapsed Live Time: 0 03:20:13.00

Energy Coefficients:

Offset: 3.30961E+03

Slope: 6.42195E+00

Quadrature: 5.74933E-05

SAMPLE IDENTIITY: H7JNL1AC

TITLE : U BRC

DETECTOR : ALP10 1
CONFIGURATION NAME : $DISK1:[ALP10.SAMPLE]H7JNL1AC_080761130.CNF;
1
ACQUIRE DATE of BACKGROUND: 06-JUL-2006 06:57:25

REPORT DATE : 08-Jul-06 SAMPLE DATE: 24-MAY-2006 12:00:00
ACQUIRE DATE: 08-JUL-2006 11:30:41 CALIB DATE : 06-JUL-2006 01:19:51

PRESET LIVE TIME: 0 03:20:00 ELAPSED LIVE TIME: 0 03:20:13

OFFSET : 3309.61 keV CONSTANT FWHM : 7.00000 Channels
SLOPE : 6.42195 keV/C SENSITIVITY : 4.00000 Std Dev's
QUAD COEFF : 5.749330E-05 keV/C^2 SUM SENSITIVITY: 1.00000 %

Alpha Regions Report
(Version: 8-Oct-91)

Sample Identity: H7JNL1AC

Detector: ALP10 1
Report Date: 08-Jul-06 02:51 PM
Acquire Date: 8-JUL-2006 11:30:41.36
Tracer Nuclide: U-232
High Counts Limit: 36
Sample Live Time: 200 minutes
Bkgrnd Live Time: 1000 minutes

Flags Key

P: Peak Identified
I: Peak Intersect
S: Single Non-peak Intersect
M: Multiple Non-peak Intersect
H: High Non-peak Sample Count
A: Altered via ALP-RGN-EDIT

Nuclide Name	Smpl Count	Bkg Count	Intrsct Count	Count Rate C/Min	Centrd Energy keV	Region Width keV	Left Chnl	Rght Chnl	Left Wdth Mult	Rght Wdth Mult	Flags
U-232	689	4	0	3.437	5313.9	148.5	295	318	0.00	0.00	P
U-234	160	1	0	0.798	4768.3	154.7	210	234	0.00	0.00	P
U-235	4	0	0	0.020	4391.5	148.1	152	175	0.00	0.00	
U-238	162	2	0	0.807	4191.7	160.9	119	144	0.00	0.00	P

End of Alpha Region Report
(Produced by Alp_rgn_cnts)

Alpha Spectrum Listing
(Version: 29-Jun-92)

Sample Identity: H7JNL1AC
Detector: ALP10 1
Report Date: 08-Jul-06 02:51 PM
Acquire Date: 8-JUL-2006 11:30:41.36

Flags Key
Intersect Region: @
Non-Intersect Region: +, -

Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn	Cnt	F	Chn
		1	0		51	0		101	0		151	1		201	0		251	18	+	301	0		351	0		401	0		451	0		501
		2	0		52	0		102	0	+	152	0		202	0		252	19	+	302	0		352	0		402	0		452	0		502
0		3	0		53	1		103	0	+	153	0		203	0		253	30	+	303	0		353	0		403	0		453	0		503
0		4	0		54	0		104	0	+	154	0		204	0		254	19	+	304	0		354	0		404	0		454	0		504
0		5	0		55	0		105	0	+	155	1		205	0		255	26	+	305	0		355	0		405	0		455	0		505
0		6	0		56	0		106	0	+	156	0		206	0		256	33	+	306	0		356	0		406	0		456	0		506
0		7	0		57	0		107	0	+	157	2		207	0		257	31	+	307	0		357	0		407	0		457	0		507
0		8	0		58	0		108	0	+	158	0		208	0		258	38	+	308	0		358	0		408	0		458	0		508
0		9	0		59	0		109	1	+	159	1		209	0		259	50	+	309	0		359	0		409	0		459	0		509
0		10	0		60	0		110	0	+	160	1	+	210	0		260	68	+	310	0		360	0		410	0		460	0		510
0		11	0		61	0		111	0	+	161	3	+	211	0		261	67	+	311	0		361	0		411	0		461	0		511
0		12	0		62	0		112	0	+	162	1	+	212	0		262	80	+	312	0		362	0		412	0		462	0		512
0		13	0		63	0		113	0	+	163	3	+	213	0		263	82	+	313	0		363	0		413	0		463			
0		14	0		64	0		114	0	+	164	1	+	214	0		264	56	+	314	0		364	0		414	1		464			
0		15	0		65	0		115	0	+	165	2	+	215	0		265	18	+	315	0		365	0		415	4		465			
0		16	0		66	0		116	0	+	166	2	+	216	0		266	3	+	316	0		366	0		416	0		466			
0		17	0		67	1		117	1	+	167	3	+	217	0		267	0	+	317	0		367	0		417	0		467			
0		18	0		68	0		118	1	+	168	4	+	218	0		268	0		318	0		368	0		418	1		468			
0		19	0		69	1	+	119	1	+	169	5	+	219	0		269	0		319	0		369	0		419	0		469			
0		20	0		70	1	+	120	0	+	170	12	+	220	0		270	0		320	2		370	0		420	0		470			
0		21	0		71	3	+	121	0	+	171	11	+	221	0		271	0		321	0		371	0		421	0		471			
0		22	0		72	3	+	122	0	+	172	7	+	222	0		272	0		322	1		372	1		422	0		472			
0		23	0		73	2	+	123	0	+	173	3	+	223	0		273	0		323	0		373	0		423	0		473			
0		24	0		74	2	+	124	0	+	174	10	+	224	0		274	1		324	1		374	0		424	0		474			
0		25	0		75	1	+	125	0	+	175	9	+	225	0		275	0		325	2		375	0		425	0		475			
0		26	0		76	4	+	126	0		176	22	+	226	1		276	0		326	0		376	0		426	0		476			
0		27	0		77	3	+	127	0		177	16	+	227	0		277	0		327	0		377	0		427	0		477			
0		28	0		78	5	+	128	0		178	22	+	228	0		278	1		328	0		378	0		428	0		478			
0		29	0		79	2	+	129	0		179	13	+	229	0		279	1		329	0		379	0		429	0		479			
0		30	0		80	10	+	130	0		180	7	+	230	2		280	2		330	0		380	0		430	0		480			
0		31	0		81	5	+	131	0		181	3	+	231	0		281	2		331	0		381	0		431	0		481			
0		32	0		82	5	+	132	0		182	0	+	232	1		282	0		332	0		382	0		432	0		482			
0		33	0		83	9	+	133	0		183	0	+	233	0		283	1		333	0		383	0		433	0		483			
0		34	0		84	12	+	134	0		184	0		234	4		284	1		334	0		384	1		434	0		484			
0		35	0		85	6	+	135	0		185	0		235	1		285	1		335	0		385	0		435	0		485			
0		36	0		86	12	+	136	0		186	0		236	0		286	0		336	0		386	1		436	0		486			
0		37	0		87	19	+	137	0		187	0		237	2		287	0		337	0		387	0		437	0		487			
0		38	0		88	23	+	138	0		188	0		238	1		288	0		338	0		388	0		438	0		488			
0		39	0		89	10	+	139	0		189	0		239	0		289	0		339	0		389	0		439	0		489			
0		40	0		90	19	+	140	0		190	0		240	3		290	0		340	0		390	0		440	0		490			
0		41	0		91	4	+	141	0		191	0		241	1		291	0		341	0		391	0		441	0		491			
0		42	0		92	1	+	142	0		192	0		242	4		292	0		342	0		392	0		442	0		492			
0		43	0		93	0	+	143	0		193	0		243	1		293	0		343	0		393	0		443	0		493			
0		44	0		94	0		144	0		194	0		244	4		294	0		344	0		394	0		444	0		494			
0		45	0		95	0		145	0		195	0		245	2	+	295	0		345	0		395	0		445	0		495			
0		46	0		96	0		146	0		196	0		246	9	+	296	0		346	0		396	0		446	0		496			
0		47	0		97	0		147	0		197	0		247	5	+	297	0		347	0		397	0		447	0		497			
0		48	0		98	0		148	2		198	0		248	10	+	298	0		348	0		398	0		448	0		498			
0		49	0		99	0		149	1		199	0		249	6	+	299	0		349	0		399	1		449	0		499			
0		50	0		100	0		150	0		200	0		250	15	+	300	0		350	0		400	0		450	0		500			

VMS Peak Search Report V1.9 Generated 8-JUL-2006 14:51:10

Configuration : $DISK1:[ALP10.SAMPLE]H7JNL1AC_080761130.CNF;1
Analyses by : ALPHA V1.8
Sample title : U BRC
Sample date : 24-MAY-2006 12:00:00 Acquisition date : 8-JUL-2006 11:30:41
Sample ID : H7JNL1AC Sample quantity : 0.00000E+00 SAMPLE
Sample type : disk Sample geometry :
Detector name : ALP10 Detector geometry:
Elapsed live time: 0 03:20:13.00 Elapsed real time: 0 03:20:13.00 0.0%
Start energy : 3328.88 keV End energy : 6612.72 keV
Sensitivity : 4.00 Sum Sensitivity : 1.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	4194.52	162	0	38.53	137.62	119	25	1.35E-02	7.9	
2	0	4770.60	160	0	32.11	227.04	210	24	1.33E-02	7.9	
3	0	5313.86	689	0	44.95	311.23	295	23	5.74E-02	3.8	

VMS Nuclide Identification Report V3.0 Generated 8-JUL-2006 14:51:12

Configuration	: $DISK1:[ALP10.SAMPLE]H7JNL1AC_080761130.CNF;1		
Analyses by	: ALPHA V1.8,PEAKEFF V2.2,NID V3.3		
Sample title	: U BRC		
Sample date	: 24-MAY-2006 12:00:00	Acquisition date	: 8-JUL-2006 11:30:41
Sample ID	: H7JNL1AC	Sample quantity	: 0.00000E+00 SAMPLE
Sample type	: disk	Sample geometry	:
Detector name	: ALP10	Detector geometry	:
Elapsed live time	: 0 03:20:13.00	Elapsed real time	: 0 03:20:13.00 0.0%
Energy tolerance	: 40.00 keV	Half life ratio	: 1.00
Errors propagated	: No	Systematic Error	: 0.00 %
Efficiency type	: Spline	Efficiencies at	: Peak Energy
Abundance limit	: 60.00		

Summary of Nuclide Activity

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-232	68.90Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Nuclide Type : NP

Nuclide	Hlife	Decay	Uncorrected PCI/SAMPLE	Decay Corr PCI/SAMPLE	Decay Corr 0-Sigma Error	0-Sigma %Error	Flags
U-234	2.45E+05Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
U-238	4.47E+09Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---	---			
Total Activity :			0.000E+00	0.000E+00			

Grand Total Activity :	0.000E+00	0.000E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

ITRD PEAK TEST REPORT (Version 16-May-94)

Configuration: $DISK1:[ALP10.SAMPLE]H7JNL1AC_080761130.CNF;1

Peak Energy	Left Chan	Rght Chan	Peak Area	Total Counts	Diff/ StDev	Overlap Counts	Multiplet Diff/StDev
4194.52	119	144	162	162	0.00		
4770.59	210	234	160	160	0.00		
5313.86	295	318	689	685	0.15		

End of Report

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/19/2006 10:31:23 AM

Lot No., Due Date: J6F270218,J6F140270; 07/25/2006,07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6179343; RUSIO Ulso by ALP

SDG, Matrix: 31999,31902; FILTER

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 Matt Lardy **Date** 7-19-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6179343

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

Comments on any "No" response:

Second Level Review: Sheryl A Adam Date: 7-20-06

7/14/2006 11:22:30 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
01 STANDARD TEST SET

AnalyDueDate: 07/11/2006

Balance Id:1120373922

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech: 7-18-06 TM.F.

Prep Tech: HansenM

Batch: 6179343 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: None

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 H7DWT-1-AG J6F140270-1-SAMP 05/24/2006 07:40	0.833g	501.65g	37.53g,in	0.0623g	UITC15931 06/23/06,pd 01/20/04,r	200				
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
2 H796F-1-AG J6F270218-1-SAMP 06/07/2006 10:00	0.833g	501.59g	37.68g,in	0.0626g	UITC15932 06/23/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
3 H796L-1-AG J6F270218-2-SAMP 06/07/2006 10:25	0.833g	501.03g	37.47g,in	0.0623g	UITC15933 06/28/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
4 H796N-1-AG J6F270218-3-SAMP 06/07/2006 10:35	0.833g	500.85g	37.57g,in	0.0625g	UITC15934 06/28/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
5 H796P-1-AG J6F270218-4-SAMP 06/07/2006 10:50	0.833g	501.24g	37.51g,in	0.0623g	UITC15935 06/28/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
6 H796Q-1-AG J6F270218-5-SAMP 06/07/2006 11:00	0.833g	517.56g	37.53g,in	0.0604g	UITC15936 06/28/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
7 H796R-1-AG J6F270218-6-SAMP 06/07/2006 11:20	0.833g	502.44g	37.66g,in	0.0624g	UITC15937 06/28/06,pd 01/20/04,r					
		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:

7/14/2006 11:22:31 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179343 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
8 H796T-1-AG J6F270218-7-SAMP 06/07/2006 10:10	0.833g	500.22g	37.57g,in	0.0626g	UITC15938 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
9 H796W-1-AG J6F270218-8-SAMP 06/07/2006 09:55	0.833g	501.87g	37.60g,in	0.0624g	UITC15939 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
10 H797D-1-AG J6F270218-9-SAMP 06/07/2006 10:20	0.833g	500.74g	37.56g,in	0.0625g	UITC15940 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
11 H797E-1-AG J6F270218-10-SAMP 06/07/2006 10:30	0.833g	503.68g	37.58g,in	0.0622g	UITC15941 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
12 H797F-1-AG J6F270218-11-SAMP 06/07/2006 10:45	0.833g	513.46g	37.55g,in	0.0609g	UITC15942 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
13 H797H-1-AG J6F270218-12-SAMP 06/07/2006 11:05	0.833g	501.88g	37.55g,in	0.0623g	UITC15943 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
14 H797J-1-AG J6F270218-13-SAMP 06/07/2006 11:10	0.833g	521.25g	37.64g,in	0.0602g	UITC15944 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:

7/14/2006 11:22:31 AM

Sample Preparation/Analysis

536403, Brown and Caldwell Caldwell , Brown &

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179343 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
15H797K-1-AG J6F270218-14-SAMP 06/07/2006 10:05	0.833g	506.13g	37.59g,in	0.0619g	UITC15945 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
16H797M-1-AG J6F270218-15-SAMP 06/07/2006 11:15	0.833g	500.73g	37.67g,in	0.0627g	UITC15946 06/28/06,pd 01/20/04,r					
			AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
17H8DM7-1-AA-B J6F280000-343-BLK 06/07/2006 10:00			1.00sa,in	1.00sa	UITC15947 06/28/06,pd 01/20/04,r					
			AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
18H8DM7-1-AC-C J6F280000-343-LCS 06/07/2006 10:00			1.00sa,in	1.00sa	UISF0460 06/15/06,pd 01/20/04,r					
			AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AG-SAMP Constituent List:

U-232	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	U-234	RDL:1	pCi/sam	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/sam	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/sam	LCL:	UCL:	RPD:

H8DM71AA-BLK:

U-232	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	U-234	RDL:1	pCi/sam	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/sam	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/sam	LCL:	UCL:	RPD:

7/19/2006 10:30:22 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/19/2005, 7/24/2006, Batch: '6179343', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6179343						
AC		**CalcC**	**HansenM**	7/17/2006 9:38:10		
SC			wagarr	IsBatched	6/28/2006 1:36:13 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	7/17/2006 9:38:10 AM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	7/17/2006 9:38:38 AM	RICH-RC-5016 REVISION 5
SC			FABREM	Sep2C	7/18/2006 3:47:55 PM	RICH-RC-5039 REV 6
SC			BlackCL	CalcC	7/19/2006 7:30:08 AM	RICH-RD-0008 REVISION 4
AC			**HansenM**	7/17/2006 9:38:38		
AC			**FABREM**	7/18/2006 3:47:55 PM		
AC			**BlackCL**	7/19/2006 7:30:08		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 4

ICOCFractions v4.8.18

7/19/2006 10:30:18 AM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes
31999	**9H796F10**			**J6F2702181**	000487	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM				
U-234	7YSR		0	7/18/2006 6:21:43 PM	**2.7995E-01**	1.743E-01	1.758E-01	4.788E-01	PCI/SA	0.975	1.0E+0	6.258E-2
U-235	7YSR		0	7/18/2006 6:21:43 PM	**9.9979E-02**	9.998E-02	1.003E-01	2.709E-01	PCI/SA	0.975	1.0E+0	6.258E-2
U-238	7YSR		0	7/18/2006 6:21:43 PM	**-1.9991E-02**	1.999E-02	2.006E-02	4.788E-01	PCI/SA	0.975	1.0E+0	6.258E-2
31999	**9H796L10**			**J6F2702182**	000488	FILTER	6/26/2006 9:00:00	6/7/2006 10:25:00 AM				
U-234	7YSR		0	7/18/2006 6:21:54 PM	**2.8598E-01**	1.651E-01	1.667E-01	2.583E-01	PCI/SA	0.926	1.0E+0	6.23E-2
U-235	7YSR		0	7/18/2006 6:21:54 PM	**2.6691E-01**	1.662E-01	1.676E-01	4.566E-01	PCI/SA	0.926	1.0E+0	6.23E-2
U-238	7YSR		0	7/18/2006 6:21:54 PM	**-3.8129E-02**	2.696E-02	2.713E-02	5.387E-01	PCI/SA	0.926	1.0E+0	6.23E-2
31999	**9H796N10**			**J6F2702183**	000489	FILTER	6/26/2006 9:00:00	6/7/2006 10:35:00 AM				
U-234	7YSR		0	7/18/2006 6:22:08 PM	**2.0632E-01**	1.459E-01	1.468E-01	2.796E-01	PCI/SA	0.951	1.0E+0	6.249E-2
U-235	7YSR		0	7/18/2006 6:22:08 PM	**0.0E+00**	0.0E+00	1.263E-01	2.796E-01	PCI/SA	0.951	1.0E+0	6.249E-2
U-238	7YSR		0	7/18/2006 6:22:08 PM	**8.2533E-02**	1.052E-01	1.054E-01	4.941E-01	PCI/SA	0.951	1.0E+0	6.249E-2
31999	**9H796P10**			**J6F2702184**	000490	FILTER	6/26/2006 9:00:00	6/7/2006 10:50:00 AM				
U-234	7YSR		0	7/18/2006 6:22:38 PM	**-3.0904E-02**	1.545E-02	1.565E-02	5.153E-01	PCI/SA	1.056	1.0E+0	6.234E-2
U-235	7YSR		0	7/18/2006 6:22:38 PM	**8.1011E-02**	9.708E-02	9.729E-02	4.409E-01	PCI/SA	1.056	1.0E+0	6.234E-2
U-238	7YSR		0	7/18/2006 6:22:38 PM	**-4.6356E-02**	1.892E-02	1.928E-02	5.724E-01	PCI/SA	1.056	1.0E+0	6.234E-2
31999	**9H796Q10**			**J6F2702185**	000491	FILTER	6/26/2006 9:00:00	6/7/2006 11:00:00 AM				
U-234	7YSR		0	7/18/2006 6:22:53 PM	**7.0218E-01**	2.752E-01	2.809E-01	5.183E-01	PCI/SA	0.981	1.0E+0	6.04E-2
U-235	7YSR		0	7/18/2006 6:22:53 PM	**7.8919E-02**	1.049E-01	1.051E-01	5.183E-01	PCI/SA	0.981	1.0E+0	6.04E-2
U-238	7YSR		0	7/18/2006 6:22:53 PM	**4.861E-01**	2.329E-01	2.361E-01	5.549E-01	PCI/SA	0.981	1.0E+0	6.04E-2
31999	**9H796R10**			**J6F2702186**	000492	FILTER	6/26/2006 9:00:00	6/7/2006 11:20:00 AM				
U-234	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-235	7YSR		0	7/18/2006 6:23:10 PM	**-8.2994E-03**	8.299E-03	8.326E-03	4.172E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-238	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
31999	**9H796T10**			**J6F2702187**	000493	FILTER	6/26/2006 9:00:00	6/7/2006 10:10:00 AM				
U-234	7YSR		0	7/18/2006 6:23:32 PM	**-2.801E-02**	1.617E-02	1.633E-02	5.817E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-235	7YSR		0	7/18/2006 6:23:32 PM	**-1.8673E-02**	1.32E-02	1.329E-02	5.33E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-238	7YSR		0	7/18/2006 6:23:32 PM	**1.166E-01**	1.166E-01	1.17E-01	3.16E-01	PCI/SA	0.885	1.0E+0	6.256E-2
31999	**9H796W10**			**J6F2702188**	P-0660	FILTER	6/26/2006 9:00:00	6/7/2006 9:55:00 AM				
U-234	7YSR		0	7/18/2006 6:24:30 PM	**1.5766E-01**	1.422E-01	1.427E-01	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-235	7YSR		0	7/18/2006 6:24:30 PM	**-3.9462E-02**	2.79E-02	2.808E-02	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-238	7YSR		0	7/18/2006 6:24:30 PM	**-5.9194E-02**	3.418E-02	3.45E-02	6.223E-01	PCI/SA	1.006	1.0E+0	6.241E-2
31999	**9H797D10**			**J6F2702189**	P-0661	FILTER	6/26/2006 9:00:00	6/7/2006 10:20:00 AM				
U-234	7YSR		0	7/18/2006 6:24:37 PM	**0.0E+00**	0.0E+00	1.219E-01	2.697E-01	PCI/SA	1.029	1.0E+0	6.248E-2
U-235	7YSR		0	7/18/2006 6:24:37 PM	**-5.9728E-02**	3.448E-02	3.481E-02	6.282E-01	PCI/SA	1.029	1.0E+0	6.248E-2
U-238	7YSR		0	7/18/2006 6:24:37 PM	**3.9782E-02**	1.053E-01	1.054E-01	6.282E-01	PCI/SA	1.029	1.0E+0	6.248E-2
31999	**9H797E10**			**J6F27021810**	P-0662	FILTER	6/26/2006 9:00:00	6/7/2006 10:30:00 AM				
U-234	7YSR		0	7/18/2006 6:24:49 PM	**-1.4874E-01**	5.622E-02	5.748E-02	8.722E-01	PCI/SA	0.906	1.0E+0	6.215E-2
U-235	7YSR		0	7/18/2006 6:24:49 PM	**-6.3746E-02**	3.68E-02	3.716E-02	6.704E-01	PCI/SA	0.906	1.0E+0	6.215E-2
U-238	7YSR		0	7/18/2006 6:24:49 PM	**-2.1298E-02**	1.183E-01	1.183E-01	8.288E-01	PCI/SA	0.906	1.0E+0	6.215E-2
31999	**9H797F10**			**J6F27021811**	P-0663	FILTER	6/26/2006 9:00:00	6/7/2006 10:45:00 AM				
U-234	7YSR		0	7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	6.092E-2
U-235	7YSR		0	7/18/2006 6:25:00 PM	**-1.9478E-02**	1.948E-02	1.954E-02	4.665E-01	PCI/SA	1.011	1.0E+0	6.092E-2
U-238	7YSR		0	7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	6.092E-2
31999	**9H797H10**			**J6F27021812**	P-0664	FILTER	6/26/2006 9:00:00	6/7/2006 11:05:00 AM				
U-234	7YSR		0	7/18/2006 6:25:11 PM	**5.5292E-02**	1.392E-01	1.392E-01	7.569E-01	PCI/SA	1.009	1.0E+0	6.232E-2
U-235	7YSR		0	7/18/2006 6:25:11 PM	**-1.8434E-02**	1.843E-02	1.849E-02	4.414E-01	PCI/SA	1.009	1.0E+0	6.232E-2
U-238	7YSR		0	7/18/2006 6:25:11 PM	**7.3726E-02**	1.379E-01	1.381E-01	7.192E-01	PCI/SA	1.009	1.0E+0	6.232E-2
31999	**9H797J10**			**J6F27021813**	P-0665	FILTER	6/26/2006 9:00:00	6/7/2006 11:10:00 AM				
U-234	7YSR		0	7/18/2006 6:25:24 PM	**0.0E+00**	0.0E+00	1.219E-01	2.698E-01	PCI/SA	1.091	1.0E+0	6.015E-2
U-235	7YSR		0	7/18/2006 6:25:24 PM	**-1.9916E-02**	1.992E-02	1.998E-02	4.769E-01	PCI/SA	1.091	1.0E+0	6.015E-2
U-238	7YSR		0	7/18/2006 6:25:24 PM	**1.5928E-01**	1.436E-01	1.441E-01	5.626E-01	PCI/SA	1.091	1.0E+0	6.015E-2

6179343, **Samples Inserted | Updated | NotUpdated => 18 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 54 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DM71AA=> , mat:FILTER | Air *wo:H8DM71AA=> , mat:FILTER | Air *wo:H8DM71AC=> , mat:FILTER | Air *wo:H8DM71AC=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot uncert	Sample Date / MDA	Units	Expected	Yield	Volumes	
31999	**9H797K10**			**J6F27021814**	P-0666	FILTER	6/26/2006 9:00:00	6/7/2006 10:05:00 AM					
U-234	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-235	7YSR	0		7/18/2006 6:25:43 PM	**1.0956E-01**	1.096E-01	1.099E-01	2.969E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-238	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
31999	**9H797M10**			**J6F27021815**	P-0667	FILTER	6/26/2006 9:00:00	6/7/2006 11:15:00 AM					
U-234	7YSR	0		7/18/2006 6:25:53 PM	**0.0E+00**	0.0E+00	1.38E-01	3.054E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-235	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-238	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
31902	**9H7DWT10**			**J6F1402701**	000473	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
U-234	7YSR	0		7/18/2006 6:21:38 PM	**8.4174E-02**	1.073E-01	1.075E-01	5.042E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-235	7YSR	0		7/18/2006 6:21:38 PM	**0.0E+00**	0.0E+00	1.289E-01	2.852E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:21:38 PM	**-4.2133E-02**	2.979E-02	2.999E-02	5.948E-01	PCI/SA		0.936	1.0E+0	6.232E-2
31999	**H8DM71AB**			**J6F280000343**	INTRA-LAB BLANK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
U-234	7YSR	0	B	7/18/2006 6:26:05 PM	**3.2658E-02**	1.822E-02	1.841E-02	5.128E-02	PCI/SA		0.96	1.0E+0	1.0E+0
U-235	7YSR	0	B	7/18/2006 6:26:05 PM	**1.7419E-02**	1.285E-02	1.293E-02	3.652E-02	PCI/SA		0.96	1.0E+0	1.0E+0
U-238	7YSR	0	B	7/18/2006 6:26:05 PM	**4.5363E-02**	2.029E-02	2.062E-02	2.459E-02	PCI/SA		0.96	1.0E+0	1.0E+0
31999	**H8DM71CS**			**J6F280000343**	INTRA-LAB CHECK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
U-234	7YSR	0	S	7/18/2006 6:26:14 PM	**1.0138E+00**	9.367E-02	1.244E-01	4.872E-02	PCI/SA	9.6804E-01	0.766	1.0E+0	1.0E+0
U-235	7YSR	0	S	7/18/2006 6:26:14 PM	**5.1722E-02**	2.112E-02	2.152E-02	2.336E-02	PCI/SA	4.4167E-02	0.766	1.0E+0	1.0E+0
U-238	7YSR	0	S	7/18/2006 6:26:14 PM	**1.0172E+00**	9.364E-02	1.245E-01	2.336E-02	PCI/SA	1.0138E+00	0.766	1.0E+0	1.0E+0

6179343, **Samples Inserted | Updated | NotUpdated => 18 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 54 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DM71AA=> , mat:FILTER | Air *wo:H8DM71AA=> , mat:FILTER | Air *wo:H8DM71AC=> , mat:FILTER | Air *wo:H8DM71AC=> , mat:FILTER | Air.

Batch Nbr: 6179343

Alpha Spec, Uiso by ALP , Results Summary Report

7/19/2006 7:27:03 AM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	MLcC	MDC	QC	Yield	RYld
Uiso by ALP				Richland Standard AlpIso Wo Blk Subt.										
Calc	SR	FILTER	H7DWT1AG	U-234	8.42E-02	(1.08E-01)	U4	PCI/SA	R	1.10E-01	5.04E-01		94%	
Calc	SR	FILTER	H7DWT1AG	U-235	0.00E+00	(1.29E-01)	U4	PCI/SA	R		2.85E-01		94%	
Calc	SR	FILTER	H7DWT1AG	U-238	-4.21E-02	(3.00E-02)	U4	PCI/SA	R	1.55E-01	5.95E-01		94%	
Calc	SR	FILTER	H796F1AG	U-234	2.80E-01	(1.76E-01)	U4	PCI/SA	R	1.04E-01	4.79E-01		98%	
Calc	SR	FILTER	H796F1AG	U-235	1.00E-01	(1.00E-01)	U4	PCI/SA	R		2.71E-01		98%	
Calc	SR	FILTER	H796F1AG	U-238	-2.00E-02	(2.01E-02)	U4	PCI/SA	R	1.04E-01	4.79E-01		98%	
Calc	SR	FILTER	H796L1AG	U-234	2.86E-01	(1.67E-01)		PCI/SA	R		2.58E-01		93%	
Calc	SR	FILTER	H796L1AG	U-235	2.67E-01	(1.68E-01)	U4	PCI/SA	R	9.92E-02	4.57E-01		93%	
Calc	SR	FILTER	H796L1AG	U-238	-3.81E-02	(2.71E-02)	U4	PCI/SA	R	1.40E-01	5.39E-01		93%	
Calc	SR	FILTER	H796N1AG	U-234	2.06E-01	(1.47E-01)	U4	PCI/SA	R		2.80E-01		95%	
Calc	SR	FILTER	H796N1AG	U-235	0.00E+00	(1.26E-01)	U4	PCI/SA	R		2.80E-01		95%	
Calc	SR	FILTER	H796N1AG	U-238	8.25E-02	(1.05E-01)	U4	PCI/SA	R	1.07E-01	4.94E-01		95%	
Calc	SR	FILTER	H796P1AG	U-234	-3.09E-02	(1.56E-02)	U4	PCI/SA	R	1.27E-01	5.15E-01		106%	
Calc	SR	FILTER	H796P1AG	U-235	8.10E-02	(9.73E-02)	U4	PCI/SA	R	8.98E-02	4.41E-01		106%	
Calc	SR	FILTER	H796P1AG	U-238	-4.64E-02	(1.93E-02)	U4	PCI/SA	R	1.56E-01	5.72E-01		106%	
Calc	SR	FILTER	H796Q1AG	U-234	7.02E-01	(2.81E-01)		PCI/SA	R	1.18E-01	5.18E-01		98%	
Calc	SR	FILTER	H796Q1AG	U-235	7.89E-02	(1.05E-01)	U4	PCI/SA	R	1.18E-01	5.18E-01		98%	
Calc	SR	FILTER	H796Q1AG	U-238	4.86E-01	(2.36E-01)		PCI/SA	R	1.37E-01	5.55E-01		98%	
Calc	SR	FILTER	H796R1AG	U-234	-3.32E-02	(1.68E-02)	U4	PCI/SA	R	1.36E-01	5.54E-01		101%	
Calc	SR	FILTER	H796R1AG	U-235	-8.30E-03	(8.33E-03)	U4	PCI/SA	R	6.82E-02	4.17E-01		101%	
Calc	SR	FILTER	H796R1AG	U-238	-3.32E-02	(1.68E-02)	U4	PCI/SA	R	1.36E-01	5.54E-01		101%	
Calc	SR	FILTER	H796T1AG	U-234	-2.80E-02	(1.63E-02)	U4	PCI/SA	R	1.33E-01	5.82E-01		89%	
Calc	SR	FILTER	H796T1AG	U-235	-1.87E-02	(1.33E-02)	U4	PCI/SA	R	1.09E-01	5.33E-01		89%	
Calc	SR	FILTER	H796T1AG	U-238	1.17E-01	(1.17E-01)	U4	PCI/SA	R		3.16E-01		89%	
Calc	SR	FILTER	H796W1AG	U-234	1.58E-01	(1.43E-01)	U4	PCI/SA	R	1.45E-01	5.57E-01		101%	
Calc	SR	FILTER	H796W1AG	U-235	-3.95E-02	(2.81E-02)	U4	PCI/SA	R	1.45E-01	5.57E-01		101%	
Calc	SR	FILTER	H796W1AG	U-238	-5.92E-02	(3.45E-02)	U4	PCI/SA	R	1.78E-01	6.22E-01		101%	
Calc	SR	FILTER	H797D1AG	U-234	0.00E+00	(1.22E-01)	U4	PCI/SA	R		2.70E-01		103%	
Calc	SR	FILTER	H797D1AG	U-235	-5.97E-02	(3.48E-02)	U4	PCI/SA	R	1.79E-01	6.28E-01		103%	
Calc	SR	FILTER	H797D1AG	U-238	3.98E-02	(1.05E-01)	U4	PCI/SA	R	1.79E-01	6.28E-01		103%	
Calc	SR	FILTER	H797E1AG	U-234	-1.49E-01	(5.75E-02)	U4	PCI/SA	R	2.92E-01	8.72E-01		91%	
Calc	SR	FILTER	H797E1AG	U-235	-6.37E-02	(3.72E-02)	U4	PCI/SA	R	1.91E-01	6.70E-01		91%	
Calc	SR	FILTER	H797E1AG	U-238	-2.13E-02	(1.18E-01)	U4	PCI/SA	R	2.71E-01	8.29E-01		91%	
Calc	SR	FILTER	H797F1AG	U-234	7.80E-02	(1.46E-01)	U4	PCI/SA	R	2.48E-01	7.60E-01		101%	
Calc	SR	FILTER	H797F1AG	U-235	-1.95E-02	(1.95E-02)	U4	PCI/SA	R	1.01E-01	4.67E-01		101%	
Calc	SR	FILTER	H797F1AG	U-238	7.80E-02	(1.46E-01)	U4	PCI/SA	R	2.48E-01	7.60E-01		101%	
Calc	SR	FILTER	H797H1AG	U-234	5.53E-02	(1.39E-01)	U4	PCI/SA	R	2.54E-01	7.57E-01		101%	

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:51
RADCALC v4.8.18
STL Richland

Batch Nbr: 6179343

Alpha Spec, Uiso by ALP , Results Summary Report

7/19/2006 7:27:03 AM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	SR	FILTER	H797H1AG	U-235	-1.84E-02	(1.85E-02)	U4	PCI/SA	R	9.59E-02	4.41E-01		101%	
Calc	SR	FILTER	H797H1AG	U-238	7.37E-02	(1.38E-01)	U4	PCI/SA	R	2.35E-01	7.19E-01		101%	
Calc	SR	FILTER	H797J1AG	U-234	0.00E+00	(1.22E-01)	U4	PCI/SA	R		2.70E-01		109%	
Calc	SR	FILTER	H797J1AG	U-235	-1.99E-02	(2.00E-02)	U4	PCI/SA	R	1.04E-01	4.77E-01		109%	
Calc	SR	FILTER	H797J1AG	U-238	1.59E-01	(1.44E-01)	U4	PCI/SA	R	1.46E-01	5.63E-01		109%	
Calc	SR	FILTER	H797K1AG	U-234	-2.19E-02	(2.20E-02)	U4	PCI/SA	R	1.14E-01	5.25E-01		91%	
Calc	SR	FILTER	H797K1AG	U-235	1.10E-01	(1.10E-01)	U4	PCI/SA	R		2.97E-01		91%	
Calc	SR	FILTER	H797K1AG	U-238	-2.19E-02	(2.20E-02)	U4	PCI/SA	R	1.14E-01	5.25E-01		91%	
Calc	SR	FILTER	H797M1AG	U-234	0.00E+00	(1.38E-01)	U4	PCI/SA	R		3.05E-01		82%	
Calc	SR	FILTER	H797M1AG	U-235	-2.25E-02	(2.26E-02)	U4	PCI/SA	R	1.17E-01	5.40E-01		82%	
Calc	SR	FILTER	H797M1AG	U-238	-2.25E-02	(2.26E-02)	U4	PCI/SA	R	1.17E-01	5.40E-01		82%	
Calc	SR	FILTER	H8DM71AA	U-234	3.27E-02	(1.84E-02)		PCI/SA	R	1.34E-02	5.13E-02	B	96%	
Calc	SR	FILTER	H8DM71AA	U-235	1.74E-02	(1.29E-02)	U4	PCI/SA	R	5.97E-03	3.65E-02	B	96%	
Calc	SR	FILTER	H8DM71AA	U-238	4.54E-02	(2.06E-02)		PCI/SA	R		2.46E-02	B	96%	
Calc	SR	FILTER	H8DM71AC	U-234	1.01E+00	(1.24E-01)		PCI/SA	R	1.27E-02	4.87E-02	S	77%	105%
Calc	SR	FILTER	H8DM71AC	U-235	5.17E-02	(2.15E-02)		PCI/SA	R		2.34E-02	S	77%	117%
Calc	SR	FILTER	H8DM71AC	U-238	1.02E+00	(1.25E-01)		PCI/SA	R		2.34E-02	S	77%	100%

Matt Lardy 7-19-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:72
RADCALC v4.8.18
STL Richland

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:04 AM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H7DWT1AG	PCI/SA		05/24/06 07:40	07/18/06 18:21			1	1.00 SA	
536403,000473					,J6F140270-1 v4.8.18		FILTER					UITC15931 Alq		0.062319 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:41	U-232	691	4	ALP9	ED	Y	N	3.6670E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	1000.0333			Y		(1.100E-02)						(0.000E+00)	16.046387		
1	07/18/06 16:41	U-234	1	1	ALP9	ED	N	N	3.6670E-01		N	94%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	1000.0333			Y		(1.100E-02)			5%			(0.000E+00)	16.046387		
2	07/18/06 16:41	U-235	0	0	ALP9	ED	N	N	3.6670E-01		N	94%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	1000.0333			Y		(1.100E-02)			5%			(0.000E+00)	16.046387		
3	07/18/06 16:41	U-238	0	2	ALP9	ED	N	N	3.6670E-01		N	94%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	1000.0333			Y		(1.100E-02)			5%			(0.000E+00)	16.046387		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**67.960345**		3.44784E+00	9.402249	9.402249	1.00 SA	94%				
				(5.078159)		(1.3133E-01)	(0.455876)	(0.455876)	(0.027066)					
	07/19/06	U-234	R	**0.084174**	U4	3.99545E-03	0.011645	0.011645	1.00 SA	94%		0.50415		
				(0.107542)		(5.0945E-03)	(0.014864)	(0.014864)	(0.027066)			0.109539		
	07/19/06	U-235	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	94%		0.285202		
				(0.128893)		(0.0000E+00)	(0.017832)	(0.017832)	(0.027066)					
	07/19/06	U-238	R	**-0.042133**	U4	-1.99993E-03	-0.005829	-0.005829	1.00 SA	94%		0.594842		
				(0.029985)		(1.4142E-03)	(0.004135)	(0.004135)	(0.027066)			0.154912		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H796F1AG	PCI/SA		06/07/06 10:00	07/18/06 18:21			1	1.00 SA	
536403,000487					,J6F270218-1 v4.8.18		FILTER					UITC15932 Alq		0.062576 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:41	U-232	724	3	ALP10	ED	Y	N	3.6914E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3166			Y		(1.107E-02)						(0.000E+00)	15.980596		
1	07/18/06 16:41	U-234	3	1	ALP10	ED	N	N	3.6914E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3166			Y		(1.107E-02)			5%			(0.000E+00)	15.980596		
2	07/18/06 16:41	U-235	1	0	ALP10	ED	N	N	3.6914E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3166			Y		(1.107E-02)			5%			(0.000E+00)	15.980596		
3	07/18/06 16:41	U-238	0	1	ALP10	ED	N	N	3.6914E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3166			Y		(1.107E-02)			5%			(0.000E+00)	15.980596		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.18

STL Richland

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:04 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**70.527903**		3.61670E+00	9.797638	9.797638	1.00 SA	98%				
				(5.238232)		(1.3454E-01)	(0.468214)	(0.468214)	(0.027066)					
	07/19/06	U-234	R	**0.279946**	U4	1.39991E-02	0.03889	0.03889	1.00 SA	98%		0.478831		
				(0.175756)		(8.7170E-03)	(0.024315)	(0.024315)	(0.027066)			0.104005		
	07/19/06	U-235	R	**0.099979**	U4	4.99958E-03	0.013889	0.013889	1.00 SA	98%		0.270944		
				(0.100299)		(4.9996E-03)	(0.013911)	(0.013911)	(0.027066)					
	07/19/06	U-238	R	**-0.019991**	U4	-9.99683E-04	-0.002777	-0.002777	1.00 SA	98%		0.47883		
				(0.020055)		(9.9968E-04)	(0.002782)	(0.002782)	(0.027066)			0.104005		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H796L1AG**	**PCI/SA**		06/07/06 10:25	07/18/06 18:21			1	1.00 SA	
536403,000488					,J6F270218-2 v4.8.18		FILTER					UITC15933 Alq		0.062297 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:41	U-232	766	9	ALP11	ED	Y	N	4.0933E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2833			Y		(1.228E-02)						(0.000E+00)	16.052218		
1	07/18/06 16:41	U-234	3	0	ALP11	ED	N	N	4.0933E-01		N	93%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2833			Y		(1.228E-02)			4%			(0.000E+00)	16.052218		
2	07/18/06 16:41	U-235	3	1	ALP11	ED	N	N	4.0933E-01		N	93%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2833			Y		(1.228E-02)			4%			(0.000E+00)	16.052218		
3	07/18/06 16:41	U-238	0	2	ALP11	ED	N	N	4.0933E-01		N	93%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2833			Y		(1.228E-02)			4%			(0.000E+00)	16.052218		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**67.479772**		3.82005E+00	9.332371	9.332371	1.00 SA	93%				
				(4.979265)		(1.3838E-01)	(0.438945)	(0.438945)	(0.027066)					
	07/19/06	U-234	R	**0.285976**		1.49963E-02	0.03955	0.03955	1.00 SA	93%		0.258331		
				(0.166672)		(8.6581E-03)	(0.022941)	(0.022941)	(0.027066)					
	07/19/06	U-235	R	**0.266911**	U4	1.39965E-02	0.036913	0.036913	1.00 SA	93%		0.456561		
				(0.167559)		(8.7156E-03)	(0.023078)	(0.023078)	(0.027066)			0.099174		
	07/19/06	U-238	R	**-0.038129**	U4	-1.99943E-03	-0.005273	-0.005273	1.00 SA	93%		0.53867		
				(0.027132)		(1.4138E-03)	(0.00374)	(0.00374)	(0.027066)			0.140253		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H796N1AG**	**PCI/SA**		06/07/06 10:35	07/18/06 18:22			1	1.00 SA	
536403,000489					,J6F270218-3 v4.8.18		FILTER					UITC15934 Alq		0.062485 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:42	U-232	706	12	ALP12	ED	Y	N	3.6724E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.2333			Y		(1.102E-02)						(0.000E+00)	16.00374		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.18

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1	07/18/06 16:42	U-234	2	0	ALP12	ED	N	N	3.6724E-01	N	95%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.0166666	1000.2333			Y		(1.102E-02)		5%		(0.000E+00)	16.00374	
2	07/18/06 16:42	U-235	0	0	ALP12	ED	N	N	3.6724E-01	N	95%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.0166666	1000.2333			Y		(1.102E-02)		5%		(0.000E+00)	16.00374	
3	07/18/06 16:42	U-238	1	1	ALP12	ED	N	N	3.6724E-01	N	95%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.0166666	1000.2333			Y		(1.102E-02)		5%		(0.000E+00)	16.00374	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**69.051892**		3.51771E+00	9.578721	9.578721	1.00 SA	95%				
				(5.148715)		(1.3289E-01)	(0.462076)	(0.462076)	(0.027066)					
	07/19/06	U-234	R	**0.206325**	U4	9.99917E-03	0.028621	0.028621	1.00 SA	95%		0.27957		
				(0.146833)		(7.0705E-03)	(0.020303)	(0.020303)	(0.027066)					
	07/19/06	U-235	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	95%		0.27957		
				(0.126348)		(0.0000E+00)	(0.017527)	(0.017527)	(0.027066)					
	07/19/06	U-238	R	**0.082533**	U4	3.99982E-03	0.011449	0.011449	1.00 SA	95%		0.494085		
				(0.105414)		(5.0986E-03)	(0.014608)	(0.014608)	(0.027066)			0.107321		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H796P1AG**	**PCI/SA**		06/07/06 10:50	07/18/06 18:22			1	1.00 SA	
536403,000490					,J6F270218-4 v4.8.18		FILTER					UITC15935 Alq		0.062337 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:42	U-232	798	24	ALP69	ED	Y	N	3.7411E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2333333	2500.0166			Y		(1.122E-02)						(0.000E+00)	16.041821		
1	07/18/06 16:42	U-234	0	4	ALP69	ED	N	N	3.7411E-01		N	106%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2333333	2500.0166			Y		(1.122E-02)			5%			(0.000E+00)	16.041821		
2	07/18/06 16:42	U-235	1	2	ALP69	ED	N	N	3.7411E-01		N	106%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2333333	2500.0166			Y		(1.122E-02)			5%			(0.000E+00)	16.041821		
3	07/18/06 16:42	U-238	0	6	ALP69	ED	N	N	3.7411E-01		N	106%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2333333	2500.0166			Y		(1.122E-02)			5%			(0.000E+00)	16.041821		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**76.792415**		3.97575E+00	10.627181	10.627181	1.00 SA	106%				
				(5.638883)		(1.4109E-01)	(0.493842)	(0.493842)	(0.027066)					
	07/19/06	U-234	R	**-0.030904**	U4	-1.59999E-03	-0.004277	-0.004277	1.00 SA	106%		0.515304		
				(0.015645)		(7.9999E-04)	(0.002151)	(0.002151)	(0.027066)			0.12702		
	07/19/06	U-235	R	**0.081011**	U4	4.19418E-03	0.011211	0.011211	1.00 SA	106%		0.440942		
				(0.097293)		(5.0261E-03)	(0.013449)	(0.013449)	(0.027066)			0.089816		
	07/19/06	U-238	R	**-0.046356**	U4	-2.39998E-03	-0.006415	-0.006415	1.00 SA	106%		0.572364		
				(0.019279)		(9.7979E-04)	(0.002643)	(0.002643)	(0.027066)			0.155567		

Batch Nbr: 6179343

Alpha Spec, Ulso by ALP , Calculated Results

7/19/2006 7:27:04 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H796Q1AG	PCI/SA		06/07/06 11:00	07/18/06 18:22			1	1.00 SA	
536403,000491					,J6F270218-5 v4.8.18		FILTER					UITC15936 Alq		0.060404 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:42	U-232	727	29	ALP71	ED	Y	N	3.6536E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.096E-02)						(0.000E+00)	16.555303		
1	07/18/06 16:42	U-234	7	3	ALP71	ED	N	N	3.6536E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.096E-02)			5%			(0.000E+00)	16.555303		
2	07/18/06 16:42	U-235	1	3	ALP71	ED	N	N	3.6536E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.096E-02)			5%			(0.000E+00)	16.555303		
3	07/18/06 16:42	U-238	5	4	ALP71	ED	N	N	3.6536E-01		N	98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.096E-02)			5%			(0.000E+00)	16.555303		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**73.875952**		3.61947E+00	9.90648	9.90648	1.00 SA	98%				
				(5.487378)		(1.3469E-01)	(0.473515)	(0.473515)	(0.027066)					
	07/19/06	U-234	R	**0.702176**		3.37621E-02	0.094159	0.094159	1.00 SA	98%		0.518264		
				(0.280898)		(1.3233E-02)	(0.037285)	(0.037285)	(0.027066)			0.11845		
	07/19/06	U-235	R	**0.078919**	**U4**	3.79461E-03	0.010583	0.010583	1.00 SA	98%		0.518263		
				(0.105061)		(5.0424E-03)	(0.014075)	(0.014075)	(0.027066)			0.11845		
	07/19/06	U-238	R	**0.486105**		2.33730E-02	0.065185	0.065185	1.00 SA	98%		0.55489		
				(0.236103)		(1.1197E-02)	(0.031443)	(0.031443)	(0.027066)			0.136774		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H796R1AG	PCI/SA		06/07/06 11:20	07/18/06 18:23			1	1.00 SA	
536403,000492					,J6F270218-6 v4.8.18		FILTER					UITC15937 Alq		0.062437 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:43	U-232	711	16	ALP83	ED	Y	N	3.4771E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.043E-02)						(0.000E+00)	16.016178		
1	07/18/06 16:43	U-234	0	4	ALP83	ED	N	N	3.4771E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.043E-02)			5%			(0.000E+00)	16.016178		
2	07/18/06 16:43	U-235	0	1	ALP83	ED	N	N	3.4771E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.043E-02)			5%			(0.000E+00)	16.016178		
3	07/18/06 16:43	U-238	0	4	ALP83	ED	N	N	3.4771E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	2500.0333			Y		(1.043E-02)			5%			(0.000E+00)	16.016178		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:7

RADCALC v4.8.18

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:05 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	73.549605		3.54475E+00	10.19471	10.19471	1.00 SA	101%				
				(5.476515)		(1.3319E-01)	(0.490169)	(0.490169)	(0.027066)					
	07/19/06	U-234	R	-0.033198	U4	-1.59998E-03	-0.004602	-0.004602	1.00 SA	101%		0.553586		
				(0.016811)		(7.9999E-04)	(0.002316)	(0.002316)	(0.027066)			0.136453		
	07/19/06	U-235	R	-0.008299	U4	-3.99995E-04	-0.00115	-0.00115	1.00 SA	101%		0.417215		
				(0.008326)		(3.9999E-04)	(0.001152)	(0.001152)	(0.027066)			0.068226		
	07/19/06	U-238	R	-0.033198	U4	-1.59998E-03	-0.004602	-0.004602	1.00 SA	101%		0.553586		
				(0.016811)		(7.9999E-04)	(0.002316)	(0.002316)	(0.027066)			0.136453		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H796T1AG	PCI/SA		06/07/06 10:10	07/18/06 18:23			1	1.00 SA	
536403,000493					,J6F270218-7 v4.8.18		FILTER					UITC15938 Alq		0.062564 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:43	U-232	626	26	ALP84	ED	Y	N	3.4843E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	2500.15			Y		(1.045E-02)						(0.000E+00)	15.983609		
1	07/18/06 16:43	U-234	0	3	ALP84	ED	N	N	3.4843E-01		N	89%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	2500.15			Y		(1.045E-02)			4%			(0.000E+00)	15.983609		
2	07/18/06 16:43	U-235	0	2	ALP84	ED	N	N	3.4843E-01		N	89%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	2500.15			Y		(1.045E-02)			4%			(0.000E+00)	15.983609		
3	07/18/06 16:43	U-238	1	0	ALP84	ED	N	N	3.4843E-01		N	89%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2	2500.15			Y		(1.045E-02)			4%			(0.000E+00)	15.983609		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	64.397175		3.11647E+00	8.94428	8.94428	1.00 SA	89%				
				(4.879382)		(1.2499E-01)	(0.447978)	(0.447978)	(0.027066)					
	07/19/06	U-234	R	-0.02801	U4	-1.19993E-03	-0.00389	-0.00389	1.00 SA	89%		0.58172		
				(0.016332)		(6.9278E-04)	(0.002258)	(0.002258)	(0.027066)			0.132948		
	07/19/06	U-235	R	-0.018673	U4	-7.99952E-04	-0.002594	-0.002594	1.00 SA	89%		0.532956		
				(0.013291)		(5.6565E-04)	(0.00184)	(0.00184)	(0.027066)			0.108552		
	07/19/06	U-238	R	0.116598	U4	4.99500E-03	0.016195	0.016195	1.00 SA	89%		0.315981		
				(0.116985)		(4.9950E-03)	(0.016222)	(0.016222)	(0.027066)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H796W1AG	PCI/SA		06/07/06 09:55	07/18/06 18:24			1	1.00 SA	
536403,P-0660					,J6F270218-8 v4.8.18		FILTER					UITC15939 Alq		0.062408 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:44	U-232	741	3	ALP1	ED	Y	N	3.6576E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.2166666	1000.1166			Y		(1.097E-02)						(0.000E+00)	16.023537		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:9

RADCALC v4.8.18

STL Richland

1	07/18/06 16:44	U-234	2	2	ALP1	ED	N	N	3.6576E-01	N	101%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	1000.1166			Y		(1.097E-02)		5%		(0.000E+00)	16.023537	
2	07/18/06 16:44	U-235	0	2	ALP1	ED	N	N	3.6576E-01	N	101%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	1000.1166			Y		(1.097E-02)		5%		(0.000E+00)	16.023537	
3	07/18/06 16:44	U-238	0	3	ALP1	ED	N	N	3.6576E-01	N	101%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.2166666	1000.1166			Y		(1.097E-02)		5%		(0.000E+00)	16.023537	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**72.974199**		3.69799E+00	10.110307	10.110307	1.00 SA	101%				
				(5.404278)		(1.3597E-01)	(0.47978)	(0.47978)	(0.027066)					
	07/19/06	U-234	R	**0.157659**	**U4**	7.98941E-03	0.021843	0.021843	1.00 SA	101%		0.557098		
				(0.142709)		(7.2036E-03)	(0.019733)	(0.019733)	(0.027066)			0.145086		
	07/19/06	U-235	R	**-0.039462**	**U4**	-1.99977E-03	-0.005467	-0.005467	1.00 SA	101%		0.557098		
				(0.028082)		(1.4140E-03)	(0.003878)	(0.003878)	(0.027066)			0.145085		
	07/19/06	U-238	R	**-0.059194**	**U4**	-2.99965E-03	-0.008201	-0.008201	1.00 SA	101%		0.622274		
				(0.034501)		(1.7318E-03)	(0.004757)	(0.004757)	(0.027066)			0.177693		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H797D1AG**	**PCI/SA**		06/07/06 10:20	07/18/06 18:24			1	1.00 SA	
536403,P-0661					,J6F270218-9 v4.8.18		FILTER					UITC15940 Alq		0.062482 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:44	U-232	755	15	ALP2	ED	Y	N	3.6206E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.1333			Y		(1.086E-02)						(0.000E+00)	16.004485		
1	07/18/06 16:44	U-234	0	0	ALP2	ED	N	N	3.6206E-01		N	103%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.1333			Y		(1.086E-02)			5%			(0.000E+00)	16.004485		
2	07/18/06 16:44	U-235	0	3	ALP2	ED	N	N	3.6206E-01		N	103%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.1333			Y		(1.086E-02)			5%			(0.000E+00)	16.004485		
3	07/18/06 16:44	U-238	1	3	ALP2	ED	N	N	3.6206E-01		N	103%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.1333			Y		(1.086E-02)			5%			(0.000E+00)	16.004485		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**74.831092**		3.75812E+00	10.379915	10.379915	1.00 SA	103%				
				(5.533817)		(1.3737E-01)	(0.490846)	(0.490846)	(0.027066)					
	07/19/06	U-234	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 SA	103%		0.269671		
				(0.121874)		(0.0000E+00)	(0.016905)	(0.016905)	(0.027066)					
	07/19/06	U-235	R	**-0.059728**	**U4**	-2.99960E-03	-0.008285	-0.008285	1.00 SA	103%		0.628158		
				(0.034812)		(1.7318E-03)	(0.004806)	(0.004806)	(0.027066)			0.17935		
	07/19/06	U-238	R	**0.039782**	**U4**	1.99790E-03	0.005518	0.005518	1.00 SA	103%		0.628158		
				(0.105363)		(5.2891E-03)	(0.014612)	(0.014612)	(0.027066)			0.17935		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:05 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H797E1AG	PCI/SA		06/07/06 10:30	07/18/06 18:24			1	1.00 SA	
536403,P-0662					,J6F270218-10 v4.8.18		FILTER					UITC15941 Alq		0.062151 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:44	U-232	690	8	ALP3	ED	Y	N	3.7651E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.0333			Y		(1.130E-02)						(0.000E+00)	16.089885		
1	07/18/06 16:44	U-234	0	7	ALP3	ED	N	N	3.7651E-01		N	91%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.0333			Y		(1.130E-02)			4%			(0.000E+00)	16.089885		
2	07/18/06 16:44	U-235	0	3	ALP3	ED	N	N	3.7651E-01		N	91%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.0333			Y		(1.130E-02)			4%			(0.000E+00)	16.089885		
3	07/18/06 16:44	U-238	1	6	ALP3	ED	N	N	3.7651E-01		N	91%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.0333			Y		(1.130E-02)			4%			(0.000E+00)	16.089885		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**66.224836**		3.44028E+00	9.137373	9.137373	1.00 SA	91%				
				(4.951058)		(1.3130E-01)	(0.443582)	(0.443582)	(0.027066)					
	07/19/06	U-234	R	**-0.148741**	U4	-6.99977E-03	-0.020522	-0.020522	1.00 SA	91%		0.872194		
				(0.057481)		(2.6457E-03)	(0.007845)	(0.007845)	(0.027066)			0.292378		
	07/19/06	U-235	R	**-0.063746**	U4	-2.99990E-03	-0.008795	-0.008795	1.00 SA	91%		0.67037		
				(0.03716)		(1.7320E-03)	(0.005103)	(0.005103)	(0.027066)			0.191406		
	07/19/06	U-238	R	**-0.021298**	U4	-1.00230E-03	-0.002939	-0.002939	1.00 SA	91%		0.828842		
				(0.118275)		(5.5655E-03)	(0.016318)	(0.016318)	(0.027066)			0.27069		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H797F1AG	PCI/SA		06/07/06 10:45	07/18/06 18:24			1	1.00 SA	
536403,P-0663					,J6F270218-11 v4.8.18		FILTER					UITC15942 Alq		0.060918 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:44	U-232	775	5	ALP4	ED	Y	N	3.7951E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3			Y		(1.139E-02)						(0.000E+00)	16.415408		
1	07/18/06 16:44	U-234	2	6	ALP4	ED	N	N	3.7951E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3			Y		(1.139E-02)			5%			(0.000E+00)	16.415408		
2	07/18/06 16:44	U-235	0	1	ALP4	ED	N	N	3.7951E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3			Y		(1.139E-02)			5%			(0.000E+00)	16.415408		
3	07/18/06 16:44	U-238	2	6	ALP4	ED	N	N	3.7951E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0166666	1000.3			Y		(1.139E-02)			5%			(0.000E+00)	16.415408		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:12

RADCALC v4.8.18

STL Richland

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:05 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**75.396951**		3.86968E+00	10.196603	10.196603	1.00 SA	101%				
				(5.554126)		(1.3920E-01)	(0.47761)	(0.47761)	(0.027066)					
	07/19/06	U-234	R	**0.077955**	U4	4.00097E-03	0.010543	0.010543	1.00 SA	101%		0.760133		
				(0.145921)		(7.4825E-03)	(0.019725)	(0.019725)	(0.027066)			0.24822		
	07/19/06	U-235	R	**-0.019478**	U4	-9.99700E-04	-0.002634	-0.002634	1.00 SA	101%		0.466537		
				(0.01954)		(9.9970E-04)	(0.002638)	(0.002638)	(0.027066)			0.101335		
	07/19/06	U-238	R	**0.077955**	U4	4.00097E-03	0.010543	0.010543	1.00 SA	101%		0.760132		
				(0.145921)		(7.4825E-03)	(0.019725)	(0.019725)	(0.027066)			0.24822		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H797H1AG**	**PCI/SA**		06/07/06 11:05	07/18/06 18:25			1	1.00 SA	
536403,P-0664					,J6F270218-12 v4.8.18		FILTER					UITC15943 Alq		0.062324 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:45	U-232	799	2	ALP5	ED	Y	N	3.9200E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2			Y		(1.176E-02)						(0.000E+00)	16.045193		
1	07/18/06 16:45	U-234	2	7	ALP5	ED	N	N	3.9200E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2			Y		(1.176E-02)			5%			(0.000E+00)	16.045193		
2	07/18/06 16:45	U-235	0	1	ALP5	ED	N	N	3.9200E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2			Y		(1.176E-02)			5%			(0.000E+00)	16.045193		
3	07/18/06 16:45	U-238	2	6	ALP5	ED	N	N	3.9200E-01		N	101%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.05	1000.2			Y		(1.176E-02)			5%			(0.000E+00)	16.045193		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**73.602529**		3.99200E+00	10.183597	10.183597	1.00 SA	101%				
				(5.401395)		(1.4130E-01)	(0.472517)	(0.472517)	(0.027066)					
	07/19/06	U-234	R	**0.055292**	U4	2.99890E-03	0.00765	0.00765	1.00 SA	101%		0.756863		
				(0.139235)		(7.5480E-03)	(0.01926)	(0.01926)	(0.027066)			0.253699		
	07/19/06	U-235	R	**-0.018434**	U4	-9.99800E-04	-0.00255	-0.00255	1.00 SA	101%		0.44143		
				(0.018492)		(9.9980E-04)	(0.002554)	(0.002554)	(0.027066)			0.095889		
	07/19/06	U-238	R	**0.073726**	U4	3.99870E-03	0.010201	0.010201	1.00 SA	101%		0.719247		
				(0.138064)		(7.4815E-03)	(0.019094)	(0.019094)	(0.027066)			0.23488		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H797J1AG**	**PCI/SA**		06/07/06 11:10	07/18/06 18:25			1	1.00 SA	
536403,P-0665					,J6F270218-13 v4.8.18		FILTER					UITC15944 Alq		0.060152 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:45	U-232	829	5	ALP6	ED	Y	N	3.7594E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.0833333	1000.1666			Y		(1.128E-02)						(0.000E+00)	16.624609		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.18

STL Richland

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:05 AM

1	07/18/06 16:45	U-234	0	0	ALP6	ED	N	N	3.7594E-01	N	109%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.0833333	1000.1666			Y		(1.128E-02)		5%		(0.000E+00)	16.624609	
2	07/18/06 16:45	U-235	0	1	ALP6	ED	N	N	3.7594E-01	N	109%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.0833333	1000.1666			Y		(1.128E-02)		5%		(0.000E+00)	16.624609	
3	07/18/06 16:45	U-238	2	2	ALP6	ED	N	N	3.7594E-01	N	109%	N	1.0000E+00	4.5045E-01	1.0000E+00
			200.0833333	1000.1666			Y		(1.128E-02)		5%		(0.000E+00)	16.624609	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**82.432595**		4.13827E+00	11.00781	11.00781	1.00 SA	109%				
				(6.024937)		(1.4392E-01)	(0.505579)	(0.505579)	(0.027066)					
	07/19/06	U-234	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	109%		0.269798		
				(0.121931)		(0.0000E+00)	(0.016282)	(0.016282)	(0.027066)					
	07/19/06	U-235	R	**-0.019916**	U4	-9.99833E-04	-0.00266	-0.00266	1.00 SA	109%		0.476855		
				(0.019978)		(9.9983E-04)	(0.002664)	(0.002664)	(0.027066)			0.10359		
	07/19/06	U-238	R	**0.15928**	U4	7.99617E-03	0.02127	0.02127	1.00 SA	109%		0.562621		
				(0.144134)		(7.2082E-03)	(0.019209)	(0.019209)	(0.027066)			0.146499		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H797K1AG**	**PCI/SA**		06/07/06 10:05	07/18/06 18:25			1	1.00 SA	
536403,P-0666					,J6F270218-14 v4.8.18		FILTER					UITC15945 Alq		0.061866 SA	✓

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:45	U-232	670	3	ALP7	ED	Y	N	3.6324E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	1000.1166			Y		(1.090E-02)						(0.000E+00)	16.163848		
1	07/18/06 16:45	U-234	0	1	ALP7	ED	N	N	3.6324E-01		N	91%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	1000.1166			Y		(1.090E-02)			4%			(0.000E+00)	16.163848		
2	07/18/06 16:45	U-235	1	0	ALP7	ED	N	N	3.6324E-01		N	91%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	1000.1166			Y		(1.090E-02)			4%			(0.000E+00)	16.163848		
3	07/18/06 16:45	U-238	0	1	ALP7	ED	N	N	3.6324E-01		N	91%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1166666	1000.1166			Y		(1.090E-02)			4%			(0.000E+00)	16.163848		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**67.050161**		3.34505E+00	9.208915	9.208915	1.00 SA	91%				
				(5.030122)		(1.2936E-01)	(0.450718)	(0.450718)	(0.027066)					
	07/19/06	U-234	R	**-0.021922**	U4	-9.99883E-04	-0.003011	-0.003011	1.00 SA	91%		0.524798		
				(0.021994)		(9.9988E-04)	(0.003016)	(0.003016)	(0.027066)			0.114012		
	07/19/06	U-235	R	**0.109561**	U4	4.99709E-03	0.015047	0.015047	1.00 SA	91%		0.296909		
				(0.109918)		(4.9971E-03)	(0.015072)	(0.015072)	(0.027066)					
	07/19/06	U-238	R	**-0.021922**	U4	-9.99883E-04	-0.003011	-0.003011	1.00 SA	91%		0.524798		
				(0.021994)		(9.9988E-04)	(0.003016)	(0.003016)	(0.027066)			0.114012		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:16

RADCALC v4.8.18

STL Richland

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
16	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H797M1AG	PCI/SA		06/07/06 11:15	07/18/06 18:25			1	1.00 SA	
536403,P-0667					,J6F270218-15 v4.8.18		FILTER					UITC15946 Alq		0.062667 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:45	U-232	644	5	ALP8	ED	Y	N	3.9047E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)						(0.000E+00)	15.957432		
1	07/18/06 16:45	U-234	0	0	ALP8	ED	N	N	3.9047E-01		N	82%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)			4%			(0.000E+00)	15.957432		
2	07/18/06 16:45	U-235	0	1	ALP8	ED	N	N	3.9047E-01		N	82%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)			4%			(0.000E+00)	15.957432		
3	07/18/06 16:45	U-238	0	1	ALP8	ED	N	N	3.9047E-01		N	82%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1	1000.2166			Y		(1.171E-02)			4%			(0.000E+00)	15.957432		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**59.153828**		3.21339E+00	8.229497	8.229497	1.00 SA	82%				
				(4.46236)		(1.2684E-01)	(0.408013)	(0.408013)	(0.027066)					
	07/19/06	U-234	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	82%		0.305449		
				(0.138043)		(0.0000E+00)	(0.019205)	(0.019205)	(0.027066)					
	07/19/06	U-235	R	**-0.022549**	U4	-9.99783E-04	-0.003137	-0.003137	1.00 SA	82%		0.539871		
				(0.022623)		(9.9978E-04)	(0.003142)	(0.003142)	(0.027066)			0.117281		
	07/19/06	U-238	R	**-0.022549**	U4	-9.99783E-04	-0.003137	-0.003137	1.00 SA	82%		0.539871		
				(0.022623)		(9.9978E-04)	(0.003142)	(0.003142)	(0.027066)			0.117281		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
17	Calc	SR	FILTER	*STLE	AlpIsoWoBS	H8DM71AA	PCI/SA	B	06/07/06 10:00	07/18/06 18:26			1	1.00 SA	
0,INTRA-LAB BLANK					,J6F280000-343		FILTER					UITC15947 Alq		1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:45	U-232	504	51	ALP85	ED	Y	N	2.5840E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	2500.1166			Y		(7.752E-03)						(0.000E+00)	1.00		
1	07/18/06 16:45	U-234	4	5	ALP85	ED	N	N	2.5840E-01		N	96%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	2500.1166			Y		(7.752E-03)			5%			(0.000E+00)	1.00		
2	07/18/06 16:45	U-235	2	1	ALP85	ED	N	N	2.5840E-01		N	96%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	2500.1166			Y		(7.752E-03)			5%			(0.000E+00)	1.00		
3	07/18/06 16:45	U-238	5	0	ALP85	ED	N	N	2.5840E-01		N	96%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1833333	2500.1166			Y		(7.752E-03)			5%			(0.000E+00)	1.00		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6179343

Alpha Spec, UIso by ALP , Calculated Results

7/19/2006 7:27:05 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**4.353385**		2.49729E+00	9.664524	9.664524	1.00 SA	96%				
				(0.329191)		(1.1218E-01)	(0.522062)	(0.522062)	(0.017321)					
	07/19/06	U-234	R	**0.032658**		1.79818E-02	0.072501	0.072501	1.00 SA	96%		0.05128		
				(0.01841)		(1.0031E-02)	(0.040691)	(0.040691)	(0.017321)			0.013355		
	07/19/06	U-235	R	**0.017419**	U4	9.59086E-03	0.038669	0.038669	1.00 SA	96%		0.036524		
				(0.012929)		(7.0759E-03)	(0.028629)	(0.028629)	(0.017321)			0.005972		
	07/19/06	U-238	R	**0.045363**		2.49771E-02	0.100705	0.100705	1.00 SA	96%		0.024587		
				(0.02062)		(1.1170E-02)	(0.045465)	(0.045465)	(0.017321)					

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
18	Calc	SR	FILTER	*STLE	AlpIsoWoBS	**H8DM71AC**	**PCI/SA**	**S**	06/07/06 10:00	07/18/06 18:26		UISF0460	1	1.00 SA	
0,INTRA-LAB CHECK					,J6F280000-343		FILTER					UISF0460 Alq		1.00 sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 16:46	U-232	526	8	ALP87	ED	Y	N	3.4106E-01		N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.0166			Y		(1.023E-02)						(0.000E+00)	1.00		
1	07/18/06 16:46	U-234	118	2	ALP87	ED	N	N	3.4106E-01		N	77%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.0166			Y		(1.023E-02)			4%			(0.000E+00)	1.00		
2	07/18/06 16:46	U-235	6	0	ALP87	ED	N	N	3.4106E-01		N	77%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.0166			Y		(1.023E-02)			4%			(0.000E+00)	1.00		
3	07/18/06 16:46	U-238	118	0	ALP87	ED	N	N	3.4106E-01		N	77%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			200.1333333	1000.0166			Y		(1.023E-02)			4%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	U-232	R	**3.460612**		2.62025E+00	7.682567	7.682567	1.00 sa	77%				
				(0.25929)		(1.1463E-01)	(0.407533)	(0.407533)	(0.017321)					
	07/19/06	U-234	R	**1.013751**		5.87607E-01 ✓	2.250529 ✓	2.250529 ✓	1.00 sa	77%	105%	0.048721		
				(0.124374)		(5.4296E-02)	(0.24911)	(0.24911)	(0.017321)			0.012688		
	07/19/06	U-235	R	**0.051722**		2.99800E-02	0.114823	0.114823	1.00 sa	77%	117%	0.023361		
				(0.021524)		(1.2239E-02)	(0.047396)	(0.047396)	(0.017321)					
	07/19/06	U-238	R	**1.017201**		5.89607E-01	2.258189	2.258189	1.00 sa	77%	100%	0.023361		
				(0.124534)		(5.4278E-02)	(0.249308)	(0.249308)	(0.017321)					

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18

RADCALC v4.8.18

STL Richland

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/14/2006 11:31:13 AM

Lot No., Due Date: J6F140270; 07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6167184; RALPHA-A Alpha by GPC-Am

SDG, Matrix: 31902; FILTER

1.0 COC

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

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
See NCM. 108335

First Level Review Pam Anderson **Date** 7-14-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 647184

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: See NCM

Second Level Review: Sherryl R. Adam Date: 7-17-06

7/13/2006 7:01:19 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167184 **FILTER** **pCi/sampl** **PM, Quote: SA , 63174**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H7DXC-1-AE J6F140270-2-SAMP 05/24/2006 08:10	0.833sa,g	12.58g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
2 H7DXD-1-AE J6F140270-3-SAMP 05/24/2006 10:30	0.833sa,g	12.55g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
3 H7DXF-1-AE J6F140270-4-SAMP 05/24/2006 11:20	0.833sa,g	12.62g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
4 H7DXH-1-AE J6F140270-5-SAMP 05/24/2006 09:15	0.833sa,g	12.71g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
5 H7DXJ-1-AE J6F140270-6-SAMP 05/24/2006 07:30	0.833sa,g	12.53g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
6 H7DXK-1-AE J6F140270-7-SAMP 05/24/2006 08:00	0.833sa,g	12.54g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
7 H7DXL-1-AE J6F140270-8-SAMP 05/24/2006 08:30	0.833sa,g	12.62g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:

7/13/2006 7:01:19 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167184 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 H7DXM-1-AE J6F140270-9-SAMP 05/24/2006 09:00	0.833sa,g	12.60g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
9 H7DXP-1-AE J6F140270-10-SAMP 05/24/2006 10:20	0.833sa,g	12.56g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
10 H7DXQ-1-AE J6F140270-11-SAMP 05/24/2006 11:10	0.833sa	12.65g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
11 H7DXV-1-AE J6F140270-12-SAMP 05/24/2006 07:35	0.833sa,g	12.59g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
12 H7DX0-1-AE J6F140270-13-SAMP 05/24/2006 08:15	0.833sa,g	12.59g,in	AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:
13 H7JP5-1-AA-B J6F160000-184-BLK 05/24/2006 07:40		1.00sa,in	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
14 H7JP5-1-AC-C J6F160000-184-LCS 05/24/2006 07:40		1.00sa,in	ASC0393 06/15/06,pd 02/09/06,r AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

7/13/2006 7:01:20 AM

Sample Preparation/Analysis

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

AnalyDueDate: 07/11/2006

Batch: 6167184 **pCi/sampl**
SEQ Batch, Test: None

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

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15H7JP5-2-AC-C J6F160000-184-LCS		1 SA	ASC 0393		0.3 mg	150 min	10D	1613	7/13/06 R	
05/24/2006 07:40		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DXC1AE-SAMP Constituent List:
ALPHA RDL:20 pCi/sam LCL: UCL: RPD:
H7JP51AA-BLK:
ALPHA RDL:20 pCi/sam LCL: UCL: RPD:
H7JP51AC-LCS:

H7JP52AC-LCS:

H7DXC1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP52AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

STL

COMMENTS

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-08335**
NCM Initiated By: Pam Anderson
Date Opened: 07/14/2006
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Alpha by GPC-Am
Lot #'s (Sample #'s): J6F140270 (10,11,12,13,2,3,4,5,6,7,8,9), J6F160000 (184),
QC Batches: 6167184

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

Problem Description / Root Cause

Name	Date	Description
Pam Anderson	07/14/2006	On the first count the LCS had a 73% recovery. It was recounted with a 87% recovery. Recount data is accepted.

Corrective Action

Name	Date	Corrective Action
Pam Anderson	07/14/2006	None at this time.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

7/14/2006 10:59:29 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/14/2005, 7/19/2006, Batch: '6167184', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6167184						
AC		**CalcC**	**HansenM**	6/26/2006 2:46:13 PM		
SC			wagarr	IsBatched	6/16/2006 4:55:22 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	6/26/2006 2:46:13 PM	RICH-RC-5016 REVISION 5
SC			ScottM	InPrep2	7/10/2006 8:24:39 AM	RICH-RC-5014 REVISION 6
SC			ScottM	Prep2C	7/10/2006 2:27:33 PM	RICH-RC-5014 REVISION 6
SC			BlackCL	CalcC	7/12/2006 9:08:40 AM	RICH-RD-0003 REVISION 4
SC			StringerR	InCnt1	7/13/2006 7:36:33 AM	RICH-RD-0003 REVISION 4
SC			DAWKINSO	CalcC	7/13/2006 9:42:34 PM	RICH-RD-0003 REVISION 4
AC			**ScottM**	7/10/2006 8:24:39		
AC			**ScottM**	7/10/2006 2:27:33 PM		
AC			**BlackCL**	7/12/2006 9:08:40		
AC			**StringerR**	7/13/2006 7:36:33		
AC			**DAWKINSO**	7/13/2006 9:42:34 PM		

AC: Accepting Entry; SC: Status Change

7/14/2006 10:59:28 AM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mdl	Sample Date / Units	Expected	Yield	Volumes
31902	**9H7DX010**			**J6F14027013**	P-0652	FILTER	6/14/2006 10:00:00		5/24/2006 8:15:00 AM			
ALPHA	BAS7		0	7/12/2006 7:34:00 AM	**7.5545E-02**	9.586E-01	9.586E-01	4.872E+00	PCI/SA	1.0	1.0E+0	2.045E-2
BETA	BDS8		0	7/10/2006 12:23:56 PM	**3.6338E+00**	1.297E+00	1.334E+00	5.02E+00	PCI/SA	1.0	1.0E+0	3.132E-2
RA-226	BXTE		0	7/1/2006 5:54:02 PM	**3.0674E-01**	1.589E-01	1.619E-01	5.026E-01	PCI/SA	0.94	1.0E+0	2.439E-1
RA-228	BXTF		0	7/11/2006 6:09:05 AM	**1.7118E-01**	3.763E-01	3.767E-01	1.822E+00	PCI/SA	0.842	1.0E+0	2.439E-1
U-234	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	3.116E-2
U-235	7YSR		0	7/8/2006 1:10:33 PM	**-1.8891E-02**	1.889E-02	1.895E-02	4.522E-01	PCI/SA	0.998	1.0E+0	3.116E-2
U-238	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	3.116E-2
31902	**9H7DXC10**			**J6F1402702**	000474	FILTER	6/14/2006 10:00:00		5/24/2006 8:10:00 AM			
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**8.2313E+00**	1.986E+00	2.163E+00	5.046E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.3057E+01**	1.65E+00	1.907E+00	5.517E+00	PCI/SA	1.0	1.0E+0	3.345E-2
RA-226	BXTE		0	7/1/2006 5:23:00 PM	**3.0178E-01**	2.836E-01	2.853E-01	1.008E+00	PCI/SA	0.867	1.0E+0	2.49E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**2.0785E+00**	6.079E-01	6.183E-01	2.483E+00	PCI/SA	0.799	1.0E+0	2.49E-1
U-234	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	3.241E-2
U-235	7YSR		0	7/8/2006 9:30:33 AM	**-1.848E-02**	1.848E-02	1.854E-02	4.425E-01	PCI/SA	1.004	1.0E+0	3.241E-2
U-238	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	3.241E-2
31902	**9H7DXD10**			**J6F1402703**	000477	FILTER	6/14/2006 10:00:00		5/24/2006 10:30:00 AM			
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**7.9411E+00**	1.998E+00	2.162E+00	5.149E+00	PCI/SA	1.0	1.0E+0	2.08E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.951E+01**	1.827E+00	2.288E+00	5.565E+00	PCI/SA	1.0	1.0E+0	3.301E-2
RA-226	BXTE		0	7/1/2006 5:22:00 PM	**4.4327E-01**	2.36E-01	2.404E-01	7.719E-01	PCI/SA	0.95	1.0E+0	2.489E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**8.1955E-01**	4.891E-01	4.935E-01	2.178E+00	PCI/SA	0.862	1.0E+0	2.489E-1
U-234	7YSR		0	7/8/2006 9:30:37 AM	**1.1566E+00**	3.401E-01	3.525E-01	4.694E-01	PCI/SA	1.039	1.0E+0	3.224E-2
U-235	7YSR		0	7/8/2006 9:30:37 AM	**0.0E+00**	0.0E+00	1.2E-01	2.656E-01	PCI/SA	1.039	1.0E+0	3.224E-2
U-238	7YSR		0	7/8/2006 9:30:37 AM	**5.6848E-01**	2.409E-01	2.451E-01	4.694E-01	PCI/SA	1.039	1.0E+0	3.224E-2
31902	**9H7DXF10**			**J6F1402704**	000478	FILTER	6/14/2006 10:00:00		5/24/2006 11:20:00 AM			
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**9.1197E+00**	2.043E+00	2.248E+00	5.063E+00	PCI/SA	1.0	1.0E+0	2.1E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.7034E+01**	1.741E+00	2.104E+00	5.336E+00	PCI/SA	1.0	1.0E+0	3.369E-2
RA-226	BXTE		0	7/1/2006 5:22:01 PM	**-1.1411E-01**	1.323E-01	1.328E-01	6.297E-01	PCI/SA	0.93	1.0E+0	2.503E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**1.1615E+00**	5.476E-01	5.684E-01	2.469E+00	PCI/SA	0.836	1.0E+0	2.503E-1
U-234	7YSR		0	7/8/2006 9:30:47 AM	**1.7843E-01**	1.262E-01	1.27E-01	2.418E-01	PCI/SA	0.984	1.0E+0	3.26E-2
U-235	7YSR		0	7/8/2006 9:30:47 AM	**7.1362E-02**	9.098E-02	9.116E-02	4.273E-01	PCI/SA	0.984	1.0E+0	3.26E-2
U-238	7YSR		0	7/8/2006 9:30:47 AM	**-3.5705E-02**	2.525E-02	2.541E-02	5.042E-01	PCI/SA	0.984	1.0E+0	3.26E-2
31902	**9H7DXH10**			**J6F1402705**	000479	FILTER	6/14/2006 10:00:00		5/24/2006 9:15:00 AM			
ALPHA	BAS7		0	7/11/2006 2:33:38 PM	**1.7697E+00**	1.181E+00	1.195E+00	4.512E+00	PCI/SA	1.0	1.0E+0	2.111E-2
BETA	BDS8		0	7/10/2006 12:24:08 PM	**3.0363E+00**	1.314E+00	1.33E+00	5.173E+00	PCI/SA	1.0	1.0E+0	3.367E-2
RA-226	BXTE		0	7/1/2006 5:21:00 PM	**-1.8428E-01**	1.907E-01	1.918E-01	8.373E-01	PCI/SA	0.964	1.0E+0	2.496E-1
RA-228	BXTF		0	7/11/2006 6:13:38 AM	**3.4659E-01**	3.918E-01	4.213E-01	1.96E+00	PCI/SA	0.858	1.0E+0	2.496E-1
U-234	7YSR		0	7/8/2006 9:31:00 AM	**1.1133E-01**	1.113E-01	1.117E-01	3.017E-01	PCI/SA	0.882	1.0E+0	3.241E-2
U-235	7YSR		0	7/8/2006 9:31:00 AM	**0.0E+00**	0.0E+00	1.364E-01	3.017E-01	PCI/SA	0.882	1.0E+0	3.241E-2
U-238	7YSR		0	7/8/2006 9:31:00 AM	**-2.2288E-02**	2.229E-02	2.236E-02	5.333E-01	PCI/SA	0.882	1.0E+0	3.241E-2
31902	**9H7DXJ10**			**J6F1402706**	P-0644	FILTER	6/14/2006 10:00:00		5/24/2006 7:30:00 AM			
ALPHA	BAS7		0	7/11/2006 5:38:19 PM	**5.3127E+00**	1.692E+00	1.78E+00	4.918E+00	PCI/SA	1.0	1.0E+0	2.085E-2
BETA	BDS8		0	7/10/2006 12:24:11 PM	**1.4236E+01**	1.619E+00	1.89E+00	5.15E+00	PCI/SA	1.0	1.0E+0	3.339E-2
RA-226	BXTE		0	7/1/2006 5:25:00 PM	**2.0883E-01**	2.01E-01	2.023E-01	7.254E-01	PCI/SA	0.92	1.0E+0	2.499E-1
RA-228	BXTF		0	7/11/2006 6:13:38 AM	**1.2818E-01**	4.435E-01	4.435E-01	2.083E+00	PCI/SA	0.832	1.0E+0	2.499E-1
U-234	7YSR		0	7/8/2006 9:31:05 AM	**1.6712E-01**	1.489E-01	1.495E-01	5.905E-01	PCI/SA	0.923	1.0E+0	3.236E-2
U-235	7YSR		0	7/8/2006 9:31:05 AM	**7.9377E-02**	1.055E-01	1.057E-01	5.212E-01	PCI/SA	0.923	1.0E+0	3.236E-2
U-238	7YSR		0	7/8/2006 9:31:05 AM	**1.4203E-01**	1.496E-01	1.501E-01	6.719E-01	PCI/SA	0.923	1.0E+0	3.236E-2
31902	**9H7DXK10**			**J6F1402707**	P-0645	FILTER	6/14/2006 10:00:00		5/24/2006 8:00:00 AM			
ALPHA	BAS7		0	7/11/2006 5:38:19 PM	**2.503E+00**	1.376E+00	1.4E+00	5.042E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/10/2006 12:24:11 PM	**1.4378E+01**	1.561E+00	1.846E+00	4.845E+00	PCI/SA	1.0	1.0E+0	3.332E-2
RA-226	BXTE		0	7/1/2006 5:17:00 PM	**-2.6994E-01**	2.303E-01	2.32E-01	1.088E+00	PCI/SA	0.824	1.0E+0	2.507E-1

6167184, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
RA-228	BXTF	0		7/11/2006 6:13:38 AM	**2.0953E-01**	4.885E-01	4.885E-01	2.296E+00	PCI/SA		0.745	1.0E+0	2.507E-1
U-234	7YSR	0		7/8/2006 9:31:08 AM	**7.473E-02**	9.928E-02	9.946E-02	4.905E-01	PCI/SA		1.047	1.0E+0	3.267E-2
U-235	7YSR	0		7/8/2006 9:31:08 AM	**6.6861E-02**	9.959E-02	9.973E-02	5.252E-01	PCI/SA		1.047	1.0E+0	3.267E-2
U-238	7YSR	0		7/8/2006 9:31:08 AM	**-3.1475E-02**	1.574E-02	1.594E-02	5.252E-01	PCI/SA		1.047	1.0E+0	3.267E-2
31902	**9H7DXL10**			**J6F1402708**	P-0646	FILTER	6/14/2006 10:00:00	5/24/2006 8:30:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**-6.313E-01**	8.874E-01	8.898E-01	5.129E+00	PCI/SA		1.0	1.0E+0	2.084E-2
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.7896E+01**	1.704E+00	2.11E+00	5.143E+00	PCI/SA		1.0	1.0E+0	3.31E-2
RA-226	BXTE	0		7/1/2006 5:57:00 PM	**0.0E+00**	0.0E+00	2.114E-01	8.351E-01	PCI/SA		0.962	1.0E+0	2.487E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**-2.4722E-01**	3.353E-01	3.353E-01	1.779E+00	PCI/SA		0.861	1.0E+0	2.487E-1
U-234	7YSR	0		7/8/2006 9:31:19 AM	**-4.3242E-02**	1.934E-02	1.965E-02	6.105E-01	PCI/SA		0.961	1.0E+0	3.233E-2
U-235	7YSR	0		7/8/2006 9:31:19 AM	**-1.7297E-02**	1.223E-02	1.231E-02	4.937E-01	PCI/SA		0.961	1.0E+0	3.233E-2
U-238	7YSR	0		7/8/2006 9:31:19 AM	**-5.189E-02**	2.118E-02	2.16E-02	6.409E-01	PCI/SA		0.961	1.0E+0	3.233E-2
31902	**9H7DXM10**			**J6F1402709**	P-0647	FILTER	6/14/2006 10:00:00	5/24/2006 9:00:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**2.945E+00**	1.445E+00	1.476E+00	5.138E+00	PCI/SA		1.0	1.0E+0	2.068E-2
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.6693E+01**	1.712E+00	2.068E+00	5.289E+00	PCI/SA		1.0	1.0E+0	3.273E-2
RA-226	BXTE	0		7/1/2006 5:54:00 PM	**6.0055E-01**	2.624E-01	2.692E-01	8.065E-01	PCI/SA		0.941	1.0E+0	2.463E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**6.3834E-01**	3.959E-01	4.103E-01	1.845E+00	PCI/SA		0.859	1.0E+0	2.463E-1
U-234	7YSR	0		7/8/2006 9:31:21 AM	**3.2796E-01**	2.129E-01	2.146E-01	6.537E-01	PCI/SA		0.857	1.0E+0	3.16E-2
U-235	7YSR	0		7/8/2006 9:31:21 AM	**-1.9591E-02**	1.385E-02	1.395E-02	5.593E-01	PCI/SA		0.857	1.0E+0	3.16E-2
U-238	7YSR	0		7/8/2006 9:31:21 AM	**0.0E+00**	0.0E+00	1.499E-01	3.317E-01	PCI/SA		0.857	1.0E+0	3.16E-2
31902	**9H7DXP10**			**J6F14027010**	P-0648	FILTER	6/14/2006 10:00:00	5/24/2006 10:20:00 AM					
ALPHA	BAS7	0		7/11/2006 5:38:19 PM	**4.8204E+00**	1.609E+00	1.684E+00	4.609E+00	PCI/SA		1.0	1.0E+0	2.068E-2
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.8178E+01**	1.726E+00	2.271E+00	5.191E+00	PCI/SA		1.0	1.0E+0	3.279E-2
RA-226	BXTE	0		7/1/2006 5:58:00 PM	**2.4791E-01**	1.56E-01	1.581E-01	5.186E-01	PCI/SA		0.957	1.0E+0	2.481E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**3.0722E-01**	3.198E-01	3.399E-01	1.615E+00	PCI/SA		0.879	1.0E+0	2.481E-1
U-234	7YSR	0		7/8/2006 9:31:31 AM	**2.2422E-01**	1.998E-01	2.007E-01	7.923E-01	PCI/SA		1.112	1.0E+0	3.211E-2
U-235	7YSR	0		7/8/2006 9:31:31 AM	**1.4018E-01**	1.402E-01	1.407E-01	3.799E-01	PCI/SA		1.112	1.0E+0	3.211E-2
U-238	7YSR	0		7/8/2006 9:31:31 AM	**0.0E+00**	0.0E+00	1.717E-01	3.799E-01	PCI/SA		1.112	1.0E+0	3.211E-2
31902	**9H7DXQ10**			**J6F14027011**	P-0649	FILTER	6/14/2006 10:00:00	5/24/2006 11:10:00 AM					
ALPHA	BAS7	0		7/12/2006 7:34:00 AM	**3.4966E+00**	1.65E+00	1.69E+00	5.896E+00	PCI/SA		1.0	1.0E+0	2.087E-2
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.5805E+01**	1.667E+00	2.124E+00	5.126E+00	PCI/SA		1.0	1.0E+0	3.36E-2
RA-226	BXTE	0		7/1/2006 5:55:00 PM	**-1.0043E-01**	2.029E-01	2.032E-01	8.745E-01	PCI/SA		0.836	1.0E+0	2.48E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**3.6453E-01**	3.761E-01	3.761E-01	1.768E+00	PCI/SA		0.745	1.0E+0	2.48E-1
U-234	7YSR	0		7/8/2006 9:31:32 AM	**-4.2646E-02**	3.016E-02	3.035E-02	6.021E-01	PCI/SA		1.031	1.0E+0	3.194E-2
U-235	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	3.194E-2
U-238	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	3.194E-2
31902	**9H7DXV10**			**J6F14027012**	P-0651	FILTER	6/14/2006 10:00:00	5/24/2006 7:35:00 AM					
ALPHA	BAS7	0		7/12/2006 7:34:00 AM	**-9.3467E-01**	8.791E-01	8.845E-01	5.269E+00	PCI/SA		1.0	1.0E+0	2.077E-2
BETA	BDS8	0		7/10/2006 12:23:56 PM	**1.9498E+01**	1.757E+00	2.239E+00	5.204E+00	PCI/SA		1.0	1.0E+0	3.332E-2
RA-226	BXTE	0		7/1/2006 5:52:00 PM	**-2.0083E-01**	2.26E-01	2.27E-01	9.441E-01	PCI/SA		0.898	1.0E+0	2.478E-1
RA-228	BXTF	0		7/11/2006 6:09:05 AM	**3.3638E+00**	5.198E-01	5.584E-01	1.672E+00	PCI/SA		0.82	1.0E+0	2.478E-1
U-234	7YSR	0		7/8/2006 1:10:30 PM	**-2.0063E-02**	2.006E-02	2.013E-02	4.801E-01	PCI/SA		0.992	1.0E+0	3.227E-2
U-235	7YSR	0		7/8/2006 1:10:30 PM	**0.0E+00**	0.0E+00	1.227E-01	2.716E-01	PCI/SA		0.992	1.0E+0	3.227E-2
U-238	7YSR	0		7/8/2006 1:10:30 PM	**6.0099E-02**	1.042E-01	1.043E-01	5.665E-01	PCI/SA		0.992	1.0E+0	3.227E-2
31902	**H7JP51AB**			**J6F160000184**	INTRA-LAB BLANK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
ALPHA	BAS7	0	B	7/12/2006 7:34:00 AM	**2.1744E-03**	2.013E-02	2.013E-02	1.001E-01	PCI/SA		1.0	1.0E+0	1.0E+0
31902	**H7JP52CS**			**J6F160000184**	INTRA-LAB CHECK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
ALPHA	BAS7	1	S	7/13/2006 2:58:16 PM	**2.0719E+00**	1.241E-01	2.463E-01	9.805E-02	PCI/SA	2.383E+00	1.0	1.0E+0	1.0E+0

6167184, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Results Summary Report

7/13/2006 6:52:25 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Alpha by GPC-Am				Richland Standard Gross Alpha/Beta Wo Blk Subt										
Calc	S7	FILTER	**H7DXC1AE**	ALPHA	**8.23E+00**	**(2.16E+00)**		PCI/SA	R	2.04E+00	5.05E+00		100%	
Calc	S7	FILTER	**H7DXD1AE**	ALPHA	**7.94E+00**	**(2.16E+00)**		PCI/SA	R	2.07E+00	5.15E+00		100%	
Calc	S7	FILTER	**H7DXF1AE**	ALPHA	**9.12E+00**	**(2.25E+00)**		PCI/SA	R	2.06E+00	5.06E+00		100%	
Calc	S7	FILTER	**H7DXH1AE**	ALPHA	**1.77E+00**	**(1.19E+00)**	**U4**	PCI/SA	R	1.76E+00	4.51E+00		100%	
Calc	S7	FILTER	**H7DXJ1AE**	ALPHA	**5.31E+00**	**(1.78E+00)**		PCI/SA	R	1.97E+00	4.92E+00		100%	
Calc	S7	FILTER	**H7DXK1AE**	ALPHA	**2.50E+00**	**(1.40E+00)**		PCI/SA	R	2.04E+00	5.04E+00		100%	
Calc	S7	FILTER	**H7DXL1AE**	ALPHA	**-6.31E-01**	**(8.90E-01)**	**U4**	PCI/SA	R	2.06E+00	5.13E+00		100%	
Calc	S7	FILTER	**H7DXM1AE**	ALPHA	**2.95E+00**	**(1.48E+00)**		PCI/SA	R	2.10E+00	5.14E+00		100%	
Calc	S7	FILTER	**H7DXP1AE**	ALPHA	**4.82E+00**	**(1.68E+00)**		PCI/SA	R	1.80E+00	4.61E+00		100%	
Calc	S7	FILTER	**H7DXQ1AE**	ALPHA	**3.50E+00**	**(1.69E+00)**		PCI/SA	R	2.46E+00	5.90E+00		100%	
Calc	S7	FILTER	**H7DXV1AE**	ALPHA	**-9.35E-01**	**(8.84E-01)**	**U4**	PCI/SA	R	2.15E+00	5.27E+00		100%	
Calc	S7	FILTER	**H7DX01AE**	ALPHA	**7.55E-02**	**(9.59E-01)**	**U4**	PCI/SA	R	1.93E+00	4.87E+00		100%	
Calc	S7	FILTER	**H7JP51AA**	ALPHA	**2.17E-03**	**(2.01E-02)**	**U4**	PCI/SA	R	4.03E-02	1.00E-01	**B**	100%	
Calc	S7	FILTER	**H7JP51AC**	ALPHA	**1.75E+00**	**(2.12E-01)**		PCI/SA	R	4.09E-02	1.03E-01	**S**	100%	73%
Calc	S7	FILTER	**H7JP52AC**	ALPHA	**2.07E+00**	**(2.46E-01)**		PCI/SA	R	3.92E-02	9.80E-02	**S**	100%	87%

PGanderson
7-14-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:15
RADCALC v4.8.24
STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/13/2006 6:52:25 PM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXC1AE**	**PCI/SA**		05/24/06 08:10	07/11/06 14:33			1	1.00 SA	
536403,000474					,J6F140270-2 v4.8.24		FILTER			00.2				0.020876 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	29	20	GPC10B	1.5	N	N	4.0195E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.349E-02)	(0.000E+00)		8%			(0.000E+00)	47.902786		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**8.231323**		1.53333E-01	0.381472	0.381472	1.00 SA	100%		5.046205		
				(2.162975)		(3.6998E-02)	(0.097816)	(0.097816)	(0.028284)			2.039381		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXD1AE**	**PCI/SA**		05/24/06 10:30	07/11/06 14:33			1	1.00 SA	
536403,000477					,J6F140270-3 v4.8.24		FILTER			01.0				0.020802 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	27	19	GPC10C	1.5	N	N	3.8722E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.289E-02)	(0.000E+00)		8%			(0.000E+00)	48.072775		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**7.941113**		1.42000E-01	0.366721	0.366721	1.00 SA	100%		5.149317		
				(2.161529)		(3.5721E-02)	(0.097571)	(0.097571)	(0.028284)			2.070714		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXF1AE**	**PCI/SA**		05/24/06 11:20	07/11/06 14:33			1	1.00 SA	
536403,000478					,J6F140270-4 v4.8.24		FILTER			00.3				0.021001 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	33	22	GPC10D	1.5	N	N	4.1395E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.204E-02)	(0.000E+00)		8%			(0.000E+00)	47.617779		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**9.11967**		1.76000E-01	0.425171	0.425171	1.00 SA	100%		5.062821		
				(2.247506)		(3.9429E-02)	(0.101895)	(0.101895)	(0.028284)			2.064563		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXH1AE**	**PCI/SA**		05/24/06 09:15	07/11/06 14:33			1	1.00 SA	
536403,000479					,J6F140270-5 v4.8.24		FILTER			00.3				0.021112 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	9	14	GPC10E	1.5	N	N	3.8582E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.142E-02)	(0.000E+00)		8%			(0.000E+00)	47.366547		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/13/2006 6:52:26 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**1.769654**	**U4**	3.20000E-02	0.082941	0.082941	1.00 SA	100%		4.512494		
				(1.194861)		(2.1354E-02)	(0.055798)	(0.055798)	(0.028284)			1.757732		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXJ1AE**	**PCI/SA**		05/24/06 07:30	07/11/06 17:38			1	1.00 SA	
536403,P-0644					,J6F140270-6 v4.8.24		FILTER			00.3				0.020852 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	20	18	GPC10A	1.5	N	N	3.9577E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.367E-02)	(0.000E+00)		8%			(0.000E+00)	47.956932		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**5.312685**		9.73333E-02	0.245933	0.245933	1.00 SA	100%		4.918099		
				(1.780496)		(3.0998E-02)	(0.081202)	(0.081202)	(0.028284)			1.967157		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXK1AE**	**PCI/SA**		05/24/06 08:00	07/11/06 17:38			1	1.00 SA	
536403,P-0645					,J6F140270-7 v4.8.24		FILTER			00.1				0.020885 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	13	20	GPC10B	1.5	N	N	4.0213E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.350E-02)	(0.000E+00)		8%			(0.000E+00)	47.881353		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**2.502976**		4.66667E-02	0.11605	0.11605	1.00 SA	100%		5.041755		
				(1.400029)		(2.5647E-02)	(0.064569)	(0.064569)	(0.028284)			2.037583		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXL1AE**	**PCI/SA**		05/24/06 08:30	07/11/06 17:38			1	1.00 SA	
536403,P-0646					,J6F140270-8 v4.8.24		FILTER			00.5				0.020838 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	4	19	GPC10C	1.5	N	N	3.8808E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.292E-02)	(0.000E+00)		8%			(0.000E+00)	47.989719		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**-0.631297**	**U4**	-1.13333E-02	-0.029204	-0.029204	1.00 SA	100%		5.128996		
				(0.889789)		(1.5930E-02)	(0.041127)	(0.041127)	(0.028284)			2.062542		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXM1AE**	**PCI/SA**		05/24/06 09:00	07/11/06 17:38			1	1.00 SA	
536403,P-0647					,J6F140270-9 v4.8.24		FILTER			00.2				0.020683 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/13/2006 6:52:26 PM

0	07/11/06 18:53	ALPHA	15	22	GPC10D	1.5	N	N	4.1414E-01	1.0000E+00	N	100%	N	1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.205E-02)	(0.000E+00)		8%		(0.000E+00)	48.349816		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**2.94501**		5.60000E-02	0.135221	0.135221	1.00 SA	100%		5.138365		
				(1.476013)		(2.7471E-02)	(0.067325)	(0.067325)	(0.028284)			2.095368		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXP1AE**	**PCI/SA**		05/24/06 10:20	07/11/06 17:38			1	1.00 SA	
536403,P-0648					,J6F140270-10 v4.8.24		FILTER			00.4				0.020677 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	17	14	GPC10E	1.5	N	N	3.8565E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.141E-02)	(0.000E+00)		8%			(0.000E+00)	48.363294		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**4.820439**		8.53333E-02	0.221271	0.221271	1.00 SA	100%		4.609418		
				(1.683885)		(2.8488E-02)	(0.076242)	(0.076242)	(0.028284)			1.795487		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXQ1AE**	**PCI/SA**		05/24/06 11:10	07/12/06 07:34			1	1.00 SA	
536403,P-0649					,J6F140270-11 v4.8.24		FILTER			00.6				0.020866 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	18	28	GPC10A	1.5	N	N	3.9513E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.365E-02)	(0.000E+00)		8%			(0.000E+00)	47.925257		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**3.49661**		6.40000E-02	0.161971	0.161971	1.00 SA	100%		5.895787		
				(1.689804)		(3.0199E-02)	(0.07772)	(0.07772)	(0.028284)			2.45582		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXV1AE**	**PCI/SA**		05/24/06 07:35	07/12/06 07:34			1	1.00 SA	
536403,P-0651					,J6F140270-12 v4.8.24		FILTER			00.1				0.020773 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	4	22	GPC10B	1.5	N	N	4.0213E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.350E-02)	(0.000E+00)		8%			(0.000E+00)	48.138398		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**-0.934668**	**U4**	-1.73333E-02	-0.043104	-0.043104	1.00 SA	100%		5.268674		
				(0.884456)		(1.6303E-02)	(0.040713)	(0.040713)	(0.028284)			2.148507		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:12

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/13/2006 6:52:26 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S7	FILTER	*STLE	GabWoBS	**H7DX01AE**	**PCI/SA**		05/24/06 08:15	07/12/06 07:34			1	1.00 SA	
536403,P-0652					,J6F140270-13 v4.8.24		FILTER			00.1				0.020451 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	5	16	GPC10C	1.5	N	N	3.8874E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.295E-02)	(0.000E+00)		8%			(0.000E+00)	48.896445		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**0.075545**	**U4**	1.33333E-03	0.00343	0.00343	1.00 SA	100%		4.871749		
				(0.958588)		(1.6918E-02)	(0.043521)	(0.043521)	(0.028284)			1.925201		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S7	FILTER	*STLE	GabWoBS	**H7JP51AA**	**PCI/SA**	**B**	05/24/06 07:40	07/12/06 07:34			1	1.00 SA	
0,INTRA-LAB BLANK					,J6F160000-184		FILTER			00.1				1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	6	19	GPC10D	1.5	N	N	4.1432E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.205E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**0.002174**	**U4**	2.00000E-03	0.004827	0.004827	1.00 SA	100%		0.100108		
				(0.020127)		(1.8511E-02)	(0.044681)	(0.044681)	(0.017321)			0.040257		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S7	FILTER	*STLE	GabWoBS	**H7JP51AC**	**PCI/SA**	**S**	05/24/06 07:40	07/12/06 07:34		ASC0393	1	1.00 SA	
0,INTRA-LAB CHECK					,J6F160000-184		FILTER			00.3		ASC0393 Alq		1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	230	17	GPC10E	1.5	N	N	3.8582E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.142E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**1.750511**		1.49933E+00	3.886138	3.886138	1.00 SA	100%	73%	0.102829		
				(0.211899)		(1.0144E-01)	(0.423091)	(0.423091)	(0.017321)			0.040892		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	S7	FILTER	*STLE	GabWoBS	**H7JP52AC**	**PCI/SA**	**S**	05/24/06 07:40	07/13/06 14:58		ASC0393	1	1.00 Sa	
0,INTRA-LAB CHECK					,J6F160000-184		FILTER			00.3				1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/13/06 16:13	ALPHA	291	18	GPC10D	1.5	N	N	4.1395E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.204E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:15

RADCALC v4.8.24
STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/13/2006 6:52:26 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/13/06	ALPHA	R	**2.071878**		1.90400E+00	4.599574	4.599574	1.00 Sa	100%	87%	0.098049		
				(0.246316)		(1.1404E-01)	(0.478747)	(0.478747)	(0.028284)			0.039218		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:15

RADCALC v4.8.24

STL Richland

UST Number: H7JP52AC Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-D File: [quad10.sample.D]H7JP52AC.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.D_15;4251

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00291	00000	0150	00000	1000	13-JUL-2006 16:13:16.33

Bkg File: [quad10.bkgrnd]2006-07-13_0535.D_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00018	0500	0.04	00000	1000	13-JUL-2006 05:35:09.70

6/23/2006 4:17:20 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

AnalyDueDate: 07/11/2006

Batch: 6167184 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: Scott

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H7DWT-1-AE J6F140270-1-SAMP 05/24/2006 07:40	0.833g mH 6-23-06	AmtRec: FILTER	#Containers: 1	1.5	~~0.2~~ 1.3 7/10/06	150	~~10~~ 7/11/06	Scr:	Alpha:	Beta:
2 H7DXC-1-AE J6F140270-2-SAMP 05/24/2006 08:10	0.833sa,g	12.58g,in AmtRec: FILTER	#Containers: 1		0.2		10B	1545	7/11/06	Scr: Alpha: Beta:
3 H7DXD-1-AE J6F140270-3-SAMP 05/24/2006 10:30	0.833sa,g	12.55g,in AmtRec: FILTER	#Containers: 1		1.0		10C			Scr: Alpha: Beta:
4 H7DXF-1-AE J6F140270-4-SAMP 05/24/2006 11:20	0.833sa,g	12.62g,in AmtRec: FILTER	#Containers: 1		0.3		10D			Scr: Alpha: Beta:
5 H7DXH-1-AE J6F140270-5-SAMP 05/24/2006 09:15	0.833sa,g	12.71g,in AmtRec: FILTER	#Containers: 1		03		10E			Scr: Alpha: Beta:
6 H7DXJ-1-AE J6F140270-6-SAMP 05/24/2006 07:30	0.833sa,g	12.53g,in AmtRec: FILTER	#Containers: 1		0.3		10A	1853	7/11/06	Scr: Alpha: Beta:
7 H7DXK-1-AE J6F140270-7-SAMP 05/24/2006 08:00	0.833sa,g	12.54g,in AmtRec: FILTER	#Containers: 1		0.1		10B			Scr: Alpha: Beta:

6/23/2006 4:17:21 PM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167184 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 H7DXL-1-AE J6F140270-8-SAMP 05/24/2006 08:30	0.833sa,g	12.62g,in AmtRec: FILTER	#Containers: 1	1.5	0.5	150	10C Scr:	1853 Alpha:	7/11/06 ok Beta:	
9 H7DXM-1-AE J6F140270-9-SAMP 05/24/2006 09:00	0.833sa,g	12.60g,in AmtRec: FILTER	#Containers: 1		0.2		10D Scr:	Alpha:	Beta:	
10 H7DXP-1-AE J6F140270-10-SAMP 05/24/2006 10:20	0.833sa,g	12.56g,in AmtRec: FILTER	#Containers: 1		0.4		11E Scr:	Alpha:	Beta:	
11 H7DXQ-1-AE J6F140270-11-SAMP 05/24/2006 11:10	0.833sa	12.65g,in AmtRec: FILTER	#Containers: 1		0.6		10A Scr:	0849 Alpha:	7/12/06 Beta:	
12 H7DXV-1-AE J6F140270-12-SAMP 05/24/2006 07:35	0.833sa,g	12.59g,in AmtRec: FILTER	#Containers: 1		0.1		10B Scr:	Alpha:	Beta:	
13 H7DX0-1-AE J6F140270-13-SAMP 05/24/2006 08:15	0.833sa,g	12.59g,in AmtRec: FILTER	#Containers: 1		0.1		10C Scr:	Alpha:	Beta:	
14 H7JP5-1-AA-B J6F160000-184-BLK 05/24/2006 07:40		1.00sa,in AmtRec:	#Containers: 1		0.1		10D Scr:	Alpha:	Beta:	

6/23/2006 4:17:21 PM

Sample Preparation/Analysis

Balance Id:1120373922

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167184 pCi/sampl
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,HansenM

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15H7JP5-1-AC-C J6F160000-184-LCS		1.00sa,in	ASC0393 06/15/06,pd 02/09/06,r	1.5	0.3	150	10E	0849	7/18/06	

05/24/2006 07:40 AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AE-SAMP Constituent List:
ALPHA RDL:20 pCi/sam LCL: UCL: RPD:
H7JP51AA-BLK:
ALPHA RDL:20 pCi/sam LCL: UCL: RPD:
H7JP51AC-LCS:

H7DWT1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Results

7/12/2006 9:08:26 AM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Alpha by GPC-Am				Richland Standard Gross Alpha/Beta Wo Blk Subt										
Calc	S7	FILTER	**H7DXC1AE**	ALPHA	**8.23E+00**	**(2.16E+00)**		PCI/SA	R	2.04E+00	5.05E+00	CRDL met	100%	
Calc	S7	FILTER	**H7DXD1AE**	ALPHA	**7.94E+00**	**(2.16E+00)**		PCI/SA	R	2.07E+00	5.15E+00		100%	
Calc	S7	FILTER	**H7DXF1AE**	ALPHA	**9.12E+00**	**(2.25E+00)**		PCI/SA	R	2.06E+00	5.06E+00		100%	
Calc	S7	FILTER	**H7DXH1AE**	ALPHA	**1.77E+00**	**(1.19E+00)**	**U4**	PCI/SA	R	1.76E+00	4.51E+00		100%	
Calc	S7	FILTER	**H7DXJ1AE**	ALPHA	**5.31E+00**	**(1.78E+00)**		PCI/SA	R	1.97E+00	4.92E+00		100%	
Calc	S7	FILTER	**H7DXK1AE**	ALPHA	**2.50E+00**	**(1.40E+00)**		PCI/SA	R	2.04E+00	5.04E+00		100%	
Calc	S7	FILTER	**H7DXL1AE**	ALPHA	**-6.31E-01**	**(8.90E-01)**	**U4**	PCI/SA	R	2.06E+00	5.13E+00		100%	
Calc	S7	FILTER	**H7DXM1AE**	ALPHA	**2.95E+00**	**(1.48E+00)**		PCI/SA	R	2.10E+00	5.14E+00		100%	
Calc	S7	FILTER	**H7DXP1AE**	ALPHA	**4.82E+00**	**(1.68E+00)**		PCI/SA	R	1.80E+00	4.61E+00		100%	
Calc	S7	FILTER	**H7DXQ1AE**	ALPHA	**3.50E+00**	**(1.69E+00)**		PCI/SA	R	2.46E+00	5.90E+00		100%	
Calc	S7	FILTER	**H7DXV1AE**	ALPHA	**-9.35E-01**	**(8.84E-01)**	**U4**	PCI/SA	R	2.15E+00	5.27E+00		100%	
Calc	S7	FILTER	**H7DX01AE**	ALPHA	**7.55E-02**	**(9.59E-01)**	**U4**	PCI/SA	R	1.93E+00	4.87E+00		100%	
Calc	S7	FILTER	**H7JP51AA**	ALPHA	**2.17E-03**	**(2.01E-02)**	**U4**	PCI/SA	R	4.03E-02	1.00E-01	**B**	100%	
Calc	S7	FILTER	**H7JP51AC**	ALPHA	**1.75E+00**	**(2.12E-01)**		PCI/SA	R	4.09E-02	1.03E-01	**S**	100%	73%

PAnderson
7-12-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14
RADCALC v4.8.24
STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

Detailed Report

7/12/2006 9:08:26 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXC1AE**	**PCI/SA**		05/24/06 08:10	07/11/06 14:33			1	1.00 SA	
536403,000474					,J6F140270-2 v4.8.24		FILTER			00.2				0.020876 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	29	20	GPC10B	1.5	N	N	4.0195E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.349E-02)	(0.000E+00)		8%			(0.000E+00)	47.902786		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**8.231323**		1.53333E-01	0.381472	0.381472	1.00 SA	100%		5.046205		
				(2.162975)		(3.6998E-02)	(0.097816)	(0.097816)	(0.028284)			2.039381		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXD1AE**	**PCI/SA**		05/24/06 10:30	07/11/06 14:33			1	1.00 SA	
536403,000477					,J6F140270-3 v4.8.24		FILTER			01.0				0.020802 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	27	19	GPC10C	1.5	N	N	3.8722E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.289E-02)	(0.000E+00)		8%			(0.000E+00)	48.072775		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**7.941113**		1.42000E-01	0.366721	0.366721	1.00 SA	100%		5.149317		
				(2.161529)		(3.5721E-02)	(0.097571)	(0.097571)	(0.028284)			2.070714		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXF1AE**	**PCI/SA**		05/24/06 11:20	07/11/06 14:33			1	1.00 SA	
536403,000478					,J6F140270-4 v4.8.24		FILTER			00.3				0.021001 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	33	22	GPC10D	1.5	N	N	4.1395E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.204E-02)	(0.000E+00)		8%			(0.000E+00)	47.617779		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**9.11967**		1.76000E-01	0.425171	0.425171	1.00 SA	100%		5.062821		
				(2.247506)		(3.9429E-02)	(0.101895)	(0.101895)	(0.028284)			2.064563		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXH1AE**	**PCI/SA**		05/24/06 09:15	07/11/06 14:33			1	1.00 SA	
536403,000479					,J6F140270-5 v4.8.24		FILTER			00.3				0.021112 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 15:48	ALPHA	9	14	GPC10E	1.5	N	N	3.8582E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.142E-02)	(0.000E+00)		8%			(0.000E+00)	47.366547		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/12/2006 9:08:26 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**1.769654**	U4	3.20000E-02	0.082941	0.082941	1.00 SA	100%		4.512494		
				(1.194861)		(2.1354E-02)	(0.055798)	(0.055798)	(0.028284)			1.757732		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXJ1AE**	**PCI/SA**		05/24/06 07:30	07/11/06 17:38			1	1.00 SA	
536403,P-0644					,J6F140270-6 v4.8.24		FILTER			00.3				0.020852 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	20	18	GPC10A	1.5	N	N	3.9577E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.367E-02)	(0.000E+00)		8%			(0.000E+00)	47.956932		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**5.312685**		9.73333E-02	0.245933	0.245933	1.00 SA	100%		4.918099		
				(1.780496)		(3.0998E-02)	(0.081202)	(0.081202)	(0.028284)			1.967157		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXK1AE**	**PCI/SA**		05/24/06 08:00	07/11/06 17:38			1	1.00 SA	
536403,P-0645					,J6F140270-7 v4.8.24		FILTER			00.1				0.020885 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	13	20	GPC10B	1.5	N	N	4.0213E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.350E-02)	(0.000E+00)		8%			(0.000E+00)	47.881353		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**2.502976**		4.66667E-02	0.11605	0.11605	1.00 SA	100%		5.041755		
				(1.400029)		(2.5647E-02)	(0.064569)	(0.064569)	(0.028284)			2.037583		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXL1AE**	**PCI/SA**		05/24/06 08:30	07/11/06 17:38			1	1.00 SA	
536403,P-0646					,J6F140270-8 v4.8.24		FILTER			00.5				0.020838 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	4	19	GPC10C	1.5	N	N	3.8808E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.292E-02)	(0.000E+00)		8%			(0.000E+00)	47.989719		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**-0.631297**	U4	-1.13333E-02	-0.029204	-0.029204	1.00 SA	100%		5.128996		
				(0.889789)		(1.5930E-02)	(0.041127)	(0.041127)	(0.028284)			2.062542		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXM1AE**	**PCI/SA**		05/24/06 09:00	07/11/06 17:38			1	1.00 SA	
536403,P-0647					,J6F140270-9 v4.8.24		FILTER			00.2				0.020683 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/12/2006 9:08:27 AM

0	07/11/06 18:53	ALPHA	15	22	GPC10D	1.5	N	N	4.1414E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.205E-02)	(0.000E+00)		8%			(0.000E+00)	48.349816		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**2.94501**		5.60000E-02	0.135221	0.135221	1.00 SA	100%		5.138365		
				(1.476013)		(2.7471E-02)	(0.067325)	(0.067325)	(0.028284)			2.095368		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXP1AE**	**PCI/SA**		05/24/06 10:20	07/11/06 17:38			1	1.00 SA	
536403,P-0648					,J6F140270-10 v4.8.24		FILTER			00.4				0.020677 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/11/06 18:53	ALPHA	17	14	GPC10E	1.5	N	N	3.8565E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.141E-02)	(0.000E+00)		8%			(0.000E+00)	48.363294		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**4.820439**		8.53333E-02	0.221271	0.221271	1.00 SA	100%		4.609418		
				(1.683885)		(2.8488E-02)	(0.076242)	(0.076242)	(0.028284)			1.795487		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXQ1AE**	**PCI/SA**		05/24/06 11:10	07/12/06 07:34			1	1.00 SA	
536403,P-0649					,J6F140270-11 v4.8.24		FILTER			00.6				0.020866 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	18	28	GPC10A	1.5	N	N	3.9513E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.365E-02)	(0.000E+00)		8%			(0.000E+00)	47.925257		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**3.49661**		6.40000E-02	0.161971	0.161971	1.00 SA	100%		5.895787		
				(1.689804)		(3.0199E-02)	(0.07772)	(0.07772)	(0.028284)			2.45582		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S7	FILTER	*STLE	GabWoBS	**H7DXV1AE**	**PCI/SA**		05/24/06 07:35	07/12/06 07:34			1	1.00 SA	
536403,P-0651					,J6F140270-12 v4.8.24		FILTER			00.1				0.020773 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	4	22	GPC10B	1.5	N	N	4.0213E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.350E-02)	(0.000E+00)		8%			(0.000E+00)	48.138398		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**-0.934668**	**U4**	-1.73333E-02	-0.043104	-0.043104	1.00 SA	100%		5.268674		
				(0.884456)		(1.6303E-02)	(0.040713)	(0.040713)	(0.028284)			2.148507		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:12

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167184

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/12/2006 9:08:27 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S7	FILTER	*STLE	GabWoBS	**H7DX01AE**	**PCI/SA**		05/24/06 08:15	07/12/06 07:34			1	1.00 SA	
536403,P-0652					,J6F140270-13 v4.8.24		FILTER			00.1				0.020451 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	5	16	GPC10C	1.5	N	N	3.8874E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.295E-02)	(0.000E+00)		8%			(0.000E+00)	48.896445		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**0.075545**	**U4**	1.33333E-03	0.00343	0.00343	1.00 SA	100%		4.871749		
				(0.958588)		(1.6918E-02)	(0.043521)	(0.043521)	(0.028284)			1.925201		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S7	FILTER	*STLE	GabWoBS	**H7JP51AA**	**PCI/SA**	**B**	05/24/06 07:40	07/12/06 07:34			1	1.00 SA	
0,INTRA-LAB BLANK					,J6F160000-184		FILTER			00.1				1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	6	19	GPC10D	1.5	N	N	4.1432E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.205E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**0.002174**	**U4**	2.00000E-03	0.004827	0.004827	1.00 SA	100%		0.100108		
				(0.020127)		(1.8511E-02)	(0.044681)	(0.044681)	(0.017321)			0.040257		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S7	FILTER	*STLE	GabWoBS	**H7JP51AC**	**PCI/SA**	**S**	05/24/06 07:40	07/12/06 07:34		ASC0393	1	1.00 SA	
0,INTRA-LAB CHECK					,J6F160000-184		FILTER			00.3		ASC0393 Alq		1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/12/06 08:49	ALPHA	230	17	GPC10E	1.5	N	N	3.8582E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.142E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/12/06	ALPHA	R	**1.750511**		1.49933E+00	3.886138	3.886138	1.00 SA	100%	73%	0.102829		
				(0.211899)		(1.0144E-01)	(0.423091)	(0.423091)	(0.017321)			0.040892		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.24

STL Richland

UST Number: H7DXC1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-B File: [quad10.sample.B]H7DXC1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.B_15;4246

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00029	00000	0150	00000	1000	11-JUL-2006 15:48:38.81

Bkg File: [quad10.bkgrnd]2006-07-11_0603.B_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00020	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXD1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-C File: [quad10.sample.C]H7DXD1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.C_15;4255

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00027	00000	0150	00000	1000	11-JUL-2006 15:48:38.81

Bkg File: [quad10.bkgrnd]2006-07-11_0603.C_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00019	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXF1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-D File: [quad10.sample.D]H7DXF1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.D_15;4249

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00033	00000	0150	00000	1000	11-JUL-2006 15:48:38.81

Bkg File: [quad10.bkgrnd]2006-07-11_0603.D_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00022	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXH1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-E File: [quad10.sample.E]H7DXH1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.E_15;4244

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00009	00000	0150	00000	1000	11-JUL-2006 15:48:38.81

Bkg File: [quad10.bkgrnd]2006-07-11_0603.E_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00014	0500	0.03	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXJ1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-A File: [quad10.sample.A]H7DXJ1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.A_15;4249

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00020	00000	0150	00000	1000	11-JUL-2006 18:53:19.31

Bkg File: [quad10.bkgrnd]2006-07-11_0603.A_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00018	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXK1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-B File: [quad10.sample.B]H7DXK1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.B_15;4246

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00013	00000	0150	00000	1000	11-JUL-2006 18:53:19.31

Bkg File: [quad10.bkgrnd]2006-07-11_0603.B_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00020	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXL1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-C File: [quad10.sample.C]H7DXL1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.C_15;4255

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00004	00000	0150	00000	1000	11-JUL-2006 18:53:19.31

Bkg File: [quad10.bkgrnd]2006-07-11_0603.C_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00019	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXM1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-D File: [quad10.sample.D]H7DXM1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.D_15;4249

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00015	00000	0150	00000	1000	11-JUL-2006 18:53:19.31

Bkg File: [quad10.bkgrnd]2006-07-11_0603.D_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00022	0500	0.04	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXP1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-E File: [quad10.sample.E]H7DXP1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.E_15;4244

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00017	00000	0150	00000	1000	11-JUL-2006 18:53:19.31

Bkg File: [quad10.bkgrnd]2006-07-11_0603.E_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00014	0500	0.03	00000	1000	11-JUL-2006 06:03:09.94

UST Number: H7DXQ1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-A File: [quad10.sample.A]H7DXQ1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.A_15;4250

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00018	00000	0150	00000	1000	12-JUL-2006 08:49:00.00

Bkg File: [quad10.bkgrnd]2006-07-12_0542.A_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00028	0500	0.06	00000	1000	12-JUL-2006 05:42:33.94

UST Number: H7DXV1AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-B File: [quad10.sample.B]H7DXV1AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.B_15;4247

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00004	00000	0150	00000	1000	12-JUL-2006 08:49:00.00

Bkg File: [quad10.bkgrnd]2006-07-12_0542.B_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00022	0500	0.04	00000	1000	12-JUL-2006 05:42:33.94

UST Number: H7DX01AE Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-C File: [quad10.sample.C]H7DX01AE.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.C_15;4256

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00005	00000	0150	00000	1000	12-JUL-2006 08:49:00.00

Bkg File: [quad10.bkgrnd]2006-07-12_0542.C_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00016	0500	0.03	00000	1000	12-JUL-2006 05:42:33.94

UST Number: H7JP51AA Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-D File: [quad10.sample.D]H7JP51AA.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.D_15;4250

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00006	00000	0150	00000	1000	12-JUL-2006 08:49:00.00

Bkg File: [quad10.bkgrnd]2006-07-12_0542.D_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00019	0500	0.04	00000	1000	12-JUL-2006 05:42:33.94

UST Number: H7JP51AC Isotope: 112 (QREPORT Rev 11-OCT-98)

Detector: 10-E File: [quad10.sample.E]H7JP51AC.112
Dish Size: 15 Bkg File: $DISK1:[QUAD10.BKGRND]CURRENT.E_15;4245

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00230	00000	0150	00000	1000	12-JUL-2006 08:49:00.00

Bkg File: [quad10.bkgrnd]2006-07-12_0542.E_15 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00017	0500	0.03	00000	1000	12-JUL-2006 05:42:33.94

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/19/2006 2:06:59 PM

Lot No., Due Date: J6F270218,J6F140270; 07/25/2006,07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6179346; RALPHA-A Alpha by GPC-Am

SDG, Matrix: 31999,31902; FILTER

1.0 COC

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

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Review [signature] **Date** 7/19/06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6179346

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

Comments on any "No" response:

Second Level Review: Sheryl A Adam Date: 7-20-06

7/14/2006 10:40:42 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179346 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM [signature]

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst Init/Date	Comments:
8 H796T-1-AE J6F270218-7-SAMP 06/07/2006 10:10	0.833g	12.71g,in AmtRec: FILTER	#Containers: 1	1.5	0.9	150	10C	1729	7/18/06 OD	
							Scr:	Alpha:		Beta:
9 H796W-1-AE J6F270218-8-SAMP 06/07/2006 09:55	0.833g	12.58g,in AmtRec: FILTER	#Containers: 1		1.3		10D			
							Scr:	Alpha:		Beta:
10 H797D-1-AE J6F270218-9-SAMP 06/07/2006 10:20	0.833g	12.54g,in AmtRec: FILTER	#Containers: 1		1.0		10E			
							Scr:	Alpha:		Beta:
11 H797E-1-AE J6F270218-10-SAMP 06/07/2006 10:30	0.833g	12.53g,in AmtRec: FILTER	#Containers: 1		1.2		10A	2018		
							Scr:	Alpha:		Beta:
12 H797F-1-AE J6F270218-11-SAMP 06/07/2006 10:45	0.833g	12.51g,in AmtRec: FILTER	#Containers: 1		1.0		10B			
							Scr:	Alpha:		Beta:
13 H797H-1-AE J6F270218-12-SAMP 06/07/2006 11:05	0.833g	12.50g,in AmtRec: FILTER	#Containers: 1		4.1		10C			
							Scr:	Alpha:		Beta:
14 H797J-1-AE J6F270218-13-SAMP 06/07/2006 11:10	0.833g	12.53g,in AmtRec: FILTER	#Containers: 1		1.5		10D			
							Scr:	Alpha:		Beta:

7/14/2006 10:40:41 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179346 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 6167169 7YSR, 6167182 9NS1, 6167184 BAS7, 6167185 BDS8, 6167188 BXTE, 6167192 BXTF, 6179343 7YSR, 6179344 9NS1, 6179346 BAS7, 6179351 BDS8, 6179354 BXTE, 6179357 BXTF,

Prep Tech: HansenM J Scott

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H7DWT-1-AE J6F140270-1-SAMP 05/24/2006 07:40	0.833g	12.62g,in AmtRec: FILTER	#Containers: 1	1.5	5.1	150	10A Scr:	1441 Alpha:	7/18 [illegible] Beta:	
2 H796F-1-AE J6F270218-1-SAMP 06/07/2006 10:00	0.833g	12.57g,in AmtRec: FILTER	#Containers: 1		6.3		10B Scr:	Alpha:	Beta:	
3 H796L-1-AE J6F270218-2-SAMP 06/07/2006 10:25	0.833g	12.56g,in AmtRec: FILTER	#Containers: 1		2.7		10C Scr:	Alpha:	Beta:	
4 H796N-1-AE J6F270218-3-SAMP 06/07/2006 10:35	0.833g	12.67g,in AmtRec: FILTER	#Containers: 1		2.2		10D Scr:	Alpha:	Beta:	
5 H796P-1-AE J6F270218-4-SAMP 06/07/2006 10:50	0.833g	12.73g,in AmtRec: FILTER	#Containers: 1		2.1		10E Scr:	Alpha:	7/18/06 [illegible] Beta:	
6 H796Q-1-AE J6F270218-5-SAMP 06/07/2006 11:00	0.833g	12.69g,in AmtRec: FILTER	#Containers: 1		3.0		10A Scr:	1729 Alpha:	Beta:	
7 H796R-1-AE J6F270218-6-SAMP 06/07/2006 11:20	0.833g	12.48g,in AmtRec: FILTER	#Containers: 1		2.7		10B Scr:	Alpha:	Beta:	

7/14/2006 10:40:43 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

BA Gross Alpha PrpRC5016/5014
S7 Gross Alpha by GPC using Am-241 curve
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179346 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HansenM

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15H797K-1-AE J6F270218-14-SAMP 06/07/2006 10:05	0.833g	12.55g,in AmtRec: FILTER	#Containers: 1	1.5	0.1 ~~1.5~~	150	10E	2018	7/18/06	Scr: Alpha: Beta:
16H797M-1-AE J6F270218-15-SAMP 06/07/2006 11:15	0.833g	12.53g,in AmtRec: FILTER	#Containers: 1		0.1 1.0		7/18/06 ~~10E~~ 10A	0946	7/19/06	Scr: Alpha: Beta:
17H8DNK-1-AA-B J6F280000-346-BLK 06/07/2006 10:00		1.00sa,in AmtRec:	#Containers: 1		0.1		10B			Scr: Alpha: Beta:
18H8DNK-1-AC-C J6F280000-346-LCS 06/07/2006 10:00		1.00sa,in AmtRec:	ASC0394 06/15/06,pd 02/09/06,r #Containers: 1		0.4 7/19/6		10C			Scr: Alpha: Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AE-SAMP Constituent List:
ALPHA RDL:20 pCi/sam LCL: UCL: RPD:
H8DNK1AA-BLK:
ALPHA RDL:20 pCi/sam LCL: UCL: RPD:
H8DNK1AC-LCS:

H7DWT1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

7/19/2006 2:06:20 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mda	Sample Date / Units	Expected	Yield	Volumes
31999	**9H796F10**			**J6F2702181**	000487	FILTER	6/26/2006 9:00:00		6/7/2006 10:00:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.2157E+00**	1.623E+00	1.71E+00	4.523E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.5369E+01**	1.72E+00	2.03E+00	5.537E+00	PCI/SA	1.0	1.0E+0	8.365E-2
U-234	7YSR		0	7/18/2006 6:21:43 PM	**2.7995E-01**	1.743E-01	1.758E-01	4.788E-01	PCI/SA	0.975	1.0E+0	6.258E-2
U-235	7YSR		0	7/18/2006 6:21:43 PM	**9.9979E-02**	9.998E-02	1.003E-01	2.709E-01	PCI/SA	0.975	1.0E+0	6.258E-2
U-238	7YSR		0	7/18/2006 6:21:43 PM	**-1.9991E-02**	1.999E-02	2.006E-02	4.788E-01	PCI/SA	0.975	1.0E+0	6.258E-2
31999	**9H796L10**			**J6F2702182**	000488	FILTER	6/26/2006 9:00:00		6/7/2006 10:25:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.4966E+00**	1.672E+00	1.766E+00	4.546E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.7538E+01**	1.725E+00	2.106E+00	5.209E+00	PCI/SA	1.0	1.0E+0	8.479E-2
U-234	7YSR		0	7/18/2006 6:21:54 PM	**2.8598E-01**	1.651E-01	1.667E-01	2.583E-01	PCI/SA	0.926	1.0E+0	6.23E-2
U-235	7YSR		0	7/18/2006 6:21:54 PM	**2.6691E-01**	1.662E-01	1.676E-01	4.566E-01	PCI/SA	0.926	1.0E+0	6.23E-2
U-238	7YSR		0	7/18/2006 6:21:54 PM	**-3.8129E-02**	2.696E-02	2.713E-02	5.387E-01	PCI/SA	0.926	1.0E+0	6.23E-2
31999	**9H796N10**			**J6F2702183**	000489	FILTER	6/26/2006 9:00:00		6/7/2006 10:35:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**6.4647E+00**	1.658E+00	1.785E+00	3.857E+00	PCI/SA	1.0	1.0E+0	2.107E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.57E+01**	1.626E+00	1.941E+00	4.99E+00	PCI/SA	1.0	1.0E+0	8.648E-2
U-234	7YSR		0	7/18/2006 6:22:08 PM	**2.0632E-01**	1.459E-01	1.468E-01	2.796E-01	PCI/SA	0.951	1.0E+0	6.249E-2
U-235	7YSR		0	7/18/2006 6:22:08 PM	**0.0E+00**	0.0E+00	1.263E-01	2.796E-01	PCI/SA	0.951	1.0E+0	6.249E-2
U-238	7YSR		0	7/18/2006 6:22:08 PM	**8.2533E-02**	1.052E-01	1.054E-01	4.941E-01	PCI/SA	0.951	1.0E+0	6.249E-2
31999	**9H796P10**			**J6F2702184**	000490	FILTER	6/26/2006 9:00:00		6/7/2006 10:50:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**3.1E+00**	1.521E+00	1.554E+00	5.409E+00	PCI/SA	1.0	1.0E+0	2.116E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.905E+01**	1.708E+00	2.143E+00	5.03E+00	PCI/SA	1.0	1.0E+0	8.489E-2
U-234	7YSR		0	7/18/2006 6:22:38 PM	**-3.0904E-02**	1.545E-02	1.565E-02	5.153E-01	PCI/SA	1.056	1.0E+0	6.234E-2
U-235	7YSR		0	7/18/2006 6:22:38 PM	**8.1011E-02**	9.708E-02	9.729E-02	4.409E-01	PCI/SA	1.056	1.0E+0	6.234E-2
U-238	7YSR		0	7/18/2006 6:22:38 PM	**-4.6356E-02**	1.892E-02	1.928E-02	5.724E-01	PCI/SA	1.056	1.0E+0	6.234E-2
31999	**9H796Q10**			**J6F2702185**	000491	FILTER	6/26/2006 9:00:00		6/7/2006 11:00:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**5.8528E+00**	1.861E+00	1.958E+00	5.57E+00	PCI/SA	1.0	1.0E+0	2.042E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.5815E+01**	1.678E+00	1.993E+00	5.248E+00	PCI/SA	1.0	1.0E+0	8.123E-2
U-234	7YSR		0	7/18/2006 6:22:53 PM	**7.0218E-01**	2.752E-01	2.809E-01	5.183E-01	PCI/SA	0.981	1.0E+0	6.04E-2
U-235	7YSR		0	7/18/2006 6:22:53 PM	**7.8919E-02**	1.049E-01	1.051E-01	5.183E-01	PCI/SA	0.981	1.0E+0	6.04E-2
U-238	7YSR		0	7/18/2006 6:22:53 PM	**4.861E-01**	2.329E-01	2.361E-01	5.549E-01	PCI/SA	0.981	1.0E+0	6.04E-2
31999	**9H796R10**			**J6F2702186**	000492	FILTER	6/26/2006 9:00:00		6/7/2006 11:20:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**4.1775E+00**	1.513E+00	1.574E+00	4.568E+00	PCI/SA	1.0	1.0E+0	2.069E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.7615E+01**	1.668E+00	2.065E+00	5.009E+00	PCI/SA	1.0	1.0E+0	8.434E-2
U-234	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-235	7YSR		0	7/18/2006 6:23:10 PM	**-8.2994E-03**	8.299E-03	8.326E-03	4.172E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-238	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
31999	**9H796T10**			**J6F2702187**	000493	FILTER	6/26/2006 9:00:00		6/7/2006 10:10:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**-7.4933E-02**	8.593E-01	8.593E-01	4.586E+00	PCI/SA	1.0	1.0E+0	2.117E-2
BETA	BDS8		0	7/18/2006 1:34:32 PM	**1.0747E+00**	1.22E+00	1.222E+00	5.046E+00	PCI/SA	1.0	1.0E+0	8.395E-2
U-234	7YSR		0	7/18/2006 6:23:32 PM	**-2.801E-02**	1.617E-02	1.633E-02	5.817E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-235	7YSR		0	7/18/2006 6:23:32 PM	**-1.8673E-02**	1.32E-02	1.329E-02	5.33E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-238	7YSR		0	7/18/2006 6:23:32 PM	**1.166E-01**	1.166E-01	1.17E-01	3.16E-01	PCI/SA	0.885	1.0E+0	6.256E-2
31999	**9H796W10**			**J6F2702188**	P-0660	FILTER	6/26/2006 9:00:00		6/7/2006 9:55:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**3.8436E+00**	1.391E+00	1.445E+00	4.008E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:32 PM	**1.3482E+01**	1.585E+00	1.923E+00	5.061E+00	PCI/SA	1.0	1.0E+0	8.329E-2
U-234	7YSR		0	7/18/2006 6:24:30 PM	**1.5766E-01**	1.422E-01	1.427E-01	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-235	7YSR		0	7/18/2006 6:24:30 PM	**-3.9462E-02**	2.79E-02	2.808E-02	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-238	7YSR		0	7/18/2006 6:24:30 PM	**-5.9194E-02**	3.418E-02	3.45E-02	6.223E-01	PCI/SA	1.006	1.0E+0	6.241E-2
31999	**9H797D10**			**J6F2702189**	P-0661	FILTER	6/26/2006 9:00:00		6/7/2006 10:20:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**2.4154E+00**	1.461E+00	1.482E+00	5.531E+00	PCI/SA	1.0	1.0E+0	2.086E-2
BETA	BDS8		0	7/18/2006 1:34:32 PM	**1.2452E+01**	1.549E+00	1.861E+00	5.002E+00	PCI/SA	1.0	1.0E+0	8.541E-2
U-234	7YSR		0	7/18/2006 6:24:37 PM	**0.0E+00**	0.0E+00	1.219E-01	2.697E-01	PCI/SA	1.029	1.0E+0	6.248E-2

6179346, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
U-235	7YSR	0		7/18/2006 6:24:37 PM	**-5.9728E-02**	3.448E-02	3.481E-02	6.282E-01	PCI/SA		1.029	1.0E+0	6.248E-2
U-238	7YSR	0		7/18/2006 6:24:37 PM	**3.9782E-02**	1.053E-01	1.054E-01	6.282E-01	PCI/SA		1.029	1.0E+0	6.248E-2
31999	**9H797E10**			**J6F27021810**	P-0662	FILTER	6/26/2006 9:00:00	6/7/2006 10:30:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**6.44E+00**	1.887E+00	2.002E+00	5.424E+00	PCI/SA		1.0	1.0E+0	2.072E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.046E+01**	1.699E+00	1.853E+00	6.064E+00	PCI/SA		1.0	1.0E+0	8.603E-2
U-234	7YSR	0		7/18/2006 6:24:49 PM	**-1.4874E-01**	5.622E-02	5.748E-02	8.722E-01	PCI/SA		0.906	1.0E+0	6.215E-2
U-235	7YSR	0		7/18/2006 6:24:49 PM	**-6.3746E-02**	3.68E-02	3.716E-02	6.704E-01	PCI/SA		0.906	1.0E+0	6.215E-2
U-238	7YSR	0		7/18/2006 6:24:49 PM	**-2.1298E-02**	1.183E-01	1.183E-01	8.288E-01	PCI/SA		0.906	1.0E+0	6.215E-2
31999	**9H797F10**			**J6F27021811**	P-0663	FILTER	6/26/2006 9:00:00	6/7/2006 10:45:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**3.9003E+00**	1.502E+00	1.556E+00	4.671E+00	PCI/SA		1.0	1.0E+0	2.03E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.6067E+01**	1.616E+00	2.113E+00	4.856E+00	PCI/SA		1.0	1.0E+0	8.165E-2
U-234	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA		1.011	1.0E+0	6.092E-2
U-235	7YSR	0		7/18/2006 6:25:00 PM	**-1.9478E-02**	1.948E-02	1.954E-02	4.665E-01	PCI/SA		1.011	1.0E+0	6.092E-2
U-238	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA		1.011	1.0E+0	6.092E-2
31999	**9H797H10**			**J6F27021812**	P-0664	FILTER	6/26/2006 9:00:00	6/7/2006 11:05:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**3.7E+00**	1.475E+00	1.524E+00	4.621E+00	PCI/SA		1.0	1.0E+0	2.075E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.3205E+01**	1.591E+00	1.827E+00	5.143E+00	PCI/SA		1.0	1.0E+0	8.304E-2
U-234	7YSR	0		7/18/2006 6:25:11 PM	**5.5292E-02**	1.392E-01	1.392E-01	7.569E-01	PCI/SA		1.009	1.0E+0	6.232E-2
U-235	7YSR	0		7/18/2006 6:25:11 PM	**-1.8434E-02**	1.843E-02	1.849E-02	4.414E-01	PCI/SA		1.009	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:25:11 PM	**7.3726E-02**	1.379E-01	1.381E-01	7.192E-01	PCI/SA		1.009	1.0E+0	6.232E-2
31999	**9H797J10**			**J6F27021813**	P-0665	FILTER	6/26/2006 9:00:00	6/7/2006 11:10:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**5.0222E+00**	1.555E+00	1.638E+00	4.09E+00	PCI/SA		1.0	1.0E+0	2.002E-2
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2848E+01**	1.59E+00	1.818E+00	5.167E+00	PCI/SA		1.0	1.0E+0	8.455E-2
U-234	7YSR	0		7/18/2006 6:25:24 PM	**0.0E+00**	0.0E+00	1.219E-01	2.698E-01	PCI/SA		1.091	1.0E+0	6.015E-2
U-235	7YSR	0		7/18/2006 6:25:24 PM	**-1.9916E-02**	1.992E-02	1.998E-02	4.769E-01	PCI/SA		1.091	1.0E+0	6.015E-2
U-238	7YSR	0		7/18/2006 6:25:24 PM	**1.5928E-01**	1.436E-01	1.441E-01	5.626E-01	PCI/SA		1.091	1.0E+0	6.015E-2
31999	**9H797K10**			**J6F27021814**	P-0666	FILTER	6/26/2006 9:00:00	6/7/2006 10:05:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**-6.0243E-01**	9.947E-01	9.967E-01	5.518E+00	PCI/SA		1.0	1.0E+0	2.066E-2
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2862E+01**	1.583E+00	1.813E+00	5.122E+00	PCI/SA		1.0	1.0E+0	8.229E-2
U-234	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-235	7YSR	0		7/18/2006 6:25:43 PM	**1.0956E-01**	1.096E-01	1.099E-01	2.969E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-238	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
31999	**9H797M10**			**J6F27021815**	P-0667	FILTER	6/26/2006 9:00:00	6/7/2006 11:15:00 AM					
ALPHA	BAS7	0		7/19/2006 8:30:44 AM	**-2.1818E+00**	8.681E-01	8.973E-01	6.058E+00	PCI/SA		1.0	1.0E+0	2.084E-2
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.6716E+00**	1.229E+00	1.238E+00	5.002E+00	PCI/SA		1.0	1.0E+0	8.539E-2
U-234	7YSR	0		7/18/2006 6:25:53 PM	**0.0E+00**	0.0E+00	1.38E-01	3.054E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-235	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-238	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
31902	**9H7DWT10**			**J6F1402701**	000473	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
ALPHA	BAS7	0		7/18/2006 1:26:23 PM	**3.4147E+00**	1.54E+00	1.581E+00	5.324E+00	PCI/SA		1.0	1.0E+0	2.096E-2
BETA	BDS8	0		7/18/2006 1:34:31 PM	**1.2465E+01**	1.665E+00	1.896E+00	5.665E+00	PCI/SA		1.0	1.0E+0	8.326E-2
U-234	7YSR	0		7/18/2006 6:21:38 PM	**8.4174E-02**	1.073E-01	1.075E-01	5.042E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-235	7YSR	0		7/18/2006 6:21:38 PM	**0.0E+00**	0.0E+00	1.289E-01	2.852E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:21:38 PM	**-4.2133E-02**	2.979E-02	2.999E-02	5.948E-01	PCI/SA		0.936	1.0E+0	6.232E-2
31999	**H8DNK1AB**			**J6F280000346**	INTRA-LAB BLANK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
ALPHA	BAS7	0	B	7/19/2006 8:30:44 AM	**-5.9742E-03**	2.282E-02	2.283E-02	1.172E-01	PCI/SA		1.0	1.0E+0	1.0E+0
31999	**H8DNK1CS**			**J6F280000346**	INTRA-LAB CHECK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
ALPHA	BAS7	0	S	7/19/2006 8:30:44 AM	**2.3228E+00**	1.357E-01	2.721E-01	1.068E-01	PCI/SA	2.3923E+00	1.0	1.0E+0	1.0E+0

6179346, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

7/19/2006 2:06:24 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/19/2005, 7/24/2006, Batch: '6179346', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6179346						
AC		**CalcC**	**HansenM**	7/14/2006 1:33:54 PM		
SC			wagarr	IsBatched	6/28/2006 1:36:13 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	7/14/2006 1:33:54 PM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	7/14/2006 1:34:26 PM	RICH-RC-5016 REVISION 5
SC			ScottM	InPrep2	7/15/2006 9:15:49 AM	RICH-RC-5014 REVISION 6
SC			BlackCL	InCnt1	7/18/2006 11:58:17 AM	RICH-RD-0003 REVISION 4
SC			BlackCL	CalcC	7/19/2006 10:11:19 AM	RICH-RD-0003 REVISION 4
AC			**HansenM**	7/14/2006 1:34:26 PM		
AC			**ScottM**	7/15/2006 9:15:49		
AC			**BlackCL**	7/18/2006 11:58:17		
AC			**BlackCL**	7/19/2006 10:11:19		

AC: Accepting Entry; SC: Status Change

Batch Nbr: 6179346

Alpha Beta, Alpha by GPC-Am , Results Summary Report

7/19/2006 10:11:14 AM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Alpha by GPC-Am				Richland Standard Gross Alpha/Beta Wo Blk Subt										
Calc	S7	FILTER	H7DWT1AE	ALPHA	3.41E+00	(1.58E+00)		PCI/SA	R	2.17E+00	5.32E+00		100%	
Calc	S7	FILTER	H796F1AE	ALPHA	5.22E+00	(1.71E+00)		PCI/SA	R	1.78E+00	4.52E+00		100%	
Calc	S7	FILTER	H796L1AE	ALPHA	5.50E+00	(1.77E+00)		PCI/SA	R	1.77E+00	4.55E+00		100%	
Calc	S7	FILTER	H796N1AE	ALPHA	6.46E+00	(1.78E+00)		PCI/SA	R	1.46E+00	3.86E+00		100%	
Calc	S7	FILTER	H796P1AE	ALPHA	3.10E+00	(1.55E+00)		PCI/SA	R	2.21E+00	5.41E+00		100%	
Calc	S7	FILTER	H796Q1AE	ALPHA	5.85E+00	(1.96E+00)		PCI/SA	R	2.27E+00	5.57E+00		100%	
Calc	S7	FILTER	H796R1AE	ALPHA	4.18E+00	(1.57E+00)		PCI/SA	R	1.79E+00	4.57E+00		100%	
Calc	S7	FILTER	H796T1AE	ALPHA	-7.49E-02	(8.59E-01)	U4	PCI/SA	R	1.79E+00	4.59E+00		100%	
Calc	S7	FILTER	H796W1AE	ALPHA	3.84E+00	(1.45E+00)		PCI/SA	R	1.52E+00	4.01E+00		100%	
Calc	S7	FILTER	H797D1AE	ALPHA	2.42E+00	(1.48E+00)	U4	PCI/SA	R	2.26E+00	5.53E+00		100%	
Calc	S7	FILTER	H797E1AE	ALPHA	6.44E+00	(2.00E+00)		PCI/SA	R	2.21E+00	5.42E+00		100%	
Calc	S7	FILTER	H797F1AE	ALPHA	3.90E+00	(1.56E+00)		PCI/SA	R	1.83E+00	4.67E+00		100%	
Calc	S7	FILTER	H797H1AE	ALPHA	3.70E+00	(1.52E+00)		PCI/SA	R	1.80E+00	4.62E+00		100%	
Calc	S7	FILTER	H797J1AE	ALPHA	5.02E+00	(1.64E+00)		PCI/SA	R	1.55E+00	4.09E+00		100%	
Calc	S7	FILTER	H797K1AE	ALPHA	-6.02E-01	(9.97E-01)	U4	PCI/SA	R	2.25E+00	5.52E+00		100%	
Calc	S7	FILTER	H797M1AE	ALPHA	-2.18E+00	(8.97E-01)	U4	PCI/SA	R	2.54E+00	6.06E+00		100%	
Calc	S7	FILTER	H8DNK1AA	ALPHA	-5.97E-03	(2.28E-02)	U4	PCI/SA	R	4.85E-02	1.17E-01	B	100%	
Calc	S7	FILTER	H8DNK1AC	ALPHA	2.32E+00	(2.72E-01)		PCI/SA	R	4.30E-02	1.07E-01	S	100%	97%

OK
SB
7/19/06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18
RADCALC v4.8.24
STL Richland

Batch Nbr: 6179346

Alpha Beta, Alpha by GPC-Am , Calculated Results

Detailed Report

7/19/2006 10:11:14 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S7	FILTER	*STLE	GabWoBS	H7DWT1AE	PCI/SA		05/24/06 07:40	07/18/06 13:26			1	1.00 SA	
536403,000473					,J6F140270-1 v4.8.24		FILTER			00.9				0.020956 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 14:41	ALPHA	16	22	GPC10A	1.5	N	N	3.9448E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.363E-02)	(0.000E+00)		8%			(0.000E+00)	47.719563		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**3.414688**		6.26667E-02	0.158858	0.158858	1.00 SA	100%		5.324031		
				(1.580794)		(2.8269E-02)	(0.072984)	(0.072984)	(0.027097)			2.171081		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S7	FILTER	*STLE	GabWoBS	H796F1AE	PCI/SA		06/07/06 10:00	07/18/06 13:26			1	1.00 SA	
536403,000487					,J6F270218-1 v4.8.24		FILTER			01.3				0.020875 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 14:41	ALPHA	19	15	GPC10B	1.5	N	N	3.9993E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.343E-02)	(0.000E+00)		8%			(0.000E+00)	47.903648		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**5.215668**		9.66667E-02	0.24171	0.24171	1.00 SA	100%		4.522934		
				(1.710475)		(3.0074E-02)	(0.078068)	(0.078068)	(0.027097)			1.775126		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S7	FILTER	*STLE	GabWoBS	H796L1AE	PCI/SA		06/07/06 10:25	07/18/06 13:26			1	1.00 SA	
536403,000488					,J6F270218-2 v4.8.24		FILTER			01.0				0.020882 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 14:41	ALPHA	19	14	GPC10C	1.5	N	N	3.8722E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.289E-02)	(0.000E+00)		8%			(0.000E+00)	47.888264		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**5.49659**		9.86667E-02	0.254811	0.254811	1.00 SA	100%		4.545704		
				(1.766088)		(3.0007E-02)	(0.08058)	(0.08058)	(0.027097)			1.770668		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S7	FILTER	*STLE	GabWoBS	H796N1AE	PCI/SA		06/07/06 10:35	07/18/06 13:26			1	1.00 SA	
536403,000489					,J6F270218-3 v4.8.24		FILTER			01.2				0.021072 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 14:41	ALPHA	22	11	GPC10D	1.5	N	N	4.1223E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.199E-02)	(0.000E+00)		8%			(0.000E+00)	47.455446		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179346

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/19/2006 10:11:15 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**6.464665**		1.24667E-01	0.302422	0.302422	1.00 SA	100%		3.85707		
				(1.784814)		(3.1965E-02)	(0.081704)	(0.081704)	(0.027096)			1.460973		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S7	FILTER	*STLE	GabWoBS	**H796P1AE**	**PCI/SA**		06/07/06 10:50	07/18/06 13:26			1	1.00 SA	
536403,000490					,J6F270218-4 v4.8.24		FILTER			01.0				0.021156 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 14:41	ALPHA	15	22	GPC10E	1.5	N	N	3.8463E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.138E-02)	(0.000E+00)		8%			(0.000E+00)	47.268554		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**3.100015**		5.60000E-02	0.145594	0.145594	1.00 SA	100%		5.408813		
				(1.553587)		(2.7471E-02)	(0.072494)	(0.072494)	(0.027096)			2.205654		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S7	FILTER	*STLE	GabWoBS	**H796Q1AE**	**PCI/SA**		06/07/06 11:00	07/18/06 16:13			1	1.00 SA	
536403,000491					,J6F270218-5 v4.8.24		FILTER			04.1				0.020424 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 17:28	ALPHA	22	22	GPC10A	1.5	N	N	3.8687E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.336E-02)	(0.000E+00)		8%			(0.000E+00)	48.961429		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**5.852762**		1.02667E-01	0.265375	0.265375	1.00 SA	100%		5.57003		
				(1.958187)		(3.2646E-02)	(0.087496)	(0.087496)	(0.027096)			2.271397		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S7	FILTER	*STLE	GabWoBS	**H796R1AE**	**PCI/SA**		06/07/06 11:20	07/18/06 16:13			1	1.00 SA	
536403,000492					,J6F270218-6 v4.8.24		FILTER			01.5				0.020691 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 17:28	ALPHA	16	15	GPC10B	1.5	N	N	3.9954E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.341E-02)	(0.000E+00)		8%			(0.000E+00)	48.330871		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**4.177507**		7.66667E-02	0.191887	0.191887	1.00 SA	100%		4.5677		
				(1.57394)		(2.7769E-02)	(0.071468)	(0.071468)	(0.027097)			1.792695		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S7	FILTER	*STLE	GabWoBS	**H796T1AE**	**PCI/SA**		06/07/06 10:10	07/18/06 16:13			1	1.00 SA	
536403,000493					,J6F270218-7 v4.8.24		FILTER			05.1				0.021166 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179346

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/19/2006 10:11:15 AM

0	07/18/06 17:28	ALPHA	4	14	GPC10C	1.5	N	N	3.7869E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.261E-02)	(0.000E+00)		8%			(0.000E+00)	47.246593		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**-0.074933**	U4	-1.33333E-03	-0.003521	-0.003521	1.00 SA	100%		4.585799		
				(0.859322)		(1.5290E-02)	(0.040377)	(0.040377)	(0.027096)			1.786286		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S7	FILTER	*STLE	GabWoBS	**H796W1AE**	**PCI/SA**		06/07/06 09:55	07/18/06 16:13			1	1.00 SA	
536403,P-0660					,J6F270218-8 v4.8.24		FILTER			06.3				0.02088 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 17:28	ALPHA	14	11	GPC10D	1.5	N	N	4.0038E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.165E-02)	(0.000E+00)		8%			(0.000E+00)	47.892289		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**3.843582**		7.13333E-02	0.178166	0.178166	1.00 SA	100%		4.007794		
				(1.445355)		(2.5811E-02)	(0.066227)	(0.066227)	(0.027097)			1.518064		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S7	FILTER	*STLE	GabWoBS	**H797D1AE**	**PCI/SA**		06/07/06 10:20	07/18/06 16:13			1	1.00 SA	
536403,P-0661					,J6F270218-9 v4.8.24		FILTER			02.7				0.020861 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 17:28	ALPHA	13	22	GPC10E	1.5	N	N	3.8143E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.129E-02)	(0.000E+00)		8%			(0.000E+00)	47.936878		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**2.41539**	U4	4.26667E-02	0.111859	0.111859	1.00 SA	100%		5.531269		
				(1.481547)		(2.5803E-02)	(0.068316)	(0.068316)	(0.027097)			2.25559		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S7	FILTER	*STLE	GabWoBS	**H797E1AE**	**PCI/SA**		06/07/06 10:30	07/18/06 19:02			1	1.00 SA	
536403,P-0662					,J6F270218-10 v4.8.24		FILTER			02.2				0.020722 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:17	ALPHA	24	22	GPC10A	1.5	N	N	3.9154E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.352E-02)	(0.000E+00)		8%			(0.000E+00)	48.256813		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**6.440045**		1.16000E-01	0.296267	0.296267	1.00 SA	100%		5.424467		
				(2.001992)		(3.3980E-02)	(0.090545)	(0.090545)	(0.027097)			2.212038		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

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RecCnt:12

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179346

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/19/2006 10:11:15 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S7	FILTER	*STLE	GabWoBS	H797F1AE	PCI/SA		06/07/06 10:45	07/18/06 19:02			1	1.00 SA	
536403,P-0663					,J6F270218-11 v4.8.24		FILTER			02.1				0.020295 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:17	ALPHA	15	15	GPC10B	1.5	N	N	3.9834E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.337E-02)	(0.000E+00)		8%			(0.000E+00)	49.272467		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**3.900262**		7.00000E-02	0.175729	0.175729	1.00 SA	100%		4.670709		
				(1.555518)		(2.6957E-02)	(0.069369)	(0.069369)	(0.027097)			1.833123		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S7	FILTER	*STLE	GabWoBS	H797H1AE	PCI/SA		06/07/06 11:05	07/18/06 19:02			1	1.00 SA	
536403,P-0664					,J6F270218-12 v4.8.24		FILTER			03.0				0.020747 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:17	ALPHA	14	14	GPC10C	1.5	N	N	3.8337E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.277E-02)	(0.000E+00)		8%			(0.000E+00)	48.19976		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**3.70004**		6.53333E-02	0.170418	0.170418	1.00 SA	100%		4.621148		
				(1.523928)		(2.6043E-02)	(0.069517)	(0.069517)	(0.027097)			1.800055		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S7	FILTER	*STLE	GabWoBS	H797J1AE	PCI/SA		06/07/06 11:10	07/18/06 19:02			1	1.00 SA	
536403,P-0665					,J6F270218-13 v4.8.24		FILTER			02.7				0.020024 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:17	ALPHA	17	11	GPC10D	1.5	N	N	4.0910E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.190E-02)	(0.000E+00)		8%			(0.000E+00)	49.940168		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	**5.022213**		9.13333E-02	0.223254	0.223254	1.00 SA	100%		4.090041		
				(1.637658)		(2.8276E-02)	(0.071683)	(0.071683)	(0.027097)			1.549218		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	S7	FILTER	*STLE	GabWoBS	H797K1AE	PCI/SA		06/07/06 10:05	07/18/06 19:02			1	1.00 SA	
536403,P-0666					,J6F270218-14 v4.8.24		FILTER			00.1				0.020655 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/18/06 20:17	ALPHA	5	22	GPC10E	1.5	N	N	3.8614E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.143E-02)	(0.000E+00)		8%			(0.000E+00)	48.414266		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:15

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179346

Alpha Beta, Alpha by GPC-Am , Calculated Results

7/19/2006 10:11:15 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	-0.602426	U4	-1.06667E-02	-0.027624	-0.027624	1.00 SA	100%		5.518247		
				(0.996659)		(1.7613E-02)	(0.045674)	(0.045674)	(0.027097)			2.25028		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
16	Calc	S7	FILTER	*STLE	GabWoBS	H797M1AE	PCI/SA		06/07/06 11:15	07/19/06 08:30			1	1.00 SA	
536403,P-0667					,J6F270218-15 v4.8.24		FILTER			00.1				0.020845 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 09:45	ALPHA	3	30	GPC10A	1.5	N	N	3.9619E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.368E-02)	(0.000E+00)		8%			(0.000E+00)	47.974178		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	-2.181767	U4	-4.00000E-02	-0.100961	-0.100961	1.00 SA	100%		6.058039		
				(0.897342)		(1.5916E-02)	(0.041126)	(0.041126)	(0.027097)			2.537811		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
17	Calc	S7	FILTER	*STLE	GabWoBS	H8DNK1AA	PCI/SA	B	06/07/06 10:00	07/19/06 08:30			1	1.00 SA	
0,INTRA-LAB BLANK					,J6F280000-346		FILTER			00.1				1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 09:45	ALPHA	7	26	GPC10B	1.5	N	N	4.0213E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.350E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	-0.005974	U4	-5.33333E-03	-0.013263	-0.013263	1.00 SA	100%		0.11722		
				(0.022831)		(2.0374E-02)	(0.050679)	(0.050679)	(0.017321)			0.04852		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
18	Calc	S7	FILTER	*STLE	GabWoBS	H8DNK1AC	PCI/SA	S	06/07/06 10:00	07/19/06 08:30		ASC0394	1	1.00 SA	
0,INTRA-LAB CHECK					,J6F280000-346		FILTER			00.4		ASC0394 Alq		1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/19/06 09:45	ALPHA	306	19	GPC10C	1.5	N	N	3.8825E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.293E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/19/06	ALPHA	R	2.322758		2.00200E+00	5.156529	5.156529	1.00 SA	100%	97%	0.106831		
				(0.272081)		(1.1694E-01)	(0.538877)	(0.538877)	(0.017321)			0.04296		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18

RADCALC v4.8.24

STL Richland

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/11/2006 3:48:34 PM

Lot No., Due Date: J6F140270; 07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6167185; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: 31902; FILTER

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:
See NCM. 0-08304

First Level Review Pam Anderson **Date** 7-16-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6167185

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: See NCM

Second Level Review: Sherryl A Adam Date: 7-13-06

6/23/2006 4:17:22 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BD Gross Beta PrpRC5016/5014
S8 Gross Beta by GPC using Sr/Y-90 curve
01 STANDARD TEST SET

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

AnalyDueDate: 07/11/2006

Batch: 6167185 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: None

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 ~~H7DWT-1-AF~~ J6F140270-1-SAMP 05/24/2006 07:40	0.833g	~~505.76g~~ mH 6-23-06		0.00E00g Dish PPT 1:5		150				
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
2 H7DXC-1-AF J6F140270-2-SAMP 05/24/2006 08:10	0.833sa,g	501.98sa,g	50.29g,in	0.0835g	2.6		26A	1338	7/10/06	
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
3 H7DXD-1-AF J6F140270-3-SAMP 05/24/2006 10:30	0.833sa,g	502.56sa,g	50.08g,in	0.083g	7.4		26B			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
4 H7DXF-1-AF J6F140270-4-SAMP 05/24/2006 11:20	0.833sa,g	500.58sa,g	50.29g,in	0.0837g	2.5		26C			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
5 H7DXH-1-AF J6F140270-5-SAMP 05/24/2006 09:15	0.833sa,g	501.49sa,g	50.37g,in	0.0837g	0.7		26D			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
6 H7DXJ-1-AF J6F140270-6-SAMP 05/24/2006 07:30	0.833sa,g	500.55sa,g	50.11g,in	0.0834g	1.3		27A			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
7 H7DXK-1-AF J6F140270-7-SAMP 05/24/2006 08:00	0.833sa,g	500.16sa,g	50.03g,in	0.0833g	0.8		27C			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:

6/23/2006 4:17:23 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BD Gross Beta PrpRC5016/5014
S8 Gross Beta by GPC using Sr/Y-90 curve
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167185 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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:
8 H7DXL-1-AF J6F140270-8-SAMP 05/24/2006 08:30	0.833sa,g	504.49sa,g	50.33g,in	0.0831g	Dish 1.5	150	27D	1338	7/10/06	
			AmtRec: FILTER	#Containers: 1	1.0		Scr:	Alpha:		Beta:
9 H7DXM-1-AF J6F140270-9-SAMP 05/24/2006 09:00	0.833sa,g	507.47sa,g	50.40g,in	0.0827g	1.8		28B			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
10 H7DXP-1-AF J6F140270-10-SAMP 05/24/2006 10:20	0.833sa,g	506.00sa,g	50.29g,in	0.0828g	2.6		2IC			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
11 H7DXQ-1-AF J6F140270-11-SAMP 05/24/2006 11:10	0.833sa	505.01sa	50.68g,in	0.0836g	1.6		28D			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
12 H7DXV-1-AF J6F140270-12-SAMP 05/24/2006 07:35	0.833sa,g	504.85sa,g	50.50g,in	0.0833g	0.2		31A			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
13 H7DX0-1-AF J6F140270-13-SAMP 05/24/2006 08:15	0.833sa,g	512.80sa,g	50.06g,in	0.0813g	0.8		31B			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
14 H7JP7-1-AA-B J6F160000-185-BLK 05/24/2006 07:40			1.00sa,in	1.00sa	0.4		31C			
			AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:

6/23/2006 4:17:24 PM

Sample Preparation/Analysis

BD Gross Beta PrpRC5016/5014
S8 Gross Beta by GPC using Sr/Y-90 curve
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167185 **pCi/sampl**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,HansenM Scot

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:
15H7JP7-1-AC-C J6F160000-185-LCS			1.00sa,in	1.00sa Disc 1.5	BESB2834 06/15/06,pd 12/28/05,r 0.5	150	310	1338	7/10	

05/24/2006 07:40 AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AF-SAMP Constituent List:

BETA	RDL:5	pCi/sam	LCL:	UCL:	RPD:						
H7JP71AA-BLK:											
BETA	RDL:5	pCi/sam	LCL:	UCL:	RPD:						
H7JP71AC-LCS:											
Cs-137	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20
Sr-90	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20						

H7DWT1AF-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP71AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H7JP71AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-08304**
NCM Initiated By: Pam Anderson
Date Opened: 07/11/2006
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J6F140270 (2,3,4),
QC Batches: 6167185

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Pam Anderson	07/11/2006	The samples listed do not meet CRDL, but the results >MDA>CRDL. H7DXC1AF H7DXD1AF H7DXF1AF.

Corrective Action

Name	Date	Corrective Action
Pam Anderson	07/11/2006	NA

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

7/11/2006 3:17:53 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/11/2005, 7/16/2006, Batch: '6167185', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6167185						
AC		**InCnt1**	**HansenM**	6/26/2006 2:46:31 PM		
SC			wagarr	IsBatched	6/16/2006 4:55:22 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	6/26/2006 2:46:31 PM	RICH-RC-5016 REVISION 5
SC			ScottM	InPrep2	7/10/2006 8:24:57 AM	RICH-RC-5014 REVISION 6
SC			BlackCL	InCnt1	7/10/2006 11:00:45 AM	RICH-RD-0003 REVISION 4
AC			**ScottM**	7/10/2006 8:24:57		
AC			**BlackCL**	7/10/2006 11:00:45		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 3

ICOCFractions v4.8.18

7/11/2006 3:17:53 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes
31902	**9H7DX010**			**J6F14027013**	P-0652	FILTER	6/14/2006 10:00:00	5/24/2006 8:15:00 AM				
BETA	BDS8	0		7/10/2006 12:23:56 PM	**3.6338E+00**	1.297E+00	1.334E+00	5.02E+00	PCI/SA	1.0	1.0E+0	3.132E-2
RA-226	BXTE	0		7/1/2006 5:54:02 PM	**3.0674E-01**	1.589E-01	1.619E-01	5.026E-01	PCI/SA	0.94	1.0E+0	2.439E-1
U-234	7YSR	0		7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	3.116E-2
U-235	7YSR	0		7/8/2006 1:10:33 PM	**-1.8891E-02**	1.889E-02	1.895E-02	4.522E-01	PCI/SA	0.998	1.0E+0	3.116E-2
U-238	7YSR	0		7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	3.116E-2
31902	**9H7DXC10**			**J6F1402702**	000474	FILTER	6/14/2006 10:00:00	5/24/2006 8:10:00 AM				
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.3057E+01**	1.65E+00	1.907E+00	5.517E+00	PCI/SA	1.0	1.0E+0	3.345E-2
RA-226	BXTE	0		7/1/2006 5:23:00 PM	**3.0178E-01**	2.836E-01	2.853E-01	1.008E+00	PCI/SA	0.867	1.0E+0	2.49E-1
U-234	7YSR	0		7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	3.241E-2
U-235	7YSR	0		7/8/2006 9:30:33 AM	**-1.848E-02**	1.848E-02	1.854E-02	4.425E-01	PCI/SA	1.004	1.0E+0	3.241E-2
U-238	7YSR	0		7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	3.241E-2
31902	**9H7DXD10**			**J6F1402703**	000477	FILTER	6/14/2006 10:00:00	5/24/2006 10:30:00 AM				
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.951E+01**	1.827E+00	2.288E+00	5.565E+00	PCI/SA	1.0	1.0E+0	3.301E-2
RA-226	BXTE	0		7/1/2006 5:22:00 PM	**4.4327E-01**	2.36E-01	2.404E-01	7.719E-01	PCI/SA	0.95	1.0E+0	2.489E-1
U-234	7YSR	0		7/8/2006 9:30:37 AM	**1.1566E+00**	3.401E-01	3.525E-01	4.694E-01	PCI/SA	1.039	1.0E+0	3.224E-2
U-235	7YSR	0		7/8/2006 9:30:37 AM	**0.0E+00**	0.0E+00	1.2E-01	2.656E-01	PCI/SA	1.039	1.0E+0	3.224E-2
U-238	7YSR	0		7/8/2006 9:30:37 AM	**5.6848E-01**	2.409E-01	2.451E-01	4.694E-01	PCI/SA	1.039	1.0E+0	3.224E-2
31902	**9H7DXF10**			**J6F1402704**	000478	FILTER	6/14/2006 10:00:00	5/24/2006 11:20:00 AM				
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.7034E+01**	1.741E+00	2.104E+00	5.336E+00	PCI/SA	1.0	1.0E+0	3.369E-2
RA-226	BXTE	0		7/1/2006 5:22:01 PM	**-1.1411E-01**	1.323E-01	1.328E-01	6.297E-01	PCI/SA	0.93	1.0E+0	2.503E-1
U-234	7YSR	0		7/8/2006 9:30:47 AM	**1.7843E-01**	1.262E-01	1.27E-01	2.418E-01	PCI/SA	0.984	1.0E+0	3.26E-2
U-235	7YSR	0		7/8/2006 9:30:47 AM	**7.1362E-02**	9.098E-02	9.116E-02	4.273E-01	PCI/SA	0.984	1.0E+0	3.26E-2
U-238	7YSR	0		7/8/2006 9:30:47 AM	**-3.5705E-02**	2.525E-02	2.541E-02	5.042E-01	PCI/SA	0.984	1.0E+0	3.26E-2
31902	**9H7DXH10**			**J6F1402705**	000479	FILTER	6/14/2006 10:00:00	5/24/2006 9:15:00 AM				
BETA	BDS8	0		7/10/2006 12:24:08 PM	**3.0363E+00**	1.314E+00	1.33E+00	5.173E+00	PCI/SA	1.0	1.0E+0	3.367E-2
RA-226	BXTE	0		7/1/2006 5:21:00 PM	**-1.8428E-01**	1.907E-01	1.918E-01	8.373E-01	PCI/SA	0.964	1.0E+0	2.496E-1
U-234	7YSR	0		7/8/2006 9:31:00 AM	**1.1133E-01**	1.113E-01	1.117E-01	3.017E-01	PCI/SA	0.882	1.0E+0	3.241E-2
U-235	7YSR	0		7/8/2006 9:31:00 AM	**0.0E+00**	0.0E+00	1.364E-01	3.017E-01	PCI/SA	0.882	1.0E+0	3.241E-2
U-238	7YSR	0		7/8/2006 9:31:00 AM	**-2.2288E-02**	2.229E-02	2.236E-02	5.333E-01	PCI/SA	0.882	1.0E+0	3.241E-2
31902	**9H7DXJ10**			**J6F1402706**	P-0644	FILTER	6/14/2006 10:00:00	5/24/2006 7:30:00 AM				
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.4236E+01**	1.619E+00	1.89E+00	5.15E+00	PCI/SA	1.0	1.0E+0	3.339E-2
RA-226	BXTE	0		7/1/2006 5:25:00 PM	**2.0883E-01**	2.01E-01	2.023E-01	7.254E-01	PCI/SA	0.92	1.0E+0	2.499E-1
U-234	7YSR	0		7/8/2006 9:31:05 AM	**1.6712E-01**	1.489E-01	1.495E-01	5.905E-01	PCI/SA	0.923	1.0E+0	3.236E-2
U-235	7YSR	0		7/8/2006 9:31:05 AM	**7.9377E-02**	1.055E-01	1.057E-01	5.212E-01	PCI/SA	0.923	1.0E+0	3.236E-2
U-238	7YSR	0		7/8/2006 9:31:05 AM	**1.4203E-01**	1.496E-01	1.501E-01	6.719E-01	PCI/SA	0.923	1.0E+0	3.236E-2
31902	**9H7DXK10**			**J6F1402707**	P-0645	FILTER	6/14/2006 10:00:00	5/24/2006 8:00:00 AM				
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.4378E+01**	1.561E+00	1.846E+00	4.845E+00	PCI/SA	1.0	1.0E+0	3.332E-2
RA-226	BXTE	0		7/1/2006 5:17:00 PM	**-2.6994E-01**	2.303E-01	2.32E-01	1.088E+00	PCI/SA	0.824	1.0E+0	2.507E-1
U-234	7YSR	0		7/8/2006 9:31:08 AM	**7.473E-02**	9.928E-02	9.946E-02	4.905E-01	PCI/SA	1.047	1.0E+0	3.267E-2
U-235	7YSR	0		7/8/2006 9:31:08 AM	**6.6861E-02**	9.959E-02	9.973E-02	5.252E-01	PCI/SA	1.047	1.0E+0	3.267E-2
U-238	7YSR	0		7/8/2006 9:31:08 AM	**-3.1475E-02**	1.574E-02	1.594E-02	5.252E-01	PCI/SA	1.047	1.0E+0	3.267E-2
31902	**9H7DXL10**			**J6F1402708**	P-0646	FILTER	6/14/2006 10:00:00	5/24/2006 8:30:00 AM				
BETA	BDS8	0		7/10/2006 12:24:11 PM	**1.7896E+01**	1.704E+00	2.11E+00	5.143E+00	PCI/SA	1.0	1.0E+0	3.31E-2
RA-226	BXTE	0		7/1/2006 5:57:00 PM	**0.0E+00**	0.0E+00	2.114E-01	8.351E-01	PCI/SA	0.962	1.0E+0	2.487E-1
U-234	7YSR	0		7/8/2006 9:31:19 AM	**-4.3242E-02**	1.934E-02	1.965E-02	6.105E-01	PCI/SA	0.961	1.0E+0	3.233E-2
U-235	7YSR	0		7/8/2006 9:31:19 AM	**-1.7297E-02**	1.223E-02	1.231E-02	4.937E-01	PCI/SA	0.961	1.0E+0	3.233E-2
U-238	7YSR	0		7/8/2006 9:31:19 AM	**-5.189E-02**	2.118E-02	2.16E-02	6.409E-01	PCI/SA	0.961	1.0E+0	3.233E-2
31902	**9H7DXM10**			**J6F1402709**	P-0647	FILTER	6/14/2006 10:00:00	5/24/2006 9:00:00 AM				
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.6693E+01**	1.712E+00	2.068E+00	5.289E+00	PCI/SA	1.0	1.0E+0	3.273E-2
RA-226	BXTE	0		7/1/2006 5:54:00 PM	**6.0055E-01**	2.624E-01	2.692E-01	8.065E-01	PCI/SA	0.941	1.0E+0	2.463E-1
U-234	7YSR	0		7/8/2006 9:31:21 AM	**3.2796E-01**	2.129E-01	2.146E-01	6.537E-01	PCI/SA	0.857	1.0E+0	3.16E-2

6167185, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / MDA	Units	Expected	Yield	Volumes	
U-235	7YSR	0		7/8/2006 9:31:21 AM	**-1.9591E-02**	1.385E-02	1.395E-02	5.593E-01	PCI/SA		0.857	1.0E+0	3.16E-2
U-238	7YSR	0		7/8/2006 9:31:21 AM	**0.0E+00**	0.0E+00	1.499E-01	3.317E-01	PCI/SA		0.857	1.0E+0	3.16E-2
31902	**9H7DXP10**			**J6F14027010**	P-0648	FILTER	6/14/2006 10:00:00	5/24/2006 10:20:00 AM					
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.8178E+01**	1.726E+00	2.271E+00	5.191E+00	PCI/SA		1.0	1.0E+0	3.279E-2
RA-226	BXTE	0		7/1/2006 5:58:00 PM	**2.4791E-01**	1.56E-01	1.581E-01	5.186E-01	PCI/SA		0.957	1.0E+0	2.481E-1
U-234	7YSR	0		7/8/2006 9:31:31 AM	**2.2422E-01**	1.998E-01	2.007E-01	7.923E-01	PCI/SA		1.112	1.0E+0	3.211E-2
U-235	7YSR	0		7/8/2006 9:31:31 AM	**1.4018E-01**	1.402E-01	1.407E-01	3.799E-01	PCI/SA		1.112	1.0E+0	3.211E-2
U-238	7YSR	0		7/8/2006 9:31:31 AM	**0.0E+00**	0.0E+00	1.717E-01	3.799E-01	PCI/SA		1.112	1.0E+0	3.211E-2
31902	**9H7DXQ10**			**J6F14027011**	P-0649	FILTER	6/14/2006 10:00:00	5/24/2006 11:10:00 AM					
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.5805E+01**	1.667E+00	2.124E+00	5.126E+00	PCI/SA		1.0	1.0E+0	3.36E-2
RA-226	BXTE	0		7/1/2006 5:55:00 PM	**-1.0043E-01**	2.029E-01	2.032E-01	8.745E-01	PCI/SA		0.836	1.0E+0	2.48E-1
U-234	7YSR	0		7/8/2006 9:31:32 AM	**-4.2646E-02**	3.016E-02	3.035E-02	6.021E-01	PCI/SA		1.031	1.0E+0	3.194E-2
U-235	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	3.194E-2
U-238	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	3.194E-2
31902	**9H7DXV10**			**J6F14027012**	P-0651	FILTER	6/14/2006 10:00:00	5/24/2006 7:35:00 AM					
BETA	BDS8	0		7/10/2006 12:23:56 PM	**1.9498E+01**	1.757E+00	2.239E+00	5.204E+00	PCI/SA		1.0	1.0E+0	3.332E-2
RA-226	BXTE	0		7/1/2006 5:52:00 PM	**-2.0083E-01**	2.26E-01	2.27E-01	9.441E-01	PCI/SA		0.898	1.0E+0	2.478E-1
U-234	7YSR	0		7/8/2006 1:10:30 PM	**-2.0063E-02**	2.006E-02	2.013E-02	4.801E-01	PCI/SA		0.992	1.0E+0	3.227E-2
U-235	7YSR	0		7/8/2006 1:10:30 PM	**0.0E+00**	0.0E+00	1.227E-01	2.716E-01	PCI/SA		0.992	1.0E+0	3.227E-2
U-238	7YSR	0		7/8/2006 1:10:30 PM	**6.0099E-02**	1.042E-01	1.043E-01	5.665E-01	PCI/SA		0.992	1.0E+0	3.227E-2
31902	**H7JP71AB**			**J6F160000185**	INTRA-LAB BLANK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
BETA	BDS8	0	B	7/10/2006 12:23:56 PM	**8.5905E-01**	1.271E-01	1.388E-01	4.332E-01	PCI/SA		1.0	1.0E+0	1.0E+0
31902	**H7JP71CS**			**J6F160000185**	INTRA-LAB CHECK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
BETA	BDS8	0	S	7/10/2006 12:23:56 PM	**4.6708E+00**	2.072E-01	3.74E-01	4.426E-01	PCI/SA	4.6009E+00	1.0	1.0E+0	1.0E+0

6167185, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

Batch Nbr: 6167185

Alpha Beta, Beta by GPC-Sr/Y , Results Summary Report

7/10/2006 7:42:05 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Beta by GPC-Sr/Y				Richland Standard Gross Alpha/Beta Wo Blk Subt										
Calc	S8	FILTER	**H7DXC1AF**	BETA	**1.31E+01**	**(1.91E+00)**		PCI/SA	R	2.65E+00	5.52E+00	*	100%	
Calc	S8	FILTER	**H7DXD1AF**	BETA	**1.95E+01**	**(2.29E+00)**		PCI/SA	R	2.67E+00	5.57E+00	*	100%	
Calc	S8	FILTER	**H7DXF1AF**	BETA	**1.70E+01**	**(2.10E+00)**		PCI/SA	R	2.55E+00	5.34E+00	*	100%	
Calc	S8	FILTER	**H7DXH1AF**	BETA	**3.04E+00**	**(1.33E+00)**		PCI/SA	R	2.47E+00	5.17E+00	-CU	100%	
Calc	S8	FILTER	**H7DXJ1AF**	BETA	**1.42E+01**	**(1.89E+00)**		PCI/SA	R	2.47E+00	5.15E+00		100%	
Calc	S8	FILTER	**H7DXK1AF**	BETA	**1.44E+01**	**(1.85E+00)**		PCI/SA	R	2.32E+00	4.84E+00		100%	
Calc	S8	FILTER	**H7DXL1AF**	BETA	**1.79E+01**	**(2.11E+00)**		PCI/SA	R	2.46E+00	5.14E+00		100%	
Calc	S8	FILTER	**H7DXM1AF**	BETA	**1.67E+01**	**(2.07E+00)**		PCI/SA	R	2.53E+00	5.29E+00		100%	
Calc	S8	FILTER	**H7DXP1AF**	BETA	**1.82E+01**	**(2.27E+00)**		PCI/SA	R	2.49E+00	5.19E+00		100%	
Calc	S8	FILTER	**H7DXQ1AF**	BETA	**1.58E+01**	**(2.12E+00)**		PCI/SA	R	2.45E+00	5.13E+00		100%	
Calc	S8	FILTER	**H7DXV1AF**	BETA	**1.95E+01**	**(2.24E+00)**		PCI/SA	R	2.49E+00	5.20E+00		100%	
Calc	S8	FILTER	**H7DX01AF**	BETA	**3.63E+00**	**(1.33E+00)**		PCI/SA	R	2.40E+00	5.02E+00	Q*	100%	
Calc	S8	FILTER	**H7JP71AA**	BETA	**8.59E-01**	**(1.39E-01)**		PCI/SA	R	2.08E-01	4.33E-01	**B**	100%	
Calc	S8	FILTER	**H7JP71AC**	BETA	**4.67E+00**	**(3.74E-01)**		PCI/SA	R	2.12E-01	4.43E-01	**S**	100%	102%

* Results > MDA > RDL

P Anderson
7-11-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14
RADCALC v4.8.24
STL Richland

Batch Nbr: 6167185

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/10/2006 7:42:05 PM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXC1AF**	**PCI/SA**		05/24/06 08:10	07/10/06 12:24			1	1.00 Sa	
536403,000474					,J6F140270-2 v4.8.24		FILTER			02.6				0.083453 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	373	693	GPC26A	1.5	N	N	4.5501E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.553E-02)	(0.000E+00)		5%			(0.000E+00)	11.98284		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**13.056988**		1.10067E+00	2.419004	2.419004	1.00 Sa	100%		5.516766		
				(1.907261)		(1.3910E-01)	(0.33898)	(0.33898)	(0.028284)			2.652797		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXD1AF**	**PCI/SA**		05/24/06 10:30	07/10/06 12:24			1	1.00 Sa	
536403,000477					,J6F140270-3 v4.8.24		FILTER			07.4				0.083008 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	425	635	GPC26B	1.5	N	N	4.3482E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.214E-02)	(0.000E+00)		5%			(0.000E+00)	12.046991		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**19.510469**		1.56333E+00	3.595361	3.595361	1.00 Sa	100%		5.565277		
				(2.287639)		(1.4639E-01)	(0.394639)	(0.394639)	(0.028284)			2.671488		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXF1AF**	**PCI/SA**		05/24/06 11:20	07/10/06 12:24			1	1.00 Sa	
536403,000478					,J6F140270-4 v4.8.24		FILTER			02.5				0.083686 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	361	543	GPC26C	1.5	N	N	4.1733E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.031E-02)	(0.000E+00)		5%			(0.000E+00)	11.949421		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**17.033791**		1.32067E+00	3.164593	3.164593	1.00 Sa	100%		5.336195		
				(2.103817)		(1.3497E-01)	(0.368432)	(0.368432)	(0.028284)			2.553103		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXH1AF**	**PCI/SA**		05/24/06 09:15	07/10/06 12:24			1	1.00 Sa	
536403,000479					,J6F140270-5 v4.8.24		FILTER			00.7				0.083667 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	196	533	GPC26D	1.5	N	N	4.2674E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(8.765E-03)	(0.000E+00)		5%			(0.000E+00)	11.95213		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167185

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/10/2006 7:42:05 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**3.036285**		2.40667E-01	0.563963	0.563963	1.00 Sa	100%		5.173458		
				(1.32984)		(1.0413E-01)	(0.245909)	(0.245909)	(0.028284)			2.474232		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXJ1AF**	**PCI/SA**		05/24/06 07:30	07/10/06 12:24			1	1.00 Sa	
536403,P-0644					,J6F140270-6 v4.8.24		FILTER			01.3				0.083392 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	343	562	GPC27A	1.5	N	N	4.4114E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(9.723E-03)	(0.000E+00)		5%			(0.000E+00)	11.991626		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**14.236365**		1.16267E+00	2.635569	2.635569	1.00 Sa	100%		5.149941		
				(1.890058)		(1.3226E-01)	(0.332604)	(0.332604)	(0.028284)			2.465825		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXK1AF**	**PCI/SA**		05/24/06 08:00	07/10/06 12:24			1	1.00 Sa	
536403,P-0645					,J6F140270-7 v4.8.24		FILTER			00.8				0.083323 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	335	517	GPC27C	1.5	N	N	4.5094E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(9.975E-03)	(0.000E+00)		5%			(0.000E+00)	12.001443		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**14.378101**		1.19933E+00	2.659632	2.659632	1.00 Sa	100%		4.844973		
				(1.845669)		(1.3022E-01)	(0.323318)	(0.323318)	(0.028284)			2.315566		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXL1AF**	**PCI/SA**		05/24/06 08:30	07/10/06 12:24			1	1.00 Sa	
536403,P-0646					,J6F140270-8 v4.8.24		FILTER			01.0				0.083104 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	393	572	GPC27D	1.5	N	N	4.4705E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.131E-02)	(0.000E+00)		5%			(0.000E+00)	12.033186		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**17.895994**		1.47600E+00	3.301632	3.301632	1.00 Sa	100%		5.142732		
				(2.110497)		(1.4055E-01)	(0.364793)	(0.364793)	(0.028284)			2.463303		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXM1AF**	**PCI/SA**		05/24/06 09:00	07/10/06 12:24			1	1.00 Sa	
536403,P-0647					,J6F140270-9 v4.8.24		FILTER			01.8				0.08273 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167185

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/10/2006 7:42:06 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
1	07/10/06 13:39	BETA	371	569		GPC28B 1.5	N N	4.3556E-01	1.0000E+00	N 100%	N	1.0000E+00	4.5045E-01	1.0000E+00
			150	500			Y	(1.084E-02)	(0.000E+00)	5%		(0.000E+00)	12.087454	
	07/10/06	BETA	R	**16.692678**		1.33533E+00	3.065805	3.065805	1.00 Sa	100%		5.288927		
				(2.067681)		(1.3698E-01)	(0.358098)	(0.358098)	(0.028284)			2.533044		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXP1AF**	**PCI/SA**		05/24/06 10:20	07/10/06 12:24			1	1.00 Sa	
536403,P-0648					,J6F140270-10 v4.8.24		FILTER			02.6				0.08279 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	390	563	GPC28C	1.5	N	N	4.4117E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.158E-02)	(0.000E+00)		5%			(0.000E+00)	12.078802		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**18.178473**		1.47400E+00	3.34108	3.34108	1.00 Sa	100%		5.191439		
				(2.27104)		(1.3995E-01)	(0.394015)	(0.394015)	(0.028284)			2.48579		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXQ1AF**	**PCI/SA**		05/24/06 11:10	07/10/06 12:24			1	1.00 Sa	
536403,P-0649					,J6F140270-11 v4.8.24		FILTER			01.6				0.083595 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:39	BETA	342	517	GPC28D	1.5	N	N	4.2481E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.220E-02)	(0.000E+00)		5%			(0.000E+00)	11.962401		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**15.804944**		1.24600E+00	2.933108	2.933108	1.00 Sa	100%		5.126307		
				(2.123616)		(1.3141E-01)	(0.37509)	(0.37509)	(0.028284)			2.450025		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S8	FILTER	*STLE	GabWoBS	**H7DXV1AF**	**PCI/SA**		05/24/06 07:35	07/10/06 12:23			1	1.00 Sa	
536403,P-0651					,J6F140270-12 v4.8.24		FILTER			00.2				0.083325 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:38	BETA	410	572	GPC31A	1.5	N	N	4.4065E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.296E-02)	(0.000E+00)		5%			(0.000E+00)	12.001236		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**19.498148**		1.58933E+00	3.606789	3.606789	1.00 Sa	100%		5.203587		
				(2.238864)		(1.4321E-01)	(0.386527)	(0.386527)	(0.028284)			2.492451		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:12

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167185

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/10/2006 7:42:06 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S8	FILTER	*STLE	GabWoBS	**H7DX01AF**	**PCI/SA**		05/24/06 08:15	07/10/06 12:23			1	1.00 Sa	
536403,P-0652					,J6F140270-13 v4.8.24		FILTER			00.8				0.081318 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:38	BETA	200	520	GPC31B	1.5	N	N	4.4716E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.469E-02)	(0.000E+00)		5%			(0.000E+00)	12.297368		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**3.633763**		2.93333E-01	0.655991	0.655991	1.00 Sa	100%		5.020248		
				(1.333781)		(1.0473E-01)	(0.239259)	(0.239259)	(0.028284)			2.399646		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S8	FILTER	*STLE	GabWoBS	**H7JP71AA**	**PCI/SA**	**B**	05/24/06 07:40	07/10/06 12:23			1	1.00 Sa	
0,INTRA-LAB BLANK					,J6F160000-185		FILTER			00.4				1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:38	BETA	301	580	GPC31C	1.5	N	N	4.4396E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(9.874E-03)	(0.000E+00)		5%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**0.85905**		8.46667E-01	1.907094	1.907094	1.00 Sa	100%		0.43323		
				(0.138765)		(1.2529E-01)	(0.300892)	(0.300892)	(0.017321)			0.207573		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S8	FILTER	*STLE	GabWoBS	**H7JP71AC**	**PCI/SA**	**S**	05/24/06 07:40	07/10/06 12:23		BESB2834	1	1.00 Sa	
0,INTRA-LAB CHECK					,J6F160000-185		FILTER			00.5		BESB2834 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/10/06 13:38	BETA	855	586	GPC31D	1.5	N	N	4.3668E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.192E-02)	(0.000E+00)		5%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/10/06	BETA	R	**4.670817**		4.52800E+00	10.369223	10.369223	1.00 Sa	100%	102%	0.442628		
				(0.374045)		(2.0086E-01)	(0.748671)	(0.748671)	(0.017321)			0.212122		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.24

STL Richland

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXC1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	373	150.00	693	500.00	26A

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
11	30	4886	1500

Bkg Count Date/Time
10-JUL-2006 00:05:49.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXD1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	425	150.00	635	500.00	26B

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
15	30	4886	1500

Bkg Count Date/Time
10-JUL-2006 00:05:49.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXF1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	361	150.00	543	500.00	26C

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
2	16	4886	1500

Bkg Count Date/Time
10-JUL-2006 00:05:49.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXH1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	196	150.00	533	500.00	26D

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
4	21	4886	1500

Bkg Count Date/Time
10-JUL-2006 00:05:49.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:11.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXJ1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:11.00	343	150.00	562	500.00	27A

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
8	16	4877	1500

Bkg Count Date/Time
10-JUL-2006 00:05:53.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:11.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXK1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:11.00	335	150.00	517	500.00	27C

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
3	13	4877	1500

Bkg Count Date/Time
10-JUL-2006 00:05:53.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:11.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXL1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:11.00	393	150.00	572	500.00	27D

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
6	9	4877	1500

Bkg Count Date/Time
10-JUL-2006 00:05:53.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXM1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	371	150.00	569	500.00	28B

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
9	27	4697	1500

Bkg Count Date/Time
10-JUL-2006 00:05:53.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXP1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	390	150.00	563	500.00	28C

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
4	27	4697	1500

Bkg Count Date/Time
10-JUL-2006 00:05:53.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:39:08.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXQ1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:39:08.00	342	150.00	517	500.00	28D

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
6	23	4697	1500

Bkg Count Date/Time
10-JUL-2006 00:05:53.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:38:56.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DXV1AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:38:56.00	410	150.00	572	500.00	31A

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
2	9	4952	1492

Bkg Count Date/Time
09-JUL-2006 22:10:38.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:38:56.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7DX01AF	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:38:56.00	200	150.00	520	500.00	31B

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
5	21	4952	1492

Bkg Count Date/Time
09-JUL-2006 22:10:38.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:38:56.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7JP71AA	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:38:56.00	301	150.00	580	500.00	31C

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
4	9	4952	1492

Bkg Count Date/Time
09-JUL-2006 22:10:38.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

STL RICHLAND
Richland, WA

GPC Report
10-JUL-2006 13:38:56.00

LBPRINT - Rev#: 2.4

Sample ID	Isotope	Geometry
H7JP71AC	111	15

Sample Count Date/Time	Beta Counts	Count Duration*	Beta Bkg Counts	Bkg Count Duration*	Instr ID
10-JUL-2006 13:38:56.00	855	150.00	586	500.00	31D

Alpha Counts	Alpha Bkg Counts	Guard Counts	HV
6	27	4952	1492

Bkg Count Date/Time
09-JUL-2006 22:10:38.00

Count Date/Times are the Count Completion Date and Time.

* Count Durations in Minutes.

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/19/2006 11:00:06 AM

Lot No., Due Date: J6F270218,J6F140270; 07/25/2006,07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6179351; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: 31999,31902; FILTER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?		✓	
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

For response to Item 3.5 see NCM #10-08350.

First Level Review Mac Lordy **Date** 7-19-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6179351

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: See NCM

Second Level Review: Sheryl A Adkins Date: 7-20-06

7/14/2006 10:40:44 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BD Gross Beta PrpRC5016/5014
S8 Gross Beta by GPC using Sr/Y-90 curve
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179351 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HansenM Scott

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 H7DWT-1-AF J6F140270-1-SAMP 05/24/2006 07:40	0.833g	501.65g	50.14g,in	0.0833g	Dish PPT 1.5 0.7	150	26A	1448	7/18/06	
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
2 H796F-1-AF J6F270218-1-SAMP 06/07/2006 10:00	0.833g	501.59g	50.37g,in	0.0837g	0.9		26B			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
3 H796L-1-AF J6F270218-2-SAMP 06/07/2006 10:25	0.833g	501.03g	51.00g,in	0.0848g	0.2		26C			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
4 H796N-1-AF J6F270218-3-SAMP 06/07/2006 10:35	0.833g	500.85g	52.00g,in	0.0865g	0.4		26D			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
5 H796P-1-AF J6F270218-4-SAMP 06/07/2006 10:50	0.833g	501.24g	51.08g,in	0.0849g	0.2		27A			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
6 H796Q-1-AF J6F270218-5-SAMP 06/07/2006 11:00	0.833g	517.56g	50.47g,in	0.0812g	0.5		27C			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
7 H796R-1-AF J6F270218-6-SAMP 06/07/2006 11:20	0.833g	502.44g	50.87g,in	0.0843g	0.2		27D			
			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 10:40:45 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

BD Gross Beta PrpRC5016/5014
S8 Gross Beta by GPC using Sr/Y-90 curve
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179351 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HansenM

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:
8 H796T-1-AF J6F270218-7-SAMP 06/07/2006 10:10	0.833g	500.22g	50.41g,in	0.0839g	Dish 1.5 PRT 0.2	150	28B	1448	7/18 lacs	
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
9 H796W-1-AF J6F270218-8-SAMP 06/07/2006 09:55	0.833g	501.87g	50.18g,in	0.0833g	0.2		28C			
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
10 H797D-1-AF J6F270218-9-SAMP 06/07/2006 10:20	0.833g	500.74g	51.34g,in	0.0854g	0.1 ~~0.2~~		28D			
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
11 H797E-1-AF J6F270218-10-SAMP 06/07/2006 10:30	0.833g	503.68g	52.02g,in	0.086g	0.8		31A			
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
12 H797F-1-AF J6F270218-11-SAMP 06/07/2006 10:45	0.833g	513.46g	50.33g,in	0.0817g	0.2		31B			
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
13 H797H-1-AF J6F270218-12-SAMP 06/07/2006 11:05	0.833g	501.88g	50.03g,in	0.083g	0.4		31C			
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
14 H797J-1-AF J6F270218-13-SAMP 06/07/2006 11:10	0.833g	521.25g	52.91g,in	0.0846g	0.1		32A			
		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 10:40:45 AM

Sample Preparation/Analysis

Balance Id:1120373922

536403, Brown and Caldwell , Brown & Caldwell

BD Gross Beta PrpRC5016/5014
S8 Gross Beta by GPC using Sr/Y-90 curve
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179351 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HansenM

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:
15H797K-1-AF J6F270218-14-SAMP 06/07/2006 10:05	0.833g	506.13g	50.00g,in AmtRec: FILTER	0.0823g #Containers: 1	Disb PPT 1.5 0.1	150	323 Scr:	1448 Alpha:	7/18 Rees Beta:	
16H797M-1-AF J6F270218-15-SAMP 06/07/2006 11:15	0.833g	500.73g	51.33g,in AmtRec: FILTER	0.0854g #Containers: 1	0.1		32C Scr:	Alpha:	Beta:	
17H8DNT-1-AA-B J6F280000-351-BLK 06/07/2006 10:00			1.00sa,in AmtRec:	1.00sa #Containers: 1	0.1		32D Scr:	Alpha:	Beta:	
18H8DNT-1-AC-C J6F280000-351-LCS 06/07/2006 10:00			1.00sa,in AmtRec:	1.00sa #Containers: 1	BESB2835 06/15/06,pd 12/28/05,r 0.4		31B Scr:	1737 Alpha:	7/18/06 Rees Beta:	

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AF-SAMP Constituent List:

BETA	RDL:5	pCi/sam	LCL:	UCL:	RPD:						
H8DNT1AA-BLK:											
BETA	RDL:5	pCi/sam	LCL:	UCL:	RPD:						
H8DNT1AC-LCS:											
Cs-137	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20
Sr-90	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20						

H7DWT1AF-SAMP Calc Info:

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-08350**
NCM Initiated By: Matt Lardy
Date Opened: 07/19/2006
Date Closed:

Classification: **Deficiency**
Status: **GLREVIEW**
Production Area: Environmental - Prep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J6F140270 (1), J6F270218 (1,10,11,12,13,14,15,2,3,4,5, 6,7,8,9),
QC Batches: 6179351

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

Problem Description / Root Cause

Name	Date	Description
Matt Lardy	07/19/2006	The MDC (IDC) on the listed samples sligtly exceed the CRDL of 5 pCi/Sa. However in each case the sample results exceeded the CRDL by a factor of two at least. H7DWT1AF, H796F1AF, H796L1AF, H796Q1AF, H797E1AF, H797H1AF, H797J1AF and H797K1AF.

Corrective Action

Name	Date	Corrective Action
Matt Lardy	07/19/2006	The results will be reported.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

7/19/2006 11:01:28 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/19/2005, 7/24/2006, Batch: '6179351', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6179351						
AC		**CalcC**	**HansenM**	7/14/2006 1:33:48 PM		
SC			wagarr	IsBatched	6/28/2006 1:36:13 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	7/14/2006 1:33:48 PM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	7/14/2006 1:34:20 PM	RICH-RC-5016 REVISION 5
SC			ScottM	InPrep2	7/15/2006 9:15:41 AM	RICH-RC-5014 REVISION 6
SC			BlackCL	InCnt1	7/18/2006 11:58:23 AM	RICH-RD-0003 REVISION 4
SC			DAWKINSO	CalcC	7/18/2006 9:46:31 PM	RICH-RD-0003 REVISION 4
AC			**HansenM**	7/14/2006 1:34:20 PM		
AC			**ScottM**	7/15/2006 9:15:41		
AC			**BlackCL**	7/18/2006 11:58:23		
AC			**DAWKINSO**	7/18/2006 9:46:31 PM		

AC: Accepting Entry; SC: Status Change

7/19/2006 11:01:23 AM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot uncert	Sample Date / mda	Units	Expected	Yield	Volumes
31999	**9H796F10**			**J6F2702181**	000487	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM				
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.5369E+01**	1.72E+00	2.03E+00	5.537E+00	PCI/SA	1.0	1.0E+0	8.365E-2
U-234	7YSR		0	7/18/2006 6:21:43 PM	**2.7995E-01**	1.743E-01	1.758E-01	4.788E-01	PCI/SA	0.975	1.0E+0	6.258E-2
U-235	7YSR		0	7/18/2006 6:21:43 PM	**9.9979E-02**	9.998E-02	1.003E-01	2.709E-01	PCI/SA	0.975	1.0E+0	6.258E-2
U-238	7YSR		0	7/18/2006 6:21:43 PM	**-1.9991E-02**	1.999E-02	2.006E-02	4.788E-01	PCI/SA	0.975	1.0E+0	6.258E-2
31999	**9H796L10**			**J6F2702182**	000488	FILTER	6/26/2006 9:00:00	6/7/2006 10:25:00 AM				
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.7538E+01**	1.725E+00	2.106E+00	5.209E+00	PCI/SA	1.0	1.0E+0	8.479E-2
U-234	7YSR		0	7/18/2006 6:21:54 PM	**2.8598E-01**	1.651E-01	1.667E-01	2.583E-01	PCI/SA	0.926	1.0E+0	6.23E-2
U-235	7YSR		0	7/18/2006 6:21:54 PM	**2.6691E-01**	1.662E-01	1.676E-01	4.566E-01	PCI/SA	0.926	1.0E+0	6.23E-2
U-238	7YSR		0	7/18/2006 6:21:54 PM	**-3.8129E-02**	2.696E-02	2.713E-02	5.387E-01	PCI/SA	0.926	1.0E+0	6.23E-2
31999	**9H796N10**			**J6F2702183**	000489	FILTER	6/26/2006 9:00:00	6/7/2006 10:35:00 AM				
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.57E+01**	1.626E+00	1.941E+00	4.99E+00	PCI/SA	1.0	1.0E+0	8.648E-2
U-234	7YSR		0	7/18/2006 6:22:08 PM	**2.0632E-01**	1.459E-01	1.468E-01	2.796E-01	PCI/SA	0.951	1.0E+0	6.249E-2
U-235	7YSR		0	7/18/2006 6:22:08 PM	**0.0E+00**	0.0E+00	1.263E-01	2.796E-01	PCI/SA	0.951	1.0E+0	6.249E-2
U-238	7YSR		0	7/18/2006 6:22:08 PM	**8.2533E-02**	1.052E-01	1.054E-01	4.941E-01	PCI/SA	0.951	1.0E+0	6.249E-2
31999	**9H796P10**			**J6F2702184**	000490	FILTER	6/26/2006 9:00:00	6/7/2006 10:50:00 AM				
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.905E+01**	1.708E+00	2.143E+00	5.03E+00	PCI/SA	1.0	1.0E+0	8.489E-2
U-234	7YSR		0	7/18/2006 6:22:38 PM	**-3.0904E-02**	1.545E-02	1.565E-02	5.153E-01	PCI/SA	1.056	1.0E+0	6.234E-2
U-235	7YSR		0	7/18/2006 6:22:38 PM	**8.1011E-02**	9.708E-02	9.729E-02	4.409E-01	PCI/SA	1.056	1.0E+0	6.234E-2
U-238	7YSR		0	7/18/2006 6:22:38 PM	**-4.6356E-02**	1.892E-02	1.928E-02	5.724E-01	PCI/SA	1.056	1.0E+0	6.234E-2
31999	**9H796Q10**			**J6F2702185**	000491	FILTER	6/26/2006 9:00:00	6/7/2006 11:00:00 AM				
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.5815E+01**	1.678E+00	1.993E+00	5.248E+00	PCI/SA	1.0	1.0E+0	8.123E-2
U-234	7YSR		0	7/18/2006 6:22:53 PM	**7.0218E-01**	2.752E-01	2.809E-01	5.183E-01	PCI/SA	0.981	1.0E+0	6.04E-2
U-235	7YSR		0	7/18/2006 6:22:53 PM	**7.8919E-02**	1.049E-01	1.051E-01	5.183E-01	PCI/SA	0.981	1.0E+0	6.04E-2
U-238	7YSR		0	7/18/2006 6:22:53 PM	**4.861E-01**	2.329E-01	2.361E-01	5.549E-01	PCI/SA	0.981	1.0E+0	6.04E-2
31999	**9H796R10**			**J6F2702186**	000492	FILTER	6/26/2006 9:00:00	6/7/2006 11:20:00 AM				
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.7615E+01**	1.668E+00	2.065E+00	5.009E+00	PCI/SA	1.0	1.0E+0	8.434E-2
U-234	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-235	7YSR		0	7/18/2006 6:23:10 PM	**-8.2994E-03**	8.299E-03	8.326E-03	4.172E-01	PCI/SA	1.009	1.0E+0	6.244E-2
U-238	7YSR		0	7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	6.244E-2
31999	**9H796T10**			**J6F2702187**	000493	FILTER	6/26/2006 9:00:00	6/7/2006 10:10:00 AM				
BETA	BDS8		0	7/18/2006 1:34:32 PM	**1.0747E+00**	1.22E+00	1.222E+00	5.046E+00	PCI/SA	1.0	1.0E+0	8.395E-2
U-234	7YSR		0	7/18/2006 6:23:32 PM	**-2.801E-02**	1.617E-02	1.633E-02	5.817E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-235	7YSR		0	7/18/2006 6:23:32 PM	**-1.8673E-02**	1.32E-02	1.329E-02	5.33E-01	PCI/SA	0.885	1.0E+0	6.256E-2
U-238	7YSR		0	7/18/2006 6:23:32 PM	**1.166E-01**	1.166E-01	1.17E-01	3.16E-01	PCI/SA	0.885	1.0E+0	6.256E-2
31999	**9H796W10**			**J6F2702188**	P-0660	FILTER	6/26/2006 9:00:00	6/7/2006 9:55:00 AM				
BETA	BDS8		0	7/18/2006 1:34:32 PM	**1.3482E+01**	1.585E+00	1.923E+00	5.061E+00	PCI/SA	1.0	1.0E+0	8.329E-2
U-234	7YSR		0	7/18/2006 6:24:30 PM	**1.5766E-01**	1.422E-01	1.427E-01	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-235	7YSR		0	7/18/2006 6:24:30 PM	**-3.9462E-02**	2.79E-02	2.808E-02	5.571E-01	PCI/SA	1.006	1.0E+0	6.241E-2
U-238	7YSR		0	7/18/2006 6:24:30 PM	**-5.9194E-02**	3.418E-02	3.45E-02	6.223E-01	PCI/SA	1.006	1.0E+0	6.241E-2
31999	**9H797D10**			**J6F2702189**	P-0661	FILTER	6/26/2006 9:00:00	6/7/2006 10:20:00 AM				
BETA	BDS8		0	7/18/2006 1:34:32 PM	**1.2452E+01**	1.549E+00	1.861E+00	5.002E+00	PCI/SA	1.0	1.0E+0	8.541E-2
U-234	7YSR		0	7/18/2006 6:24:37 PM	**0.0E+00**	0.0E+00	1.219E-01	2.697E-01	PCI/SA	1.029	1.0E+0	6.248E-2
U-235	7YSR		0	7/18/2006 6:24:37 PM	**-5.9728E-02**	3.448E-02	3.481E-02	6.282E-01	PCI/SA	1.029	1.0E+0	6.248E-2
U-238	7YSR		0	7/18/2006 6:24:37 PM	**3.9782E-02**	1.053E-01	1.054E-01	6.282E-01	PCI/SA	1.029	1.0E+0	6.248E-2
31999	**9H797E10**			**J6F27021810**	P-0662	FILTER	6/26/2006 9:00:00	6/7/2006 10:30:00 AM				
BETA	BDS8		0	7/18/2006 1:34:19 PM	**1.046E+01**	1.699E+00	1.853E+00	6.064E+00	PCI/SA	1.0	1.0E+0	8.603E-2
U-234	7YSR		0	7/18/2006 6:24:49 PM	**-1.4874E-01**	5.622E-02	5.748E-02	8.722E-01	PCI/SA	0.906	1.0E+0	6.215E-2
U-235	7YSR		0	7/18/2006 6:24:49 PM	**-6.3746E-02**	3.68E-02	3.716E-02	6.704E-01	PCI/SA	0.906	1.0E+0	6.215E-2
U-238	7YSR		0	7/18/2006 6:24:49 PM	**-2.1298E-02**	1.183E-01	1.183E-01	8.288E-01	PCI/SA	0.906	1.0E+0	6.215E-2
31999	**9H797F10**			**J6F27021811**	P-0663	FILTER	6/26/2006 9:00:00	6/7/2006 10:45:00 AM				
BETA	BDS8		0	7/18/2006 1:34:19 PM	**1.6067E+01**	1.616E+00	2.113E+00	4.856E+00	PCI/SA	1.0	1.0E+0	8.165E-2

6179351,6179351, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
U-234	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA		1.011	1.0E+0	6.092E-2
U-235	7YSR	0		7/18/2006 6:25:00 PM	**-1.9478E-02**	1.948E-02	1.954E-02	4.665E-01	PCI/SA		1.011	1.0E+0	6.092E-2
U-238	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA		1.011	1.0E+0	6.092E-2
31999	**9H797H10**			**J6F27021812**	P-0664	FILTER	6/26/2006 9:00:00	6/7/2006 11:05:00 AM					
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.3205E+01**	1.591E+00	1.827E+00	5.143E+00	PCI/SA		1.0	1.0E+0	8.304E-2
U-234	7YSR	0		7/18/2006 6:25:11 PM	**5.5292E-02**	1.392E-01	1.392E-01	7.569E-01	PCI/SA		1.009	1.0E+0	6.232E-2
U-235	7YSR	0		7/18/2006 6:25:11 PM	**-1.8434E-02**	1.843E-02	1.849E-02	4.414E-01	PCI/SA		1.009	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:25:11 PM	**7.3726E-02**	1.379E-01	1.381E-01	7.192E-01	PCI/SA		1.009	1.0E+0	6.232E-2
31999	**9H797J10**			**J6F27021813**	P-0665	FILTER	6/26/2006 9:00:00	6/7/2006 11:10:00 AM					
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2848E+01**	1.59E+00	1.818E+00	5.167E+00	PCI/SA		1.0	1.0E+0	8.455E-2
U-234	7YSR	0		7/18/2006 6:25:24 PM	**0.0E+00**	0.0E+00	1.219E-01	2.698E-01	PCI/SA		1.091	1.0E+0	6.015E-2
U-235	7YSR	0		7/18/2006 6:25:24 PM	**-1.9916E-02**	1.992E-02	1.998E-02	4.769E-01	PCI/SA		1.091	1.0E+0	6.015E-2
U-238	7YSR	0		7/18/2006 6:25:24 PM	**1.5928E-01**	1.436E-01	1.441E-01	5.626E-01	PCI/SA		1.091	1.0E+0	6.015E-2
31999	**9H797K10**			**J6F27021814**	P-0666	FILTER	6/26/2006 9:00:00	6/7/2006 10:05:00 AM					
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2862E+01**	1.583E+00	1.813E+00	5.122E+00	PCI/SA		1.0	1.0E+0	8.229E-2
U-234	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-235	7YSR	0		7/18/2006 6:25:43 PM	**1.0956E-01**	1.096E-01	1.099E-01	2.969E-01	PCI/SA		0.914	1.0E+0	6.187E-2
U-238	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA		0.914	1.0E+0	6.187E-2
31999	**9H797M10**			**J6F27021815**	P-0667	FILTER	6/26/2006 9:00:00	6/7/2006 11:15:00 AM					
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.6716E+00**	1.229E+00	1.238E+00	5.002E+00	PCI/SA		1.0	1.0E+0	8.539E-2
U-234	7YSR	0		7/18/2006 6:25:53 PM	**0.0E+00**	0.0E+00	1.38E-01	3.054E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-235	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
U-238	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	6.267E-2
31902	**9H7DWT10**			**J6F1402701**	000473	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
BETA	BDS8	0		7/18/2006 1:34:31 PM	**1.2465E+01**	1.665E+00	1.896E+00	5.665E+00	PCI/SA		1.0	1.0E+0	8.326E-2
U-234	7YSR	0		7/18/2006 6:21:38 PM	**8.4174E-02**	1.073E-01	1.075E-01	5.042E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-235	7YSR	0		7/18/2006 6:21:38 PM	**0.0E+00**	0.0E+00	1.289E-01	2.852E-01	PCI/SA		0.936	1.0E+0	6.232E-2
U-238	7YSR	0		7/18/2006 6:21:38 PM	**-4.2133E-02**	2.979E-02	2.999E-02	5.948E-01	PCI/SA		0.936	1.0E+0	6.232E-2
31999	**H8DNT1AB**			**J6F280000351**	INTRA-LAB BLANK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
BETA	BDS8	0	B	7/18/2006 1:34:38 PM	**5.586E-02**	1.129E-01	1.13E-01	4.723E-01	PCI/SA		1.0	1.0E+0	1.0E+0
31999	**H8DNT1CS**			**J6F280000351**	INTRA-LAB CHECK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
BETA	BDS8	0	S	7/18/2006 4:22:47 PM	**4.4486E+00**	1.962E-01	4.148E-01	3.965E-01	PCI/SA	4.5918E+00	1.0	1.0E+0	1.0E+0

6179351,6179351, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

Batch Nbr: 6179351

Alpha Beta, Beta by GPC-Sr/Y , Results

Summary Report

7/18/2006 9:44:33 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Beta by GPC-Sr/Y				Richland Standard Gross Alpha/Beta Wo Blk Subt										
Calc	S8	FILTER	H7DWT1AF	BETA	1.25E+01	(1.90E+00)		PCI/SA	R	2.73E+00	5.66E+00		100%	
Calc	S8	FILTER	H796F1AF	BETA	1.54E+01	(2.03E+00)		PCI/SA	R	2.66E+00	5.54E+00		100%	
Calc	S8	FILTER	H796L1AF	BETA	1.75E+01	(2.11E+00)		PCI/SA	R	2.49E+00	5.21E+00		100%	
Calc	S8	FILTER	H796N1AF	BETA	1.57E+01	(1.94E+00)		PCI/SA	R	2.39E+00	4.99E+00		100%	
Calc	S8	FILTER	H796P1AF	BETA	1.90E+01	(2.14E+00)		PCI/SA	R	2.41E+00	5.03E+00		100%	
Calc	S8	FILTER	H796Q1AF	BETA	1.58E+01	(1.99E+00)		PCI/SA	R	2.51E+00	5.25E+00		100%	
Calc	S8	FILTER	H796R1AF	BETA	1.76E+01	(2.07E+00)		PCI/SA	R	2.40E+00	5.01E+00		100%	
Calc	S8	FILTER	H796T1AF	BETA	1.07E+00	(1.22E+00)	U4	PCI/SA	R	2.41E+00	5.05E+00		100%	
Calc	S8	FILTER	H796W1AF	BETA	1.35E+01	(1.92E+00)		PCI/SA	R	2.42E+00	5.06E+00		100%	
Calc	S8	FILTER	H797D1AF	BETA	1.25E+01	(1.86E+00)		PCI/SA	R	2.39E+00	5.00E+00		100%	
Calc	S8	FILTER	H797E1AF	BETA	1.05E+01	(1.85E+00)		PCI/SA	R	2.93E+00	6.06E+00		100%	
Calc	S8	FILTER	H797F1AF	BETA	1.61E+01	(2.11E+00)		PCI/SA	R	2.32E+00	4.86E+00		100%	
Calc	S8	FILTER	H797H1AF	BETA	1.32E+01	(1.83E+00)		PCI/SA	R	2.46E+00	5.14E+00		100%	
Calc	S8	FILTER	H797J1AF	BETA	1.28E+01	(1.82E+00)		PCI/SA	R	2.47E+00	5.17E+00		100%	
Calc	S8	FILTER	H797K1AF	BETA	1.29E+01	(1.81E+00)		PCI/SA	R	2.45E+00	5.12E+00		100%	
Calc	S8	FILTER	H797M1AF	BETA	1.67E+00	(1.24E+00)	U4	PCI/SA	R	2.40E+00	5.00E+00		100%	
Calc	S8	FILTER	H8DNT1AA	BETA	5.59E-02	(1.13E-01)	U4	PCI/SA	R	2.27E-01	4.72E-01	B	100%	
Calc	S8	FILTER	H8DNT1AC	BETA	4.45E+00	(4.15E-01)		PCI/SA	R	1.89E-01	3.97E-01	S	100%	97%

Matt Lardy 7-19-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18
RADCALC v4.8.24
STL Richland

Batch Nbr: 6179351

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

Detailed Report

7/18/2006 9:44:33 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	S8	FILTER	*STLE	GabWoBS	H7DWT1AF	PCI/SA		05/24/06 07:40	07/18/06 13:34			1	1.00 Sa	
536403,000473					,J6F140270-1 v4.8.24		FILTER			00.7				0.083258 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	378	734	GPC26A	1.5	N	N	4.5661E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.558E-02)	(0.000E+00)		5%			(0.000E+00)	12.010788		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**12.465**		1.05200E+00	2.303956	2.303956	1.00 Sa	100%		5.664702		
				(1.895765)		(1.4048E-01)	(0.33781)	(0.33781)	(0.027064)			2.726935		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	S8	FILTER	*STLE	GabWoBS	H796F1AF	PCI/SA		06/07/06 10:00	07/18/06 13:34			1	1.00 Sa	
536403,000487					,J6F270218-1 v4.8.24		FILTER			00.9				0.08365 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	381	646	GPC26B	1.5	N	N	4.3726E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.221E-02)	(0.000E+00)		5%			(0.000E+00)	11.954514		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**15.369167**		1.24800E+00	2.854117	2.854117	1.00 Sa	100%		5.537137		
				(2.029877)		(1.3970E-01)	(0.358885)	(0.358885)	(0.027064)			2.658902		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	S8	FILTER	*STLE	GabWoBS	H796L1AF	PCI/SA		06/07/06 10:25	07/18/06 13:34			1	1.00 Sa	
536403,000488					,J6F270218-2 v4.8.24		FILTER			00.2				0.084791 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	367	533	GPC26C	1.5	N	N	4.1822E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.033E-02)	(0.000E+00)		5%			(0.000E+00)	11.793659		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**17.537883**		1.38067E+00	3.301278	3.301278	1.00 Sa	100%		5.20886		
				(2.105837)		(1.3581E-01)	(0.373281)	(0.373281)	(0.027064)			2.491163		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	S8	FILTER	*STLE	GabWoBS	H796N1AF	PCI/SA		06/07/06 10:35	07/18/06 13:34			1	1.00 Sa	
536403,000489					,J6F270218-3 v4.8.24		FILTER			00.4				0.086485 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	352	530	GPC26D	1.5	N	N	4.2685E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(8.768E-03)	(0.000E+00)		5%			(0.000E+00)	11.562702		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179351

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/18/2006 9:44:33 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**15.699799**		1.28667E+00	3.014312	3.014312	1.00 Sa	100%		4.990118		
				(1.940996)		(1.3328E-01)	(0.352202)	(0.352202)	(0.027064)			2.386252		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	S8	FILTER	*STLE	GabWoBS	**H796P1AF**	**PCI/SA**		06/07/06 10:50	07/18/06 13:34			1	1.00 Sa	
536403,000490					,J6F270218-4 v4.8.24		FILTER			00.2				0.084889 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	405	557	GPC27A	1.5	N	N	4.4178E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(9.737E-03)	(0.000E+00)		5%			(0.000E+00)	11.780123		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**19.049786**		1.58600E+00	3.589994	3.589994	1.00 Sa	100%		5.030235		
				(2.14341)		(1.4223E-01)	(0.376991)	(0.376991)	(0.027064)			2.408046		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	S8	FILTER	*STLE	GabWoBS	**H796Q1AF**	**PCI/SA**		06/07/06 11:00	07/18/06 13:34			1	1.00 Sa	
536403,000491					,J6F270218-5 v4.8.24		FILTER			00.5				0.08123 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	367	580	GPC27C	1.5	N	N	4.5115E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(9.979E-03)	(0.000E+00)		5%			(0.000E+00)	12.31069		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**15.815195**		1.28667E+00	2.851974	2.851974	1.00 Sa	100%		5.248327		
				(1.992699)		(1.3650E-01)	(0.34037)	(0.34037)	(0.027064)			2.514622		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	S8	FILTER	*STLE	GabWoBS	**H796R1AF**	**PCI/SA**		06/07/06 11:20	07/18/06 13:34			1	1.00 Sa	
536403,000492					,J6F270218-6 v4.8.24		FILTER			00.5				0.084338 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	389	559	GPC27D	1.5	N	N	4.4733E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.132E-02)	(0.000E+00)		5%			(0.000E+00)	11.857072		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**17.615319**		1.47533E+00	3.29812	3.29812	1.00 Sa	100%		5.008947		
				(2.065044)		(1.3973E-01)	(0.362949)	(0.362949)	(0.027064)			2.398041		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	S8	FILTER	*STLE	GabWoBS	**H796T1AF**	**PCI/SA**		06/07/06 10:10	07/18/06 13:34			1	1.00 Sa	
536403,000493					,J6F270218-7 v4.8.24		FILTER			00.2				0.083946 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179351

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/18/2006 9:44:34 PM

1	07/18/06 14:49	BETA	173	533	GPC28B	1.5	N	N	4.3604E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00
			150	500				Y	(1.085E-02)	(0.000E+00)		5%			(0.000E+00)	11.912402	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**1.07473**	U4	8.73333E-02	0.200287	0.200287	1.00 Sa	100%		5.046308		
				(1.221785)		(9.9100E-02)	(0.227549)	(0.227549)	(0.027064)			2.413422		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	S8	FILTER	*STLE	GabWoBS	**H796W1AF**	**PCI/SA**		06/07/06 09:55	07/18/06 13:34			1	1.00 Sa	
536403,P-0660					,J6F270218-8 v4.8.24		FILTER			00.2				0.083288 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	326	538	GPC28C	1.5	N	N	4.4019E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.153E-02)	(0.000E+00)		5%			(0.000E+00)	12.006477		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**13.482289**		1.09733E+00	2.492881	2.492881	1.00 Sa	100%		5.060784		
				(1.923075)		(1.2900E-01)	(0.341014)	(0.341014)	(0.027064)			2.420842		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	S8	FILTER	*STLE	GabWoBS	**H797D1AF**	**PCI/SA**		06/07/06 10:20	07/18/06 13:34			1	1.00 Sa	
536403,P-0661					,J6F270218-9 v4.8.24		FILTER			00.1				0.085406 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	306	517	GPC28D	1.5	N	N	4.2611E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.227E-02)	(0.000E+00)		5%			(0.000E+00)	11.708774		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**12.451792**		1.00600E+00	2.36088	2.36088	1.00 Sa	100%		5.002229		
				(1.861334)		(1.2517E-01)	(0.339776)	(0.339776)	(0.027064)			2.390724		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	S8	FILTER	*STLE	GabWoBS	**H797E1AF**	**PCI/SA**		06/07/06 10:30	07/18/06 13:34			1	1.00 Sa	
536403,P-0662					,J6F270218-10 v4.8.24		FILTER			00.8				0.086032 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	384	840	GPC31A	1.5	N	N	4.4050E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.296E-02)	(0.000E+00)		5%			(0.000E+00)	11.623565		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**10.459753**		8.80000E-01	1.997724	1.997724	1.00 Sa	100%		6.063999		
				(1.85273)		(1.4292E-01)	(0.344527)	(0.344527)	(0.027064)			2.926366		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:12

RADCALC v4.8.24
STL Richland

Batch Nbr: 6179351

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/18/2006 9:44:34 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	S8	FILTER	*STLE	GabWoBS	H797F1AF	PCI/SA		06/07/06 10:45	07/18/06 13:34			1	1.00 Sa	
536403,P-0663					,J6F270218-11 v4.8.24		FILTER			00.2				0.081652 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	342	489	GPC31B	1.5	N	N	4.4704E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.468E-02)	(0.000E+00)		5%			(0.000E+00)	12.24714		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**16.06738**		1.30200E+00	2.912486	2.912486	1.00 Sa	100%		4.85647		
				(2.11339)		(1.3098E-01)	(0.364567)	(0.364567)	(0.027064)			2.318135		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	S8	FILTER	*STLE	GabWoBS	H797H1AF	PCI/SA		06/07/06 11:05	07/18/06 13:34			1	1.00 Sa	
536403,P-0664					,J6F270218-12 v4.8.24		FILTER			00.4				0.083038 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	331	563	GPC31C	1.5	N	N	4.4396E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(9.874E-03)	(0.000E+00)		5%			(0.000E+00)	12.042714		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**13.20451**		1.08067E+00	2.434172	2.434172	1.00 Sa	100%		5.143496		
				(1.827395)		(1.3024E-01)	(0.322193)	(0.322193)	(0.027064)			2.462833		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	S8	FILTER	*STLE	GabWoBS	H797J1AF	PCI/SA		06/07/06 11:10	07/18/06 13:34			1	1.00 Sa	
536403,P-0665					,J6F270218-13 v4.8.24		FILTER			00.1				0.084554 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	322	554	GPC32A	1.5	N	N	4.3066E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.036E-02)	(0.000E+00)		5%			(0.000E+00)	11.826692		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**12.848396**		1.03867E+00	2.411787	2.411787	1.00 Sa	100%		5.167161		
				(1.818416)		(1.2856E-01)	(0.327132)	(0.327132)	(0.027064)			2.473306		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	S8	FILTER	*STLE	GabWoBS	H797K1AF	PCI/SA		06/07/06 10:05	07/18/06 13:34			1	1.00 Sa	
536403,P-0666					,J6F270218-14 v4.8.24		FILTER			00.1				0.082291 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	317	539	GPC32B	1.5	N	N	4.4063E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.071E-02)	(0.000E+00)		5%			(0.000E+00)	12.151981		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:15

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179351

Alpha Beta, Beta by GPC-Sr/Y , Calculated Results

7/18/2006 9:44:34 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**12.861842**		1.03533E+00	2.349684	2.349684	1.00 Sa	100%		5.121549		
				(1.813382)		(1.2746E-01)	(0.317386)	(0.317386)	(0.027064)			2.450009		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
16	Calc	S8	FILTER	*STLE	GabWoBS	**H797M1AF**	**PCI/SA**		06/07/06 11:15	07/18/06 13:34			1	1.00 Sa	
536403,P-0667					,J6F270218-15 v4.8.24		FILTER			00.1				0.085391 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	190	563	GPC32C	1.5	N	N	4.4391E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.769E-02)	(0.000E+00)		5%			(0.000E+00)	11.710821		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**1.67159**	**U4**	1.40667E-01	0.316881	0.316881	1.00 Sa	100%		5.002261		
				(1.238105)		(1.0342E-01)	(0.234356)	(0.234356)	(0.027064)			2.395206		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
17	Calc	S8	FILTER	*STLE	GabWoBS	**H8DNT1AA**	**PCI/SA**	**B**	06/07/06 10:00	07/18/06 13:34			1	1.00 Sa	
0,INTRA-LAB BLANK					,J6F280000-351		FILTER			00.1				1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 14:49	BETA	203	650	GPC32D	1.5	N	N	4.3007E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(1.332E-02)	(0.000E+00)		5%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**0.05586**	**U4**	5.33333E-02	0.12401	0.12401	1.00 Sa	100%		0.472326		
				(0.112979)		(1.0781E-01)	(0.250777)	(0.250777)	(0.017321)			0.226836		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
18	Calc	S8	FILTER	*STLE	GabWoBS	**H8DNT1AC**	**PCI/SA**	**S**	06/07/06 10:00	07/18/06 16:22		BESB2835	1	1.00 Sa	
0,INTRA-LAB CHECK					,J6F280000-351		FILTER			00.4		BESB2835 Alq		1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/18/06 17:37	BETA	809	489	GPC31B	1.5	N	N	4.4708E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	
			150	500			Y		(2.468E-02)	(0.000E+00)		5%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/18/06	BETA	R	**4.448603**		4.41533E+00	9.875909	9.875909	1.00 Sa	100%	97%	0.396503		
				(0.414767)		(1.9471E-01)	(0.854869)	(0.854869)	(0.017321)			0.189263		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18

RADCALC v4.8.24

STL Richland

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/11/2006 4:02:16 PM

Lot No., Due Date: J6F140270; 07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6167192; RRA228 Ra-228 by GPC

SDG, Matrix: 31902; FILTER

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** 7-11-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6167192

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?	SAA 7-13-06		✓
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: Sherryl A. Adam Date: 7-13-06

6/26/2006 11:31:57 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech: 6/27/06 17:00 SE

Batch: 6167192 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: 6167188, BXTE

Sep2 DT/Tm Tech: 7-10-6 M 9:08

Prep Tech: HansenM

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 H7DWT-1-AD J6F140270-1-SAMP	0.833g	505.76g		0.00E00g						
05/24/2006 07:40		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
2 H7DXC-1-AD J6F140270-2-SAMP	0.833sa,g	501.98sa,g	150.08g,in	0.249g	RATA22876 06/26/06,pd 10/04/04,r					
				0.8666						
05/24/2006 08:10		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
3 H7DXD-1-AD J6F140270-3-SAMP	0.833sa,g	502.56sa,g	150.16g,in	0.2489g	RATA22877 06/26/06,pd 10/04/04,r					
				0.9504						
05/24/2006 10:30		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
4 H7DXF-1-AD J6F140270-4-SAMP	0.833sa,g	500.58sa,g	150.41g,in	0.2503g	RATA22878 06/26/06,pd 10/04/04,r					
				0.9302						
05/24/2006 11:20		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:

No sample UMA 6/26/06

In 31.7 3x50 TA 1403 7/10/06
TA 0609 7/11/06

31.2 TB 1403 7/10/06
TB 0609 7/11/06

30.9 TC 1403 7/10/06
TC 0609 7/11/06

6/26/2006 11:31:58 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167192 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: 6167188, BXTE

Sep2 DT/Tm Tech:

Prep Tech: HansenM,LongA

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:
5 H7DXH-1-AD J6F140270-5-SAMP	0.833sa,g	501.49sa,g	150.25g,in	0.2496g	RATA22879 06/26/06,pd 10/04/04,r	0.9642	lin 30.6 3x50	1A 1A	1403 0609	7/1/06 7/1/06
05/24/2006 09:15		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	
6 H7DXJ-1-AD J6F140270-6-SAMP	0.833sa,g	500.55sa,g	150.17g,in	0.2499g	RATA22880 06/26/06,pd 10/04/04,r	0.9199	31.1	1C 1C	1403 0609	7/1/06 7/1/06
05/24/2006 07:30		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	
7 H7DXK-1-AD J6F140270-7-SAMP	0.833sa,g	500.16sa,g	150.50g,in	0.2507g	RATA22881 06/26/06,pd 10/04/04,r	0.8245	31.1	1D 1D	1403 0609	7/1/06 7/1/06
05/24/2006 08:00		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	
8 H7DXL-1-AD J6F140270-8-SAMP	0.833sa,g	504.49sa,g	150.60g,in	0.2487g	RATA22882 06/26/06,pd 10/04/04,r	0.9616	30.8	2B 2A	1403 0609	7/1/06 7/1/06
05/24/2006 08:30		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	

6/26/2006 11:31:58 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167192 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: 6167188, BXTE

Sep2 DT/Tm Tech:

Prep Tech: HansenM,LongA

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:
9 H7DXM-1-AD J6F140270-9-SAMP	0.833sa,g	507.47sa,g	150.07g,in	0.2463g	RATA22883 06/26/06,pd 10/04/04,r	in	31.4	3x50	2C 1403 7/1/05	
			0.9415						2B 0609 7/1/05	
05/24/2006 09:00		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	
10H7DXP-1-AD J6F140270-10-SAMP	0.833sa,g	506.00sa,g	150.70g,in	0.2481g	RATA22884 06/26/06,pd 10/04/04,r		31.6		2D 1403 7/1/05	
			0.9574						2C 0609 7/1/05	
05/24/2006 10:20		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	
11H7DXQ-1-AD J6F140270-11-SAMP	0.833sa	505.01sa	150.38g,in	0.248g	RATA22885 06/26/06,pd 10/04/04,r		30.7		3A 1403 7/1/05	
			0.8343						2D 0609 7/1/05	
05/24/2006 11:10		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	
12H7DXV-1-AD J6F140270-12-SAMP	0.833sa,g	504.85sa,g	150.19g,in	0.2478g	RATA22886 06/26/06,pd 10/04/04,r		31.4		3B 1403 7/1/05	
			0.8978						3A 0609 7/1/05	
05/24/2006 07:35		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:	Beta:	

6/26/2006 11:31:58 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167192 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: 6167188, BXTE

Sep2 DT/Tm Tech:

Prep Tech: HansenM,LongA

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:
13H7DX0-1-AD J6F140270-13-SAMP	0.833sa,g	512.80sa,g	150.13g,in	0.2439g	RATA22887 06/26/06,pd 10/04/04,r	1in	30.8	3x50	3C 1403 7/10/06 3D 0609 7/11/06	
			0.9402							
05/24/2006 08:15		AmtRec: FILTER	#Containers: 1				Scr:		Alpha:	Beta:
14H7JQ5-1-AA-B J6F160000-192-BLK			1.00sa,in	1.00sa	RATA22888 06/26/06,pd 10/04/04,r	31.1			3D 1403 7/10/06 3C 0609 7/11/06	
			0.8699							
05/24/2006 07:40		AmtRec:	#Containers: 1				Scr:		Alpha:	Beta:
15H7JQ5-1-AC-C J6F160000-192-LCS			1.00g,in	1.00g	RASC4129 06/09/06	31.3			4A 1403 7/10/06 3D 0609 7/11/06	
			0.8947							
05/24/2006 07:40		AmtRec:	#Containers: 1				Scr:		Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AD-SAMP Constituent List:

Ba-133	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	RA-228	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:

7/11/2006 3:33:32 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/11/2005, 7/16/2006, Batch: '6167192', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6167192						
AC		**CalcC**	**TamosaitisM**	7/10/2006 9:35:22		
SC			wagarr	IsBatched	6/16/2006 4:55:22 PM	ICOC_RADCALC v4.8.24
SC			TamosaitisM	Sep2C	7/10/2006 9:35:22 AM	RICH-RC-5005 REVISION 4
SC			BlackCL	InCnt2	7/10/2006 11:24:35 AM	RICH-RD-0003 REVISION 4
SC			BlackCL	CalcC	7/11/2006 7:57:47 AM	RICH-RD-0003 REVISION 4
AC			**BlackCL**	7/10/2006 11:24:35		
AC			**BlackCL**	7/11/2006 7:57:47		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 3

ICOCFractions v4.8.18

7/11/2006 3:33:32 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mda	Sample Date / Units	Expected	Yield	Volumes
31902	**9H7DX010**			**J6F14027013**	P-0652	FILTER	6/14/2006 10:00:00		5/24/2006 8:15:00 AM			
BETA	BDS8		0	7/10/2006 12:23:56 PM	**3.6338E+00**	1.297E+00	1.334E+00	5.02E+00	PCI/SA	1.0	1.0E+0	3.132E-2
RA-226	BXTE		0	7/1/2006 5:54:02 PM	**3.0674E-01**	1.589E-01	1.619E-01	5.026E-01	PCI/SA	0.94	1.0E+0	2.439E-1
RA-228	BXTF		0	7/11/2006 6:09:05 AM	**1.7118E-01**	3.763E-01	3.767E-01	1.822E+00	PCI/SA	0.842	1.0E+0	2.439E-1
U-234	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	3.116E-2
U-235	7YSR		0	7/8/2006 1:10:33 PM	**-1.8891E-02**	1.889E-02	1.895E-02	4.522E-01	PCI/SA	0.998	1.0E+0	3.116E-2
U-238	7YSR		0	7/8/2006 1:10:33 PM	**0.0E+00**	0.0E+00	1.156E-01	2.559E-01	PCI/SA	0.998	1.0E+0	3.116E-2
31902	**9H7DXC10**			**J6F1402702**	000474	FILTER	6/14/2006 10:00:00		5/24/2006 8:10:00 AM			
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.3057E+01**	1.65E+00	1.907E+00	5.517E+00	PCI/SA	1.0	1.0E+0	3.345E-2
RA-226	BXTE		0	7/1/2006 5:23:00 PM	**3.0178E-01**	2.836E-01	2.853E-01	1.008E+00	PCI/SA	0.867	1.0E+0	2.49E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**2.0785E+00**	6.079E-01	6.183E-01	2.483E+00	PCI/SA	0.799	1.0E+0	2.49E-1
U-234	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	3.241E-2
U-235	7YSR		0	7/8/2006 9:30:33 AM	**-1.848E-02**	1.848E-02	1.854E-02	4.425E-01	PCI/SA	1.004	1.0E+0	3.241E-2
U-238	7YSR		0	7/8/2006 9:30:33 AM	**0.0E+00**	0.0E+00	1.131E-01	2.503E-01	PCI/SA	1.004	1.0E+0	3.241E-2
31902	**9H7DXD10**			**J6F1402703**	000477	FILTER	6/14/2006 10:00:00		5/24/2006 10:30:00 AM			
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.951E+01**	1.827E+00	2.288E+00	5.565E+00	PCI/SA	1.0	1.0E+0	3.301E-2
RA-226	BXTE		0	7/1/2006 5:22:00 PM	**4.4327E-01**	2.36E-01	2.404E-01	7.719E-01	PCI/SA	0.95	1.0E+0	2.489E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**8.1955E-01**	4.891E-01	4.935E-01	2.178E+00	PCI/SA	0.862	1.0E+0	2.489E-1
U-234	7YSR		0	7/8/2006 9:30:37 AM	**1.1566E+00**	3.401E-01	3.525E-01	4.694E-01	PCI/SA	1.039	1.0E+0	3.224E-2
U-235	7YSR		0	7/8/2006 9:30:37 AM	**0.0E+00**	0.0E+00	1.2E-01	2.656E-01	PCI/SA	1.039	1.0E+0	3.224E-2
U-238	7YSR		0	7/8/2006 9:30:37 AM	**5.6848E-01**	2.409E-01	2.451E-01	4.694E-01	PCI/SA	1.039	1.0E+0	3.224E-2
31902	**9H7DXF10**			**J6F1402704**	000478	FILTER	6/14/2006 10:00:00		5/24/2006 11:20:00 AM			
BETA	BDS8		0	7/10/2006 12:24:08 PM	**1.7034E+01**	1.741E+00	2.104E+00	5.336E+00	PCI/SA	1.0	1.0E+0	3.369E-2
RA-226	BXTE		0	7/1/2006 5:22:01 PM	**-1.1411E-01**	1.323E-01	1.328E-01	6.297E-01	PCI/SA	0.93	1.0E+0	2.503E-1
RA-228	BXTF		0	7/11/2006 6:13:29 AM	**1.1615E+00**	5.476E-01	5.684E-01	2.469E+00	PCI/SA	0.836	1.0E+0	2.503E-1
U-234	7YSR		0	7/8/2006 9:30:47 AM	**1.7843E-01**	1.262E-01	1.27E-01	2.418E-01	PCI/SA	0.984	1.0E+0	3.26E-2
U-235	7YSR		0	7/8/2006 9:30:47 AM	**7.1362E-02**	9.098E-02	9.116E-02	4.273E-01	PCI/SA	0.984	1.0E+0	3.26E-2
U-238	7YSR		0	7/8/2006 9:30:47 AM	**-3.5705E-02**	2.525E-02	2.541E-02	5.042E-01	PCI/SA	0.984	1.0E+0	3.26E-2
31902	**9H7DXH10**			**J6F1402705**	000479	FILTER	6/14/2006 10:00:00		5/24/2006 9:15:00 AM			
BETA	BDS8		0	7/10/2006 12:24:08 PM	**3.0363E+00**	1.314E+00	1.33E+00	5.173E+00	PCI/SA	1.0	1.0E+0	3.367E-2
RA-226	BXTE		0	7/1/2006 5:21:00 PM	**-1.8428E-01**	1.907E-01	1.918E-01	8.373E-01	PCI/SA	0.964	1.0E+0	2.496E-1
RA-228	BXTF		0	7/11/2006 6:13:38 AM	**3.4659E-01**	3.918E-01	4.213E-01	1.96E+00	PCI/SA	0.858	1.0E+0	2.496E-1
U-234	7YSR		0	7/8/2006 9:31:00 AM	**1.1133E-01**	1.113E-01	1.117E-01	3.017E-01	PCI/SA	0.882	1.0E+0	3.241E-2
U-235	7YSR		0	7/8/2006 9:31:00 AM	**0.0E+00**	0.0E+00	1.364E-01	3.017E-01	PCI/SA	0.882	1.0E+0	3.241E-2
U-238	7YSR		0	7/8/2006 9:31:00 AM	**-2.2288E-02**	2.229E-02	2.236E-02	5.333E-01	PCI/SA	0.882	1.0E+0	3.241E-2
31902	**9H7DXJ10**			**J6F1402706**	P-0644	FILTER	6/14/2006 10:00:00		5/24/2006 7:30:00 AM			
BETA	BDS8		0	7/10/2006 12:24:11 PM	**1.4236E+01**	1.619E+00	1.89E+00	5.15E+00	PCI/SA	1.0	1.0E+0	3.339E-2
RA-226	BXTE		0	7/1/2006 5:25:00 PM	**2.0883E-01**	2.01E-01	2.023E-01	7.254E-01	PCI/SA	0.92	1.0E+0	2.499E-1
RA-228	BXTF		0	7/11/2006 6:13:38 AM	**1.2818E-01**	4.435E-01	4.435E-01	2.083E+00	PCI/SA	0.832	1.0E+0	2.499E-1
U-234	7YSR		0	7/8/2006 9:31:05 AM	**1.6712E-01**	1.489E-01	1.495E-01	5.905E-01	PCI/SA	0.923	1.0E+0	3.236E-2
U-235	7YSR		0	7/8/2006 9:31:05 AM	**7.9377E-02**	1.055E-01	1.057E-01	5.212E-01	PCI/SA	0.923	1.0E+0	3.236E-2
U-238	7YSR		0	7/8/2006 9:31:05 AM	**1.4203E-01**	1.496E-01	1.501E-01	6.719E-01	PCI/SA	0.923	1.0E+0	3.236E-2
31902	**9H7DXK10**			**J6F1402707**	P-0645	FILTER	6/14/2006 10:00:00		5/24/2006 8:00:00 AM			
BETA	BDS8		0	7/10/2006 12:24:11 PM	**1.4378E+01**	1.561E+00	1.846E+00	4.845E+00	PCI/SA	1.0	1.0E+0	3.332E-2
RA-226	BXTE		0	7/1/2006 5:17:00 PM	**-2.6994E-01**	2.303E-01	2.32E-01	1.088E+00	PCI/SA	0.824	1.0E+0	2.507E-1
RA-228	BXTF		0	7/11/2006 6:13:38 AM	**2.0953E-01**	4.885E-01	4.885E-01	2.296E+00	PCI/SA	0.745	1.0E+0	2.507E-1
U-234	7YSR		0	7/8/2006 9:31:08 AM	**7.473E-02**	9.928E-02	9.946E-02	4.905E-01	PCI/SA	1.047	1.0E+0	3.267E-2
U-235	7YSR		0	7/8/2006 9:31:08 AM	**6.6861E-02**	9.959E-02	9.973E-02	5.252E-01	PCI/SA	1.047	1.0E+0	3.267E-2
U-238	7YSR		0	7/8/2006 9:31:08 AM	**-3.1475E-02**	1.574E-02	1.594E-02	5.252E-01	PCI/SA	1.047	1.0E+0	3.267E-2
31902	**9H7DXL10**			**J6F1402708**	P-0646	FILTER	6/14/2006 10:00:00		5/24/2006 8:30:00 AM			
BETA	BDS8		0	7/10/2006 12:24:11 PM	**1.7896E+01**	1.704E+00	2.11E+00	5.143E+00	PCI/SA	1.0	1.0E+0	3.31E-2
RA-226	BXTE		0	7/1/2006 5:57:00 PM	**0.0E+00**	0.0E+00	2.114E-01	8.351E-01	PCI/SA	0.962	1.0E+0	2.487E-1

6167192, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JQ51AA=> , mat:FILTER | Air *wo:H7JQ51AC=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**-2.4722E-01**	3.353E-01	3.353E-01	1.779E+00	PCI/SA		0.861	1.0E+0	2.487E-1
U-234	7YSR	0		7/8/2006 9:31:19 AM	**-4.3242E-02**	1.934E-02	1.965E-02	6.105E-01	PCI/SA		0.961	1.0E+0	3.233E-2
U-235	7YSR	0		7/8/2006 9:31:19 AM	**-1.7297E-02**	1.223E-02	1.231E-02	4.937E-01	PCI/SA		0.961	1.0E+0	3.233E-2
U-238	7YSR	0		7/8/2006 9:31:19 AM	**-5.189E-02**	2.118E-02	2.16E-02	6.409E-01	PCI/SA		0.961	1.0E+0	3.233E-2
31902	**9H7DXM10**			**J6F1402709**	P-0647	FILTER	6/14/2006 10:00:00	5/24/2006 9:00:00 AM					
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.6693E+01**	1.712E+00	2.068E+00	5.289E+00	PCI/SA		1.0	1.0E+0	3.273E-2
RA-226	BXTE	0		7/1/2006 5:54:00 PM	**6.0055E-01**	2.624E-01	2.692E-01	8.065E-01	PCI/SA		0.941	1.0E+0	2.463E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**6.3834E-01**	3.959E-01	4.103E-01	1.845E+00	PCI/SA		0.859	1.0E+0	2.463E-1
U-234	7YSR	0		7/8/2006 9:31:21 AM	**3.2796E-01**	2.129E-01	2.146E-01	6.537E-01	PCI/SA		0.857	1.0E+0	3.16E-2
U-235	7YSR	0		7/8/2006 9:31:21 AM	**-1.9591E-02**	1.385E-02	1.395E-02	5.593E-01	PCI/SA		0.857	1.0E+0	3.16E-2
U-238	7YSR	0		7/8/2006 9:31:21 AM	**0.0E+00**	0.0E+00	1.499E-01	3.317E-01	PCI/SA		0.857	1.0E+0	3.16E-2
31902	**9H7DXP10**			**J6F14027010**	P-0648	FILTER	6/14/2006 10:00:00	5/24/2006 10:20:00 AM					
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.8178E+01**	1.726E+00	2.271E+00	5.191E+00	PCI/SA		1.0	1.0E+0	3.279E-2
RA-226	BXTE	0		7/1/2006 5:58:00 PM	**2.4791E-01**	1.56E-01	1.581E-01	5.186E-01	PCI/SA		0.957	1.0E+0	2.481E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**3.0722E-01**	3.198E-01	3.399E-01	1.615E+00	PCI/SA		0.879	1.0E+0	2.481E-1
U-234	7YSR	0		7/8/2006 9:31:31 AM	**2.2422E-01**	1.998E-01	2.007E-01	7.923E-01	PCI/SA		1.112	1.0E+0	3.211E-2
U-235	7YSR	0		7/8/2006 9:31:31 AM	**1.4018E-01**	1.402E-01	1.407E-01	3.799E-01	PCI/SA		1.112	1.0E+0	3.211E-2
U-238	7YSR	0		7/8/2006 9:31:31 AM	**0.0E+00**	0.0E+00	1.717E-01	3.799E-01	PCI/SA		1.112	1.0E+0	3.211E-2
31902	**9H7DXQ10**			**J6F14027011**	P-0649	FILTER	6/14/2006 10:00:00	5/24/2006 11:10:00 AM					
BETA	BDS8	0		7/10/2006 12:24:08 PM	**1.5805E+01**	1.667E+00	2.124E+00	5.126E+00	PCI/SA		1.0	1.0E+0	3.36E-2
RA-226	BXTE	0		7/1/2006 5:55:00 PM	**-1.0043E-01**	2.029E-01	2.032E-01	8.745E-01	PCI/SA		0.836	1.0E+0	2.48E-1
RA-228	BXTF	0		7/11/2006 6:13:49 AM	**3.6453E-01**	3.761E-01	3.761E-01	1.768E+00	PCI/SA		0.745	1.0E+0	2.48E-1
U-234	7YSR	0		7/8/2006 9:31:32 AM	**-4.2646E-02**	3.016E-02	3.035E-02	6.021E-01	PCI/SA		1.031	1.0E+0	3.194E-2
U-235	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	3.194E-2
U-238	7YSR	0		7/8/2006 9:31:32 AM	**0.0E+00**	0.0E+00	1.305E-01	2.887E-01	PCI/SA		1.031	1.0E+0	3.194E-2
31902	**9H7DXV10**			**J6F14027012**	P-0651	FILTER	6/14/2006 10:00:00	5/24/2006 7:35:00 AM					
BETA	BDS8	0		7/10/2006 12:23:56 PM	**1.9498E+01**	1.757E+00	2.239E+00	5.204E+00	PCI/SA		1.0	1.0E+0	3.332E-2
RA-226	BXTE	0		7/1/2006 5:52:00 PM	**-2.0083E-01**	2.26E-01	2.27E-01	9.441E-01	PCI/SA		0.898	1.0E+0	2.478E-1
RA-228	BXTF	0		7/11/2006 6:09:05 AM	**3.3638E+00**	5.198E-01	5.584E-01	1.672E+00	PCI/SA		0.82	1.0E+0	2.478E-1
U-234	7YSR	0		7/8/2006 1:10:30 PM	**-2.0063E-02**	2.006E-02	2.013E-02	4.801E-01	PCI/SA		0.992	1.0E+0	3.227E-2
U-235	7YSR	0		7/8/2006 1:10:30 PM	**0.0E+00**	0.0E+00	1.227E-01	2.716E-01	PCI/SA		0.992	1.0E+0	3.227E-2
U-238	7YSR	0		7/8/2006 1:10:30 PM	**6.0099E-02**	1.042E-01	1.043E-01	5.665E-01	PCI/SA		0.992	1.0E+0	3.227E-2
31902	**H7JQ51AB**			**J6F160000192**	INTRA-LAB BLANK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
RA-228	BXTF	0	B	7/11/2006 6:09:05 AM	**4.3115E-01**	9.838E-02	1.041E-01	3.629E-01	PCI/SA		0.786	1.0E+0	1.0E+0
31902	**H7JQ51CS**			**J6F160000192**	INTRA-LAB CHECK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
RA-228	BXTF	0	S	7/11/2006 6:09:05 AM	**4.4355E+00**	2.536E-01	3.588E-01	5.244E-01	PCI/SA	5.0879E+00	0.814	1.0E+0	1.0E+0

6167192, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 12,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H7JQ51AA=> , mat:FILTER | Air *wo:H7JQ51AC=> , mat:FILTER | Air.

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Results

7/11/2006 7:56:09 AM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Ra-228 by GPC				Ra-226/Ra-228 Deem With Out Blk Subt.										
Calc	TF	FILTER	H7DXC1AD	RA-228	1.23E+00	(9.03E-01)	U4	PCI/SA	R	1.77E+00	3.86E+00	CRDL met	80%	
Calc	TF	FILTER	H7DXC1AD	RA-228	2.73E+00	(1.12E+00)		PCI/SA	R	1.96E+00	4.29E+00		80%	
Calc	TF	FILTER	H7DXC1AD	RA-228	2.27E+00	(1.17E+00)		PCI/SA	R	2.17E+00	4.75E+00		80%	
Calc	TF	FILTER	H7DXC1AD	RA-228	2.08E+00	(6.18E-01)		PCI/SA	A	1.13E+00	2.48E+00		80%	
Calc	TF	FILTER	H7DXC1AD	RA-228	1.22E+01	(6.92E+00)		PCI/SA	R	1.30E+01	2.85E+01		80%	
Calc	TF	FILTER	H7DXD1AD	RA-228	1.04E+00	(7.89E-01)	U4	PCI/SA	R	1.54E+00	3.39E+00		86%	
Calc	TF	FILTER	H7DXD1AD	RA-228	1.42E-01	(7.91E-01)	U4	PCI/SA	R	1.71E+00	3.76E+00		86%	
Calc	TF	FILTER	H7DXD1AD	RA-228	1.28E+00	(9.71E-01)	U4	PCI/SA	R	1.90E+00	4.17E+00		86%	
Calc	TF	FILTER	H7DXD1AD	RA-228	8.20E-01	(4.94E-01)		PCI/SA	A	9.91E-01	2.18E+00		86%	
Calc	TF	FILTER	H7DXD1AD	RA-228	7.06E+00	(6.11E+00)	U4	PCI/SA	R	1.22E+01	2.67E+01		86%	
Calc	TF	FILTER	H7DXF1AD	RA-228	1.55E+00	(9.24E-01)		PCI/SA	R	1.76E+00	3.84E+00		84%	
Calc	TF	FILTER	H7DXF1AD	RA-228	1.19E+00	(9.82E-01)	U4	PCI/SA	R	1.95E+00	4.26E+00		84%	
Calc	TF	FILTER	H7DXF1AD	RA-228	7.36E-01	(1.04E+00)	U4	PCI/SA	R	2.17E+00	4.73E+00		84%	
Calc	TF	FILTER	H7DXF1AD	RA-228	1.16E+00	(5.68E-01)		PCI/SA	A	1.13E+00	2.47E+00		84%	
Calc	TF	FILTER	H7DXF1AD	RA-228	-2.88E+00	(5.83E+00)	U4	PCI/SA	R	1.32E+01	2.89E+01		84%	
Calc	TF	FILTER	H7DXH1AD	RA-228	5.58E-01	(6.77E-01)	U4	PCI/SA	R	1.37E+00	3.05E+00		86%	
Calc	TF	FILTER	H7DXH1AD	RA-228	6.19E-01	(7.51E-01)	U4	PCI/SA	R	1.52E+00	3.38E+00		86%	
Calc	TF	FILTER	H7DXH1AD	RA-228	-1.37E-01	(7.59E-01)	U4	PCI/SA	R	1.69E+00	3.75E+00		86%	
Calc	TF	FILTER	H7DXH1AD	RA-228	3.47E-01	(4.21E-01)	U4	PCI/SA	A	8.83E-01	1.96E+00		86%	
Calc	TF	FILTER	H7DXH1AD	RA-228	6.72E+00	(5.46E+00)	U4	PCI/SA	R	1.07E+01	2.36E+01		86%	
Calc	TF	FILTER	H7DXJ1AD	RA-228	-5.70E-01	(6.17E-01)	U4	PCI/SA	R	1.46E+00	3.24E+00		83%	
Calc	TF	FILTER	H7DXJ1AD	RA-228	-5.03E-01	(6.96E-01)	U4	PCI/SA	R	1.62E+00	3.59E+00		83%	
Calc	TF	FILTER	H7DXJ1AD	RA-228	1.46E+00	(9.51E-01)	U4	PCI/SA	R	1.80E+00	3.99E+00		83%	
Calc	TF	FILTER	H7DXJ1AD	RA-228	1.28E-01	(4.44E-01)	U4	PCI/SA	A	9.40E-01	2.08E+00		83%	
Calc	TF	FILTER	H7DXJ1AD	RA-228	-4.33E-01	(4.69E+00)	U4	PCI/SA	R	1.04E+01	2.31E+01		83%	
Calc	TF	FILTER	H7DXK1AD	RA-228	-5.75E-01	(6.87E-01)	U4	PCI/SA	R	1.61E+00	3.57E+00		75%	
Calc	TF	FILTER	H7DXK1AD	RA-228	4.96E-01	(8.60E-01)	U4	PCI/SA	R	1.79E+00	3.96E+00		75%	
Calc	TF	FILTER	H7DXK1AD	RA-228	7.07E-01	(9.68E-01)	U4	PCI/SA	R	1.99E+00	4.40E+00		75%	
Calc	TF	FILTER	H7DXK1AD	RA-228	2.10E-01	(4.88E-01)	U4	PCI/SA	A	1.04E+00	2.30E+00		75%	
Calc	TF	FILTER	H7DXK1AD	RA-228	8.52E+00	(6.49E+00)	U4	PCI/SA	R	1.26E+01	2.79E+01		75%	
Calc	TF	FILTER	H7DXL1AD	RA-228	1.16E-01	(5.63E-01)	U4	PCI/SA	R	1.20E+00	2.77E+00		86%	
Calc	TF	FILTER	H7DXL1AD	RA-228	-1.85E-02	(6.07E-01)	U4	PCI/SA	R	1.34E+00	3.07E+00		86%	
Calc	TF	FILTER	H7DXL1AD	RA-228	-8.40E-01	(5.71E-01)	U4	PCI/SA	R	1.48E+00	3.41E+00		86%	
Calc	TF	FILTER	H7DXL1AD	RA-228	-2.47E-01	(3.35E-01)	U4	PCI/SA	A	7.74E-01	1.78E+00		86%	
Calc	TF	FILTER	H7DXL1AD	RA-228	7.44E+00	(4.31E+00)		PCI/SA	R	7.06E+00	1.69E+01		86%	
Calc	TF	FILTER	H7DXM1AD	RA-228	7.33E-01	(6.56E-01)	U4	PCI/SA	R	1.25E+00	2.87E+00		86%	
Calc	TF	FILTER	H7DXM1AD	RA-228	9.68E-01	(7.46E-01)	U4	PCI/SA	R	1.38E+00	3.18E+00		86%	
Calc	TF	FILTER	H7DXM1AD	RA-228	2.15E-01	(7.26E-01)	U4	PCI/SA	R	1.53E+00	3.53E+00		86%	

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:39
RADCALC v4.8.24
STL Richland

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Results

7/11/2006 7:56:09 AM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	TF	FILTER	H7DXM1AD	RA-228	6.38E-01	(4.10E-01)	U4	PCI/SA	A	8.02E-01	1.85E+00		86%	
Calc	TF	FILTER	H7DXM1AD	RA-228	4.75E+00	(4.46E+00)	U4	PCI/SA	R	8.47E+00	1.96E+01		86%	
Calc	TF	FILTER	H7DXP1AD	RA-228	7.81E-01	(5.93E-01)	U4	PCI/SA	R	1.08E+00	2.51E+00		88%	
Calc	TF	FILTER	H7DXP1AD	RA-228	-1.66E-01	(5.22E-01)	U4	PCI/SA	R	1.19E+00	2.79E+00		88%	
Calc	TF	FILTER	H7DXP1AD	RA-228	3.07E-01	(6.45E-01)	U4	PCI/SA	R	1.33E+00	3.09E+00		88%	
Calc	TF	FILTER	H7DXP1AD	RA-228	3.07E-01	(3.40E-01)	U4	PCI/SA	A	6.92E-01	1.61E+00		88%	
Calc	TF	FILTER	H7DXP1AD	RA-228	-3.89E+00	(3.12E+00)	U4	PCI/SA	R	8.05E+00	1.88E+01		88%	
Calc	TF	FILTER	H7DXQ1AD	RA-228	1.65E-01	(5.59E-01)	U4	PCI/SA	R	1.18E+00	2.75E+00		74%	
Calc	TF	FILTER	H7DXQ1AD	RA-228	1.83E-01	(6.20E-01)	U4	PCI/SA	R	1.31E+00	3.05E+00		74%	
Calc	TF	FILTER	H7DXQ1AD	RA-228	7.45E-01	(7.59E-01)	U4	PCI/SA	R	1.45E+00	3.38E+00		74%	
Calc	TF	FILTER	H7DXQ1AD	RA-228	3.65E-01	(3.76E-01)	U4	PCI/SA	A	7.56E-01	1.77E+00		74%	
Calc	TF	FILTER	H7DXQ1AD	RA-228	5.08E+00	(4.56E+00)	U4	PCI/SA	R	8.38E+00	1.99E+01		74%	
Calc	TF	FILTER	H7DXV1AD	RA-228	3.03E+00	(8.68E-01)		PCI/SA	R	1.12E+00	2.60E+00		82%	
Calc	TF	FILTER	H7DXV1AD	RA-228	3.65E+00	(9.94E-01)		PCI/SA	R	1.25E+00	2.89E+00		82%	
Calc	TF	FILTER	H7DXV1AD	RA-228	3.41E+00	(1.03E+00)		PCI/SA	R	1.38E+00	3.20E+00		82%	
Calc	TF	FILTER	H7DXV1AD	RA-228	3.36E+00	(5.58E-01)		PCI/SA	A	7.23E-01	1.67E+00		82%	
Calc	TF	FILTER	H7DXV1AD	RA-228	4.29E+00	(4.25E+00)	U4	PCI/SA	R	8.10E+00	1.89E+01		82%	
Calc	TF	FILTER	H7DX01AD	RA-228	3.28E-01	(6.03E-01)	U4	PCI/SA	R	1.24E+00	2.83E+00		84%	
Calc	TF	FILTER	H7DX01AD	RA-228	-2.18E-01	(6.02E-01)	U4	PCI/SA	R	1.38E+00	3.14E+00		84%	
Calc	TF	FILTER	H7DX01AD	RA-228	4.04E-01	(7.42E-01)	U4	PCI/SA	R	1.53E+00	3.49E+00		84%	
Calc	TF	FILTER	H7DX01AD	RA-228	1.71E-01	(3.77E-01)	U4	PCI/SA	A	7.97E-01	1.82E+00		84%	
Calc	TF	FILTER	H7DX01AD	RA-228	1.89E+00	(3.73E+00)	U4	PCI/SA	R	7.63E+00	1.78E+01		84%	
Calc	TF	FILTER	H7JQ51AA	RA-228	6.68E-01	(1.97E-01)		PCI/SA	R	2.36E-01	5.65E-01	B	79%	
Calc	TF	FILTER	H7JQ51AA	RA-228	3.97E-01	(1.76E-01)		PCI/SA	R	2.61E-01	6.26E-01	B	79%	
Calc	TF	FILTER	H7JQ51AA	RA-228	2.28E-01	(1.66E-01)	U4	PCI/SA	R	2.90E-01	6.95E-01	B	79%	
Calc	TF	FILTER	H7JQ51AA	RA-228	4.31E-01	(1.04E-01)		PCI/SA	A	1.51E-01	3.63E-01	B	79%	
Calc	TF	FILTER	H7JQ51AA	RA-228	-1.42E+00	(7.96E-01)	U4	PCI/SA	R	2.16E+00	5.00E+00	B	79%	
Calc	TF	FILTER	H7JQ51AC	RA-228	4.36E+00	(5.95E-01)		PCI/SA	R	3.64E-01	8.16E-01	S	81%	86%
Calc	TF	FILTER	H7JQ51AC	RA-228	4.30E+00	(6.07E-01)		PCI/SA	R	4.04E-01	9.05E-01	S	81%	84%
Calc	TF	FILTER	H7JQ51AC	RA-228	4.65E+00	(6.61E-01)		PCI/SA	R	4.48E-01	1.00E+00	S	81%	91%
Calc	TF	FILTER	H7JQ51AC	RA-228	4.44E+00	(3.59E-01)		PCI/SA	A	2.34E-01	5.24E-01	S	81%	87%
Calc	TF	FILTER	H7JQ51AC	RA-228	7.13E+00	(1.70E+00)		PCI/SA	R	1.79E+00	4.24E+00	S	81%	140%

P Anderson
7-11-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:70
RADCALC v4.8.24
STL Richland

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:10 AM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	FILTER	*STLE	Ra228WoBS	H7DXC1AD	PCI/SA		05/24/06 08:10	07/11/06 06:13	06/27/06 17:00	RATA22876	1	1.00 SA	
536403,000474					,J6F140270-2 v4.8.24		FILTER			31.7	07/10/06 09:08	RATA22876 Alq	87%	0.249047 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	48	304	GPC7A	1	N	N	5.1764E-01	1.0000E+00	N	80%	N		1.3910E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.196E-02)	(0.000E+00)		6%			(0.000E+00)	4.015305		
1	07/10/06 13:22	RA-228	58	304	GPC7A	1	N	N	5.1764E-01	1.0000E+00	N	80%	N		1.5432E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.196E-02)	(0.000E+00)		6%			(0.000E+00)	4.015305		
2	07/10/06 14:17	RA-228	53	304	GPC7A	1	N	N	5.1764E-01	1.0000E+00	N	80%	N		1.7120E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.196E-02)	(0.000E+00)		6%			(0.000E+00)	4.015305		
3	07/11/06 06:13	RA-228	51	301	GPC7A	1	N	N	5.1764E-01	1.0000E+00	N	80%	N		1.0310E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.196E-02)	(0.000E+00)		6%			(0.000E+00)	4.015305		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**1.231123**	**U4**	2.00000E-01	0.673006	0.673006	1.00 SA	80%		3.86259		
				(0.902787)		(1.4526E-01)	(0.492001)	(0.492001)	(0.028284)			1.765526		
	07/11/06	RA-228	R	**2.73152**		4.00000E-01	1.493212	1.493212	1.00 SA	80%		4.285007		
				(1.116617)		(1.5843E-01)	(0.604353)	(0.604353)	(0.028284)			1.958606		
	07/11/06	RA-228	R	**2.272753**		3.00000E-01	1.242423	1.242423	1.00 SA	80%		4.753769		
				(1.174159)		(1.5199E-01)	(0.637885)	(0.637885)	(0.028284)			2.172869		
	07/11/06	RA-228	A	**2.078465**		3.00000E-01	1.136214	1.136214	1.00 SA	80%		2.482869		
				(0.618287)		(8.7750E-02)	(0.335692)	(0.335692)	(0.01633)			1.134878		
	07/11/06	RA-228	R	**12.20382**		2.67500E-01	6.671339	6.671339	1.00 SA	80%		28.497847		
				(6.920922)		(1.4927E-01)	(3.76393)	(3.76393)	(0.028284)			13.020305		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	FILTER	*STLE	Ra228WoBS	H7DXD1AD	PCI/SA		05/24/06 10:30	07/11/06 06:13	06/27/06 17:00	RATA22877	1	1.00 SA	
536403,000477					,J6F140270-3 v4.8.24		FILTER			31.2	07/10/06 09:08	RATA22877 Alq	95%	0.248892 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	43	271	GPC7B	1	N	N	5.1908E-01	1.0000E+00	N	86%	N		1.3910E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.256E-02)	(0.000E+00)		7%			(0.000E+00)	4.017803		
1	07/10/06 13:22	RA-228	35	271	GPC7B	1	N	N	5.1908E-01	1.0000E+00	N	86%	N		1.5432E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.256E-02)	(0.000E+00)		7%			(0.000E+00)	4.017803		
2	07/10/06 14:17	RA-228	43	271	GPC7B	1	N	N	5.1908E-01	1.0000E+00	N	86%	N		1.7120E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.256E-02)	(0.000E+00)		7%			(0.000E+00)	4.017803		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:10 AM

3	07/11/06 06:13	RA-228	47	309	GPC7B	1	N	N	5.1908E-01	1.0000E+00	N	86%	N		1.0310E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.256E-02)	(0.000E+00)		7%			(0.000E+00)	4.017803		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**1.038503**	U4	1.82500E-01	0.567373	0.567373	1.00 SA	86%		3.388539		
				(0.789234)		(1.3745E-01)	(0.429955)	(0.429955)	(0.028284)			1.540974		
	07/11/06	RA-228	R	**0.142037**	U4	2.25000E-02	0.0776	0.0776	1.00 SA	86%		3.759113		
				(0.790957)		(1.2527E-01)	(0.432107)	(0.432107)	(0.028284)			1.709496		
	07/11/06	RA-228	R	**1.278107**	U4	1.82500E-01	0.698278	0.698278	1.00 SA	86%		4.170344		
				(0.971327)		(1.3745E-01)	(0.529154)	(0.529154)	(0.028284)			1.896508		
	07/11/06	RA-228	A	**0.819549**		1.29167E-01	0.44775	0.44775	1.00 SA	86%		2.178149		
				(0.493511)		(7.7087E-02)	(0.269069)	(0.269069)	(0.01633)			0.990536		
	07/11/06	RA-228	R	**7.064153**	U4	1.67500E-01	3.859412	3.859412	1.00 SA	86%		26.661836		
				(6.114485)		(1.4398E-01)	(3.333207)	(3.333207)	(0.028284)			12.195242		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXF1AD**	**PCI/SA**		05/24/06 11:20	07/11/06 06:13	06/27/06 17:00	RATA22878	1	1.00 SA	
536403,000478					,J6F140270-4 v4.8.24		FILTER			30.9	07/10/06 09:08	RATA22878 Alq	93%-	0.250293 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	53	320	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	84%	N		1.3910E+00	4.5045E-01	1.0113E+00	
			50	400			Y		(1.091E-02)	(0.000E+00)		7%			(0.000E+00)	3.995322		
1	07/10/06 13:22	RA-228	49	320	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	84%	N		1.5432E+00	4.5045E-01	1.0113E+00	
			50	400			Y		(1.091E-02)	(0.000E+00)		7%			(0.000E+00)	3.995322		
2	07/10/06 14:17	RA-228	45	320	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	84%	N		1.7120E+00	4.5045E-01	1.0113E+00	
			50	400			Y		(1.091E-02)	(0.000E+00)		7%			(0.000E+00)	3.995322		
3	07/11/06 06:13	RA-228	38	330	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	84%	N		1.0310E+01	4.5045E-01	1.0113E+00	
			50	400			N		(1.091E-02)	(0.000E+00)		7%			(0.000E+00)	3.995322		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**1.554683**		2.60000E-01	0.854171	0.854171	1.00 SA	84%		3.841166		
				(0.924165)		(1.5232E-01)	(0.505377)	(0.505377)	(0.028284)			1.759582		
	07/11/06	RA-228	R	**1.194027**	U4	1.80000E-01	0.65602	0.65602	1.00 SA	84%		4.26124		
				(0.982322)		(1.4697E-01)	(0.538388)	(0.538388)	(0.028284)			1.952012		
	07/11/06	RA-228	R	**0.735916**	U4	1.00000E-01	0.404325	0.404325	1.00 SA	84%		4.727402		
				(1.043383)		(1.4142E-01)	(0.572783)	(0.572783)	(0.028284)			2.165554		
	07/11/06	RA-228	A	**1.161542**		1.80000E-01	0.638172	0.638172	1.00 SA	84%		2.469098		
				(0.568398)		(8.4853E-02)	(0.31151)	(0.31151)	(0.01633)			1.131058		
	07/11/06	RA-228	R	**-2.880597**	U4	-6.50000E-02	-1.582652	-1.582652	1.00 SA	84%		28.872595		
				(5.829892)		(1.3139E-01)	(3.201757)	(3.201757)	(0.028284)			13.243173		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:4

RADCALC v4.8.24

STL Richland

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:10 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXH1AD**	**PCI/SA**		05/24/06 09:15	07/11/06 06:13	06/27/06 17:00	RATA22879	1	1.00 SA	
536403,000479					,J6F140270-5 v4.8.24		FILTER			30.6	07/10/06 09:08	RATA22879 Alq	96%	0.249573 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	33	224	GPC1A	1	N	N	5.3073E-01	1.0000E+00	N	86%	N		1.3916E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.448E-02)	(0.000E+00)		7%			(0.000E+00)	4.006847		
1	07/10/06 13:22	RA-228	33	224	GPC1A	1	N	N	5.3073E-01	1.0000E+00	N	86%	N		1.5438E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.448E-02)	(0.000E+00)		7%			(0.000E+00)	4.006847		
2	07/10/06 14:17	RA-228	27	224	GPC1A	1	N	N	5.3073E-01	1.0000E+00	N	86%	N		1.7127E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.448E-02)	(0.000E+00)		7%			(0.000E+00)	4.006847		
3	07/11/06 06:13	RA-228	39	247	GPC1A	1	N	N	5.3073E-01	1.0000E+00	N	86%	N		1.0312E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.448E-02)	(0.000E+00)		7%			(0.000E+00)	4.006847		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.558047**	**U4**	1.00000E-01	0.305711	0.305711	1.00 SA	86%		3.048668		
				(0.676699)		(1.2083E-01)	(0.370294)	(0.370294)	(0.028284)			1.373919		
	07/11/06	RA-228	R	**0.619076**	**U4**	1.00000E-01	0.339144	0.339144	1.00 SA	86%		3.382073		
				(0.750703)		(1.2083E-01)	(0.41079)	(0.41079)	(0.028284)			1.524172		
	07/11/06	RA-228	R	**-0.13736**	**U4**	-2.00000E-02	-0.075249	-0.075249	1.00 SA	86%		3.752058		
				(0.758726)		(1.1045E-01)	(0.415624)	(0.415624)	(0.028284)			1.69091		
	07/11/06	RA-228	A	**0.346588**	**U4**	6.00000E-02	0.189868	0.189868	1.00 SA	86%		1.959681		
				(0.42126)		(6.7823E-02)	(0.230605)	(0.230605)	(0.01633)			0.883154		
	07/11/06	RA-228	R	**6.720022**	**U4**	1.62500E-01	3.681376	3.681376	1.00 SA	86%		23.611347		
				(5.458029)		(1.3093E-01)	(2.98254)	(2.98254)	(0.028284)			10.691329		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXJ1AD**	**PCI/SA**		05/24/06 07:30	07/11/06 06:13	06/27/06 17:00	RATA22880	1	1.00 SA	
536403,P-0644					,J6F140270-6 v4.8.24		FILTER			31.1	07/10/06 09:08	RATA22880 Alq	92%	0.249908 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	24	231	GPC1C	1	N	N	5.2154E-01	1.0000E+00	N	83%	N		1.3916E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.167E-02)	(0.000E+00)		7%			(0.000E+00)	4.001467		
1	07/10/06 13:22	RA-228	25	231	GPC1C	1	N	N	5.2154E-01	1.0000E+00	N	83%	N		1.5438E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.167E-02)	(0.000E+00)		7%			(0.000E+00)	4.001467		
2	07/10/06 14:17	RA-228	39	231	GPC1C	1	N	N	5.2154E-01	1.0000E+00	N	83%	N		1.7127E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.167E-02)	(0.000E+00)		7%			(0.000E+00)	4.001467		
3	07/11/06 06:13	RA-228	26	212	GPC1C	1	N	N	5.2154E-01	1.0000E+00	N	83%	N		1.0312E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.167E-02)	(0.000E+00)		7%			(0.000E+00)	4.001467		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:5

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:10 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**-0.570269**	U4	-9.75000E-02	-0.312819	-0.312819	1.00 SA	83%		3.239947		
				(0.617351)		(1.0509E-01)	(0.338168)	(0.338168)	(0.028284)			1.462336		
	07/11/06	RA-228	R	**-0.502863**	U4	-7.75000E-02	-0.275843	-0.275843	1.00 SA	83%		3.594271		
				(0.695972)		(1.0698E-01)	(0.381443)	(0.381443)	(0.028284)			1.622259		
	07/11/06	RA-228	R	**1.457672**	U4	2.02500E-01	0.799599	0.799599	1.00 SA	83%		3.987469		
				(0.951223)		(1.3055E-01)	(0.519763)	(0.519763)	(0.028284)			1.799727		
	07/11/06	RA-228	A	**0.12818**	U4	9.16667E-03	0.070312	0.070312	1.00 SA	83%		2.082635		
				(0.443512)		(6.6275E-02)	(0.242673)	(0.242673)	(0.01633)			0.939988		
	07/11/06	RA-228	R	**-0.433433**	U4	-1.00000E-02	-0.237757	-0.237757	1.00 SA	83%		23.099647		
				(4.6935)		(1.0828E-01)	(2.574561)	(2.574561)	(0.028284)			10.381385		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXK1AD**	**PCI/SA**		05/24/06 08:00	07/11/06 06:13	06/27/06 17:00	RATA22881	1	1.00 SA	
536403,P-0645					,J6F140270-7 v4.8.24		FILTER			31.1	07/10/06 09:08	RATA22881 Alq	82%	0.250653 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	25	236	GPC1D	1	N	N	5.3130E-01	1.0000E+00	N	75%	N		1.3916E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.367E-02)	(0.000E+00)		6%			(0.000E+00)	3.989583		
1	07/10/06 13:22	RA-228	33	236	GPC1D	1	N	N	5.3130E-01	1.0000E+00	N	75%	N		1.5438E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.367E-02)	(0.000E+00)		6%			(0.000E+00)	3.989583		
2	07/10/06 14:17	RA-228	34	236	GPC1D	1	N	N	5.3130E-01	1.0000E+00	N	75%	N		1.7127E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.367E-02)	(0.000E+00)		6%			(0.000E+00)	3.989583		
3	07/11/06 06:13	RA-228	42	264	GPC1D	1	N	N	5.3130E-01	1.0000E+00	N	75%	N		1.0312E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.367E-02)	(0.000E+00)		6%			(0.000E+00)	3.989583		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**-0.574802**	U4	-9.00000E-02	-0.316246	-0.316246	1.00 SA	75%		3.572196		
				(0.686648)		(1.0712E-01)	(0.377345)	(0.377345)	(0.028284)			1.613977		
	07/11/06	RA-228	R	**0.49596**	U4	7.00000E-02	0.272869	0.272869	1.00 SA	75%		3.962855		
				(0.85978)		(1.2114E-01)	(0.472777)	(0.472777)	(0.028284)			1.790483		
	07/11/06	RA-228	R	**0.70742**	U4	9.00000E-02	0.389211	0.389211	1.00 SA	75%		4.396374		
				(0.967763)		(1.2278E-01)	(0.531978)	(0.531978)	(0.028284)			1.986355		
	07/11/06	RA-228	A	**0.209526**	U4	2.33333E-02	0.115278	0.115278	1.00 SA	75%		2.296204		
				(0.488453)		(6.7680E-02)	(0.268516)	(0.268516)	(0.01633)			1.037463		
	07/11/06	RA-228	R	**8.519107**	U4	1.80000E-01	4.68707	4.68707	1.00 SA	75%		27.850113		
				(6.486876)		(1.3583E-01)	(3.5588)	(3.5588)	(0.028284)			12.649969		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:7

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167192 — Alpha Beta, Ra-228 by GPC , Calculated Results — 7/11/2006 7:56:10 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXL1AD**	**PCI/SA**		05/24/06 08:30	07/11/06 06:13	06/27/06 17:00	RATA22882	1	1.00 SA	
536403,P-0646					,J6F140270-8 v4.8.24		FILTER			30.8	07/10/06 09:08	RATA22882 Alq	96%	0.248667 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	16	121	GPC2B	1	N	N	4.4502E-01	1.0000E+00	N	86%	N		1.3920E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.050E-02)	(0.000E+00)		7%			(0.000E+00)	4.021449		
1	07/10/06 13:22	RA-228	15	121	GPC2B	1	N	N	4.4502E-01	1.0000E+00	N	86%	N		1.5443E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.050E-02)	(0.000E+00)		7%			(0.000E+00)	4.021449		
2	07/10/06 14:18	RA-228	10	121	GPC2B	1	N	N	4.4502E-01	1.0000E+00	N	86%	N		1.7132E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.050E-02)	(0.000E+00)		7%			(0.000E+00)	4.021449		
3	07/11/06 06:13	RA-228	16	70	GPC2A	1	N	N	4.2799E-01	1.0000E+00	N	86%	N		1.0316E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.185E-02)	(0.000E+00)		7%			(0.000E+00)	4.021449		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.116481**	**U4**	1.75000E-02	0.063579	0.063579	1.00 SA	86%		2.76816		
				(0.563191)		(8.4595E-02)	(0.307383)	(0.307383)	(0.028284)			1.204416		
	07/11/06	RA-228	R	**-0.018461**	**U4**	-2.50000E-03	-0.010076	-0.010076	1.00 SA	86%		3.070985		
				(0.606959)		(8.2196E-02)	(0.331294)	(0.331294)	(0.028284)			1.336174		
	07/11/06	RA-228	R	**-0.839682**	**U4**	-1.02500E-01	-0.458321	-0.458321	1.00 SA	86%		3.406938		
				(0.571331)		(6.8966E-02)	(0.310735)	(0.310735)	(0.028284)			1.482345		
	07/11/06	RA-228	A	**-0.24722**	**U4**	-2.91667E-02	-0.13494	-0.13494	1.00 SA	86%		1.77941		
				(0.335328)		(4.5545E-02)	(0.182816)	(0.182816)	(0.01633)			0.774214		
	07/11/06	RA-228	R	**7.437203**		1.45000E-01	4.059428	4.059428	1.00 SA	86%		16.890027		
				(4.308922)		(8.2689E-02)	(2.340338)	(2.340338)	(0.028284)			7.059217		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXM1AD**	**PCI/SA**		05/24/06 09:00	07/11/06 06:13	06/27/06 17:00	RATA22883	1	1.00 SA	
536403,P-0647					,J6F140270-9 v4.8.24		FILTER			31.4	07/10/06 09:08	RATA22883 Alq	94%	0.246336 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	20	118	GPC2C	1	N	N	4.2929E-01	1.0000E+00	N	86%	N		1.3920E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(9.337E-03)	(0.000E+00)		7%			(0.000E+00)	4.05949		
1	07/10/06 13:22	RA-228	21	118	GPC2C	1	N	N	4.2929E-01	1.0000E+00	N	86%	N		1.5443E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(9.337E-03)	(0.000E+00)		7%			(0.000E+00)	4.05949		
2	07/10/06 14:18	RA-228	16	118	GPC2C	1	N	N	4.2929E-01	1.0000E+00	N	86%	N		1.7132E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(9.337E-03)	(0.000E+00)		7%			(0.000E+00)	4.05949		
3	07/11/06 06:13	RA-228	18	106	GPC2B	1	N	N	4.4405E-01	1.0000E+00	N	86%	N		1.0316E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.048E-02)	(0.000E+00)		7%			(0.000E+00)	4.05949		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8 RADCALC v4.8.24
STL Richland

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:10 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.732677**	U4	1.05000E-01	0.396171	0.396171	1.00 SA	86%		2.870514		
				(0.656428)		(9.3475E-02)	(0.354211)	(0.354211)	(0.028284)			1.246897		
	07/11/06	RA-228	R	**0.967654**	U4	1.25000E-01	0.523226	0.523226	1.00 SA	86%		3.184536		
				(0.746395)		(9.5590E-02)	(0.402467)	(0.402467)	(0.028284)			1.383302		
	07/11/06	RA-228	R	**0.214702**	U4	2.50000E-02	0.116093	0.116093	1.00 SA	86%		3.532911		
				(0.725877)		(8.4484E-02)	(0.392437)	(0.392437)	(0.028284)			1.534629		
	07/11/06	RA-228	A	**0.638345**	U4	8.50000E-02	0.345163	0.345163	1.00 SA	86%		1.845204		
				(0.410271)		(5.2718E-02)	(0.221473)	(0.221473)	(0.01633)			0.801521		
	07/11/06	RA-228	R	**4.749427**	U4	9.50000E-02	2.568092	2.568092	1.00 SA	86%		19.633888		
				(4.459021)		(8.8671E-02)	(2.406547)	(2.406547)	(0.028284)			8.467135		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXP1AD**	**PCI/SA**		05/24/06 10:20	07/11/06 06:13	06/27/06 17:00	RATA22884	1	1.00 SA	
536403,P-0648					,J6F140270-10 v4.8.24		FILTER			31.6	07/10/06 09:08	RATA22884 Alq	96%	0.248089 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	18	97	GPC2D	1	N	N	4.3737E-01	1.0000E+00	N	88%	N		1.3920E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.307E-02)	(0.000E+00)		7%			(0.000E+00)	4.030809		
1	07/10/06 13:22	RA-228	11	97	GPC2D	1	N	N	4.3737E-01	1.0000E+00	N	88%	N		1.5443E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.307E-02)	(0.000E+00)		7%			(0.000E+00)	4.030809		
2	07/10/06 14:18	RA-228	14	97	GPC2D	1	N	N	4.3737E-01	1.0000E+00	N	88%	N		1.7132E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.307E-02)	(0.000E+00)		7%			(0.000E+00)	4.030809		
3	07/11/06 06:13	RA-228	8	95	GPC2C	1	N	N	4.2878E-01	1.0000E+00	N	88%	N		1.0316E+01	4.5045E-01	1.0114E+00	
			50	400			N		(9.326E-03)	(0.000E+00)		7%			(0.000E+00)	4.030809		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.780822**	U4	1.17500E-01	0.425215	0.425215	1.00 SA	88%		2.512152		
				(0.592606)		(8.8353E-02)	(0.321792)	(0.321792)	(0.028284)			1.076628		
	07/11/06	RA-228	R	**-0.165876**	U4	-2.25000E-02	-0.090332	-0.090332	1.00 SA	88%		2.786971		
				(0.521902)		(7.0755E-02)	(0.284167)	(0.284167)	(0.028284)			1.194407		
	07/11/06	RA-228	R	**0.306703**	U4	3.75000E-02	0.167022	0.167022	1.00 SA	88%		3.091854		
				(0.645093)		(7.8780E-02)	(0.351169)	(0.351169)	(0.028284)			1.32507		
	07/11/06	RA-228	A	**0.307216**	U4	4.41667E-02	0.167302	0.167302	1.00 SA	88%		1.614844		
				(0.339887)		(4.5969E-02)	(0.184879)	(0.184879)	(0.01633)			0.692071		
	07/11/06	RA-228	R	**-3.893153**	U4	-7.75000E-02	-2.120108	-2.120108	1.00 SA	88%		18.821719		
				(3.118916)		(6.1593E-02)	(1.694107)	(1.694107)	(0.028284)			8.054294		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:10

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167192 — Alpha Beta, Ra-228 by GPC , Calculated Results — 7/11/2006 7:56:10 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXQ1AD**	**PCI/SA**		05/24/06 11:10	07/11/06 06:13	06/27/06 17:00	RATA22885	1	1.00 SA	
536403,P-0649					,J6F140270-11 v4.8.24		FILTER			30.7	07/10/06 09:08	RATA22885 Alq	83%	0.248048 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	13	95	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	74%	N		1.3926E+00	4.5045E-01	1.0113E+00	
			50	400			Y		(1.324E-02)	(0.000E+00)		6%			(0.000E+00)	4.031484		
1	07/10/06 13:23	RA-228	13	95	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	74%	N		1.5449E+00	4.5045E-01	1.0113E+00	
			50	400			Y		(1.324E-02)	(0.000E+00)		6%			(0.000E+00)	4.031484		
2	07/10/06 14:18	RA-228	16	95	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	74%	N		1.7139E+00	4.5045E-01	1.0113E+00	
			50	400			Y		(1.324E-02)	(0.000E+00)		6%			(0.000E+00)	4.031484		
3	07/11/06 06:13	RA-228	14	77	GPC2D	1	N	N	4.3824E-01	1.0000E+00	N	74%	N		1.0316E+01	4.5045E-01	1.0113E+00	
			50	400			N		(1.310E-02)	(0.000E+00)		6%			(0.000E+00)	4.031484		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.165144**	U4	2.25000E-02	0.089919	0.089919	1.00 SA	74%		2.750038		
				(0.558931)		(7.6117E-02)	(0.304288)	(0.304288)	(0.028284)			1.176811		
	07/11/06	RA-228	R	**0.183204**	U4	2.25000E-02	0.099752	0.099752	1.00 SA	74%		3.050785		
				(0.620056)		(7.6117E-02)	(0.337565)	(0.337565)	(0.028284)			1.305509		
	07/11/06	RA-228	R	**0.745234**	U4	8.25000E-02	0.405771	0.405771	1.00 SA	74%		3.384528		
				(0.759279)		(8.3629E-02)	(0.412761)	(0.412761)	(0.028284)			1.448326		
	07/11/06	RA-228	A	**0.364527**	U4	4.25000E-02	0.198481	0.198481	1.00 SA	74%		1.767722		
				(0.376147)		(4.5438E-02)	(0.204644)	(0.204644)	(0.01633)			0.756453		
	07/11/06	RA-228	R	**5.080637**	U4	8.75000E-02	2.766349	2.766349	1.00 SA	74%		19.900126		
				(4.558097)		(7.7982E-02)	(2.476739)	(2.476739)	(0.028284)			8.381494		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DXV1AD**	**PCI/SA**		05/24/06 07:35	07/11/06 06:09	06/27/06 17:00	RATA22886	1	1.00 SA	
536403,P-0651					,J6F140270-12 v4.8.24		FILTER			31.4	07/10/06 09:08	RATA22886 Alq	90%	0.247813 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	37	110	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	82%	N		1.3926E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.035305		
1	07/10/06 13:23	RA-228	39	110	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	82%	N		1.5449E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.035305		
2	07/10/06 14:18	RA-228	35	110	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	82%	N		1.7139E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.035305		
3	07/11/06 06:09	RA-228	17	101	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	82%	N		1.0225E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.324E-02)	(0.000E+00)		7%			(0.000E+00)	4.035305		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:11 RADCALC v4.8.24
STL Richland

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:11 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**3.030782**		4.65000E-01	1.648583	1.648583	1.00 SA	82%		2.600953		
				(0.867531)		(1.2445E-01)	(0.46229)	(0.46229)	(0.028284)			1.124512		
	07/11/06	RA-228	R	**3.651456**		5.05000E-01	1.986196	1.986196	1.00 SA	82%		2.885396		
				(0.994463)		(1.2762E-01)	(0.528764)	(0.528764)	(0.028284)			1.24749		
	07/11/06	RA-228	R	**3.409181**		4.25000E-01	1.854412	1.854412	1.00 SA	82%		3.201047		
				(1.031927)		(1.2119E-01)	(0.551111)	(0.551111)	(0.028284)			1.38396		
	07/11/06	RA-228	A	**3.363806**		4.65000E-01	1.82973	1.82973	1.00 SA	82%		1.67189		
				(0.558414)		(7.1851E-02)	(0.297588)	(0.297588)	(0.01633)			0.722835		
	07/11/06	RA-228	R	**4.288511**	**U4**	8.75000E-02	2.33272	2.33272	1.00 SA	82%		18.852029		
				(4.24782)		(8.6205E-02)	(2.306697)	(2.306697)	(0.028284)			8.102612		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7DX01AD**	**PCI/SA**		05/24/06 08:15	07/11/06 06:09	06/27/06 17:00	RATA22887	1	1.00 SA	
536403,P-0652					,J6F140270-13 v4.8.24		FILTER			30.8	07/10/06 09:08	RATA22887 Alq	94%	0.243873 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	19	132	GPC3C	1	N	N	4.7091E-01	1.0000E+00	N	84%	N		1.3926E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.100488		
1	07/10/06 13:23	RA-228	15	132	GPC3C	1	N	N	4.7091E-01	1.0000E+00	N	84%	N		1.5449E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.100488		
2	07/10/06 14:18	RA-228	19	132	GPC3C	1	N	N	4.7091E-01	1.0000E+00	N	84%	N		1.7139E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.100488		
3	07/11/06 06:09	RA-228	14	96	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	84%	N		1.0225E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.100488		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/lLcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.328121**	**U4**	5.00000E-02	0.175645	0.175645	1.00 SA	84%		2.834754		
				(0.603265)		(9.1788E-02)	(0.322773)	(0.322773)	(0.028284)			1.240272		
	07/11/06	RA-228	R	**-0.218403**	**U4**	-3.00000E-02	-0.116912	-0.116912	1.00 SA	84%		3.144766		
				(0.601841)		(8.2614E-02)	(0.322098)	(0.322098)	(0.028284)			1.375909		
	07/11/06	RA-228	R	**0.403825**	**U4**	5.00000E-02	0.216169	0.216169	1.00 SA	84%		3.48879		
				(0.742451)		(9.1788E-02)	(0.397243)	(0.397243)	(0.028284)			1.526428		
	07/11/06	RA-228	A	**0.171181**	**U4**	2.33333E-02	0.091634	0.091634	1.00 SA	84%		1.822177		
				(0.376737)		(5.1289E-02)	(0.201586)	(0.201586)	(0.01633)			0.797246		
	07/11/06	RA-228	R	**1.893609**	**U4**	4.00000E-02	1.013657	1.013657	1.00 SA	84%		17.817039		
				(3.732528)		(7.8740E-02)	(1.99719)	(1.99719)	(0.028284)			7.63013		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:13

RADCALC v4.8.24

STL Richland

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7JQ51AA**	**PCI/SA**	**B**	05/24/06 07:40	07/11/06 06:09	06/27/06 17:00	RATA22888	1	1.00 SA	
0,INTRA-LAB BLANK					,J6F160000-192		FILTER			31.1	07/10/06 09:08	RATA22888 Alq	87%	1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:27	RA-228	28	69	GPC3D	1	N	N	4.6776E-01	1.0000E+00	N	79%	N		1.3926E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.145E-02)	(0.000E+00)		6%			(0.000E+00)	1.00		
1	07/10/06 13:23	RA-228	19	69	GPC3D	1	N	N	4.6776E-01	1.0000E+00	N	79%	N		1.5449E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.145E-02)	(0.000E+00)		6%			(0.000E+00)	1.00		
2	07/10/06 14:18	RA-228	14	69	GPC3D	1	N	N	4.6776E-01	1.0000E+00	N	79%	N		1.7139E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.145E-02)	(0.000E+00)		6%			(0.000E+00)	1.00		
3	07/11/06 06:09	RA-228	8	109	GPC3C	1	N	N	4.7074E-01	1.0000E+00	N	79%	N		1.0225E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.100E-02)	(0.000E+00)		6%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**0.668289**		3.87500E-01	1.46689	1.46689	1.00 SA	79%		0.564512		
				(0.197411)		(1.0785E-01)	(0.426307)	(0.426307)	(0.017321)			0.235659		
	07/11/06	RA-228	R	**0.396994**		2.07500E-01	0.871398	0.871398	1.00 SA	79%		0.626247		
				(0.175904)		(8.9617E-02)	(0.383344)	(0.383344)	(0.017321)			0.261431		
	07/11/06	RA-228	R	**0.228171**	**U4**	1.07500E-01	0.500834	0.500834	1.00 SA	79%		0.694756		
				(0.166378)		(7.7661E-02)	(0.364235)	(0.364235)	(0.017321)			0.29003		
	07/11/06	RA-228	A	**0.431152**		2.34167E-01	0.946374	0.946374	1.00 SA	79%		0.362868		
				(0.104134)		(5.3431E-02)	(0.226411)	(0.226411)	(0.01)			0.151481		
	07/11/06	RA-228	R	**-1.415542**	**U4**	-1.12500E-01	-3.107102	-3.107102	1.00 SA	79%		5.001356		
				(0.79625)		(6.2300E-02)	(1.740011)	(1.740011)	(0.017321)			2.160973		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	TF	FILTER	*STLE	Ra228WoBS	**H7JQ51AC**	**PCI/SA**	**S**	05/24/06 07:40	07/11/06 06:09	06/27/06 17:00	RASC4129	1	1.00 SA	
0,INTRA-LAB CHECK					,J6F160000-192		FILTER			31.3	07/10/06 09:08	RASC4129 Alq	89%	1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/10/06 12:28	RA-228	158	187	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	81%	N		1.3935E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		
1	07/10/06 13:23	RA-228	143	187	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	81%	N		1.5460E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		
2	07/10/06 14:18	RA-228	140	187	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	81%	N		1.7150E+00	4.5045E-01	1.0114E+00	
			50	400			Y		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		
3	07/11/06 06:09	RA-228	39	79	GPC3D	1	N	N	4.6770E-01	1.0000E+00	N	81%	N		1.0225E+01	4.5045E-01	1.0114E+00	
			50	400			N		(1.144E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		

Batch Nbr: 6167192

Alpha Beta, Ra-228 by GPC , Calculated Results

7/11/2006 7:56:11 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/11/06	RA-228	R	**4.360017**		2.69250E+00	9.5702	9.5702	1.00 SA	81%	86%	0.815867		
				(0.594681)		(2.5371E-01)	(1.203085)	(1.203085)	(0.017321)			0.364266		
	07/11/06	RA-228	R	**4.298045**		2.39250E+00	9.434171	9.434171	1.00 SA	81%	84%	0.90512		
				(0.606641)		(2.4160E-01)	(1.234454)	(1.234454)	(0.017321)			0.404116		
	07/11/06	RA-228	R	**4.648508**		2.33250E+00	10.203435	10.203435	1.00 SA	81%	91%	1.004105		
				(0.661205)		(2.3910E-01)	(1.347174)	(1.347174)	(0.017321)			0.44831		
	07/11/06	RA-228	A	**4.435523**		2.47250E+00	9.735935	9.735935	1.00 SA	81%	87%	0.524444		
				(0.358833)		(1.4138E-01)	(0.729244)	(0.729244)	(0.01)			0.234153		
	07/11/06	RA-228	R	**7.126691**		5.82500E-01	15.643027	15.643027	1.00 SA	81%	140%	4.238674		
				(1.704905)		(1.2686E-01)	(3.649559)	(3.649559)	(0.017321)			1.78884		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:14

RADCALC v4.8.24

STL Richland

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

UST Number: H7DXC1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 7-A File: [quad7.sample.A]H7DXC1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD7.BKGRND]CURRENT.A_1;2944

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00048	0050	01155	1700	10-JUL-2006 12:27:10.21
2	00000	00058	0050	01149	1700	10-JUL-2006 13:22:25.94
3	00000	00053	0050	01142	1700	10-JUL-2006 14:17:41.56

Bkg File: [quad7.bkgrnd]2006-07-09_2132.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00304	0400	0.76	09258	1700	9-JUL-2006 21:32:06.63

UST Number: H7DXC1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 7-A File: [quad7.sample.A]H7DXC1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD7.BKGRND]CURRENT.A_1;2945

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00051	0050	01140	1700	11-JUL-2006 06:13:29.62

Bkg File: [quad7.bkgrnd]2006-07-11_0236.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00301	0400	0.75	09210	1700	11-JUL-2006 02:36:18.73

UST Number: H7DXD1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 7-B File: [quad7.sample.B]H7DXD1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD7.BKGRND]CURRENT.B_1;2931

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00043	0050	01155	1700	10-JUL-2006 12:27:10.21
2	00000	00035	0050	01149	1700	10-JUL-2006 13:22:25.94
3	00000	00043	0050	01142	1700	10-JUL-2006 14:17:41.56

Bkg File: [quad7.bkgrnd]2006-07-09_2132.B_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00271	0400	0.68	09258	1700	9-JUL-2006 21:32:06.63

UST Number: H7DXD1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 7-B File: [quad7.sample.B]H7DXD1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD7.BKGRND]CURRENT.B_1;2932

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00047	0050	01140	1700	11-JUL-2006 06:13:29.62

Bkg File: [quad7.bkgrnd]2006-07-11_0236.B_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00309	0400	0.77	09210	1700	11-JUL-2006 02:36:18.73

UST Number: H7DXF1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 7-C File: [quad7.sample.C]H7DXF1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD7.BKGRND]CURRENT.C_1;2936

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00053	0050	01155	1700	10-JUL-2006 12:27:10.21
2	00000	00049	0050	01149	1700	10-JUL-2006 13:22:25.94
3	00000	00045	0050	01142	1700	10-JUL-2006 14:17:41.56

Bkg File: [quad7.bkgrnd]2006-07-09_2132.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00320	0400	0.80	09258	1700	9-JUL-2006 21:32:06.63

UST Number: H7DXF1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 7-C File: [quad7.sample.C]H7DXF1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD7.BKGRND]CURRENT.C_1;2937

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00038	0050	01140	1700	11-JUL-2006 06:13:29.62

Bkg File: [quad7.bkgrnd]2006-07-11_0236.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00330	0400	0.83	09210	1700	11-JUL-2006 02:36:18.73

UST Number: H7DXH1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 1-A File: [quad1.sample.A]H7DXH1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD1.BKGRND]CURRENT.A_1;2992

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00033	0050	01180	1650	10-JUL-2006 12:27:23.00
2	00000	00033	0050	01162	1650	10-JUL-2006 13:22:38.57
3	00000	00027	0050	01162	1650	10-JUL-2006 14:17:54.18

Bkg File: [quad1.bkgrnd]2006-07-09_2131.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00224	0400	0.56	09297	1650	9-JUL-2006 21:31:28.89

UST Number: H7DXH1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 1-A File: [quad1.sample.A]H7DXH1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD1.BKGRND]CURRENT.A_1;2993

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00039	0050	01151	1650	11-JUL-2006 06:13:38.76

Bkg File: [quad1.bkgrnd]2006-07-11_0240.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00247	0400	0.62	09255	1650	11-JUL-2006 02:40:44.26

UST Number: H7DXJ1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 1-C File: [quad1.sample.C]H7DXJ1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD1.BKGRND]CURRENT.C_1;2988

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00024	0050	01180	1650	10-JUL-2006 12:27:23.00
2	00000	00025	0050	01162	1650	10-JUL-2006 13:22:38.57
3	00000	00039	0050	01162	1650	10-JUL-2006 14:17:54.18

Bkg File: [quad1.bkgrnd]2006-07-09_2131.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00231	0400	0.58	09297	1650	9-JUL-2006 21:31:28.89

UST Number: H7DXJ1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 1-C File: [quad1.sample.C]H7DXJ1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD1.BKGRND]CURRENT.C_1;2989

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00026	0050	01151	1650	11-JUL-2006 06:13:38.76

Bkg File: [quad1.bkgrnd]2006-07-11_0240.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00212	0400	0.53	09255	1650	11-JUL-2006 02:40:44.26

UST Number: H7DXK1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 1-D File: [quad1.sample.D]H7DXK1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD1.BKGRND]CURRENT.D_1;2991

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00025	0050	01180	1650	10-JUL-2006 12:27:23.00
2	00000	00033	0050	01162	1650	10-JUL-2006 13:22:38.57
3	00000	00034	0050	01162	1650	10-JUL-2006 14:17:54.18

Bkg File: [quad1.bkgrnd]2006-07-09_2131.D_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00236	0400	0.59	09297	1650	9-JUL-2006 21:31:28.89

UST Number: H7DXK1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 1-D File: [quad1.sample.D]H7DXK1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD1.BKGRND]CURRENT.D_1;2992

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00042	0050	01151	1650	11-JUL-2006 06:13:38.76

Bkg File: [quad1.bkgrnd]2006-07-11_0240.D_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00264	0400	0.66	09255	1650	11-JUL-2006 02:40:44.26

UST Number: H7DXL1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 2-B File: [quad2.sample.B]H7DXL1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.B_1;3531

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00016	0050	01177	1810	10-JUL-2006 12:27:32.84
2	00000	00015	0050	01177	1810	10-JUL-2006 13:22:48.52
3	00000	00010	0050	01163	1810	10-JUL-2006 14:18:04.15

Bkg File: [quad2.bkgrnd]2006-07-09_2131.B_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00121	0400	0.30	09415	1810	9-JUL-2006 21:31:33.66

UST Number: H7DXL1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 2-A File: [quad2.sample.A]H7DXL1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.A_1;3535

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00016	0050	01159	1810	11-JUL-2006 06:13:49.69

Bkg File: [quad2.bkgrnd]2006-07-11_0240.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00070	0400	0.18	09331	1810	11-JUL-2006 02:40:49.36

UST Number: H7DXM1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 2-C File: [quad2.sample.C]H7DXM1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.C_1;3532

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00020	0050	01177	1810	10-JUL-2006 12:27:32.84
2	00000	00021	0050	01177	1810	10-JUL-2006 13:22:48.52
3	00000	00016	0050	01163	1810	10-JUL-2006 14:18:04.15

Bkg File: [quad2.bkgrnd]2006-07-09_2131.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00118	0400	0.30	09415	1810	9-JUL-2006 21:31:33.66

UST Number: H7DXM1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 2-B File: [quad2.sample.B]H7DXM1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.B_1;3532

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00018	0050	01159	1810	11-JUL-2006 06:13:49.69

Bkg File: [quad2.bkgrnd]2006-07-11_0240.B_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00106	0400	0.27	09331	1810	11-JUL-2006 02:40:49.36

UST Number: H7DXP1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 2-D File: [quad2.sample.D]H7DXP1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.D_1;3531

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00018	0050	01177	1810	10-JUL-2006 12:27:32.84
2	00000	00011	0050	01177	1810	10-JUL-2006 13:22:48.52
3	00000	00014	0050	01163	1810	10-JUL-2006 14:18:04.15

Bkg File: [quad2.bkgrnd]2006-07-09_2131.D_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00097	0400	0.24	09415	1810	9-JUL-2006 21:31:33.66

UST Number: H7DXP1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 2-C File: [quad2.sample.C]H7DXP1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.C_1;3533

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00008	0050	01159	1810	11-JUL-2006 06:13:49.69

Bkg File: [quad2.bkgrnd]2006-07-11_0240.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00095	0400	0.24	09331	1810	11-JUL-2006 02:40:49.36

UST Number: H7DXQ1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 3-A File: [quad3.sample.A]H7DXQ1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.A_1;5447

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00013	0050	01278	1920	10-JUL-2006 12:27:45.14
2	00000	00013	0050	01273	1920	10-JUL-2006 13:23:00.96
3	00000	00016	0050	01278	1920	10-JUL-2006 14:18:16.57

Bkg File: [quad3.bkgrnd]2006-07-09_2131.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00095	0400	0.24	10313	1920	9-JUL-2006 21:31:38.38

UST Number: H7DXQ1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 2-D File: [quad2.sample.D]H7DXQ1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD2.BKGRND]CURRENT.D_1;3532

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00014	0050	01159	1810	11-JUL-2006 06:13:49.69

Bkg File: [quad2.bkgrnd]2006-07-11_0240.D_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00077	0400	0.19	09331	1810	11-JUL-2006 02:40:49.36

UST Number: H7DXV1AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 3-B File: [quad3.sample.B]H7DXV1AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.B_1;5456

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00037	0050	01278	1920	10-JUL-2006 12:27:45.14
2	00000	00039	0050	01273	1920	10-JUL-2006 13:23:00.96
3	00000	00035	0050	01278	1920	10-JUL-2006 14:18:16.57

Bkg File: [quad3.bkgrnd]2006-07-09_2131.B_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00110	0400	0.28	10313	1920	9-JUL-2006 21:31:38.38

UST Number: H7DXV1AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 3-A File: [quad3.sample.A]H7DXV1AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.A_1;5448

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00017	0050	01284	1920	11-JUL-2006 06:09:05.95

Bkg File: [quad3.bkgrnd]2006-07-11_0240.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00101	0400	0.25	10204	1920	11-JUL-2006 02:40:54.40

UST Number: H7DX01AD Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 3-C File: [quad3.sample.C]H7DX01AD.180
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.C_1;5461

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00019	0050	01278	1920	10-JUL-2006 12:27:45.14
2	00000	00015	0050	01273	1920	10-JUL-2006 13:23:00.96
3	00000	00019	0050	01278	1920	10-JUL-2006 14:18:16.57

Bkg File: [quad3.bkgrnd]2006-07-09_2131.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00132	0400	0.33	10313	1920	9-JUL-2006 21:31:38.38

UST Number: H7DX01AD Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 3-B File: [quad3.sample.B]H7DX01AD.430
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.B_1;5457

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00014	0050	01284	1920	11-JUL-2006 06:09:05.95

Bkg File: [quad3.bkgrnd]2006-07-11_0240.B_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00096	0400	0.24	10204	1920	11-JUL-2006 02:40:54.40

UST Number: H7JQ51AA Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 3-D File: [quad3.sample.D]H7JQ51AA.180
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.D_1;5441

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00028	0050	01278	1920	10-JUL-2006 12:27:45.14
2	00000	00019	0050	01273	1920	10-JUL-2006 13:23:00.96
3	00000	00014	0050	01278	1920	10-JUL-2006 14:18:16.57

Bkg File: [quad3.bkgrnd]2006-07-09_2131.D_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00069	0400	0.17	10313	1920	9-JUL-2006 21:31:38.38

UST Number: H7JQ51AA Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 3-C File: [quad3.sample.C]H7JQ51AA.430
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.C_1;5462

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00008	0050	01284	1920	11-JUL-2006 06:09:05.95

Bkg File: [quad3.bkgrnd]2006-07-11_0240.C_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00109	0400	0.27	10204	1920	11-JUL-2006 02:40:54.40

UST Number: H7JQ51AC Isotope: 180 (QREPORT Rev 11-OCT-98)

Detector: 4-A File: [quad4.sample.A]H7JQ51AC.180
Dish Size: 1 Bkg File: $DISK1:[QUAD4.BKGRND]CURRENT.A_1;5466

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00158	0050	01220	1850	10-JUL-2006 12:28:07.44
2	00000	00143	0050	01198	1850	10-JUL-2006 13:23:23.32
3	00000	00140	0050	01200	1850	10-JUL-2006 14:18:38.97

Bkg File: [quad4.bkgrnd]2006-07-09_2131.A_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00187	0400	0.47	09716	1850	9-JUL-2006 21:31:48.24

UST Number: H7JQ51AC Isotope: 430 (QREPORT Rev 11-OCT-98)

Detector: 3-D File: [quad3.sample.D]H7JQ51AC.430
Dish Size: 1 Bkg File: $DISK1:[QUAD3.BKGRND]CURRENT.D_1;5442

Cycle	Alpha	Beta	Min	Guard	Volts	Finish Date/Time
1	00000	00039	0050	01284	1920	11-JUL-2006 06:09:05.95

Bkg File: [quad3.bkgrnd]2006-07-11_0240.D_1 (QREPORT Rev 11-OCT-98)

Cycle	Count	Min	CPM	Guard	Volts	Date/Time
Bkg	00079	0400	0.20	10204	1920	11-JUL-2006 02:40:54.40

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167192 pCi/sampl

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,LongA

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:
RA-228DA	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:					
H7JQ51AA-BLK:										
Ba-133	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	RA-228	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:
RA-228DA	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:					
H7JQ51AC-LCS:										
Ba-133	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	Ra-226	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20
RA-228	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20

H7DWT1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H7JQ51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H7JQ51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/25/2006 3:45:26 PM

Lot No., Due Date: J6F270218,J6F140270; 07/25/2006,07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6179357; RRA228 Ra-228 by GPC

SDG, Matrix: 31999,31902; FILTER

1.0 COC

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

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Review Pam Anderson **Date** 7-25-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6179357

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: Sherryl A Adam Date: 7-26-06

7/14/2006 9:34:27 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech: 7/17/06 AL 1512

Batch: 6179357 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: 6179354, BXTE

Sep2 DT/Tm Tech: 7:35 M 7-24-6

Prep Tech: HansenM,AntonsonL

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 H7DWT-1-AD J6F140270-1-SAMP	0.833g	501.65g	152.92g,in 1.0489	0.2539g	RATA23244 07/12/06	in 31.2	3x50	7A 1341 7/24/06 7A 0605 7/25/06		
05/24/2006 07:40		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:	
2 H796F-1-AD J6F270218-1-SAMP	0.833g	501.59g	152.13g,in 0.9828	0.2526g	RATA23245 07/12/06	30.9		7B 1341 7/24/06 7B 0605 7/25/06		
06/07/2006 10:00		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:	
3 H796L-1-AD J6F270218-2-SAMP	0.833g	501.03g	150.93g,in 1.0534	0.2509g	RATA23246 07/12/06	30.9		7C 1341 7/24/06 7C 0605 7/25/06		
06/07/2006 10:25		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:	
4 H796N-1-AD J6F270218-3-SAMP	0.833g	500.85g	153.24g,in 1.0515	0.2549g	RATA23247 07/12/06	31.1		1A 1341 7/24/06 1A 0605 7/25/06		
06/07/2006 10:35		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:	Beta:	

7/14/2006 9:34:27 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179357 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: 6179354, BXTE

Prep Tech: HansenM,AntonsonL

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:
5 H796P-1-AD J6F270218-4-SAMP	0.833g	501.24g	151.48g,in 0.9500	0.2517g	RATA23248 07/12/06	in	31.6	3x50	1C 1341 7/24/06 1C clos 7/25/06	
06/07/2006 10:50		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:
6 H796Q-1-AD J6F270218-5-SAMP	0.833g	517.56g	150.67g,in 1.0021	0.2425g	RATA23249 07/12/06		30.7		1D 1341 7/24/06 1D clos 7/25/06	
06/07/2006 11:00		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:
7 H796R-1-AD J6F270218-6-SAMP	0.833g	502.44g	153.56g,in 1.0220	0.2546g	RATA23250 07/12/06		30.6		2A 1341 7/24/06 2A clos 7/25/06	
06/07/2006 11:20		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:
8 H796T-1-AD J6F270218-7-SAMP	0.833g	500.22g	151.86g,in 1.0859	0.2529g	RATA23251 07/12/06		29.7		2B 1341 7/24/06 2B clos 7/25/06	
06/07/2006 10:10		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:

7/14/2006 9:34:28 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179357 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: 6179354, BXTE

Prep Tech: HansenM,AntonsonL

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:
9 H796W-1-AD J6F270218-8-SAMP	0.833g	501.87g	151.54g,in 0.9979	0.2515g	RATA23252 07/12/06	in 30.1		7/14 3D 3A 3D	1341 7/24/06 dcos 7/25/06	
06/07/2006 09:55		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
10H797D-1-AD J6F270218-9-SAMP	0.833g	500.74g	154.70g,in 0.9621	0.2573g	RATA23253 07/12/06	30.8		7/14 2D 3B 2D	1341 7/24/06 dcos 7/25/06	
06/07/2006 10:20		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
11H797E-1-AD J6F270218-10-SAMP	0.833g	503.68g	152.19g,in 0.9740	0.2517g	RATA23254 07/12/06	31.3		3A 3A	1341 7/24/06 dcos 7/25/06	
06/07/2006 10:30		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
12H797F-1-AD J6F270218-11-SAMP	0.833g	513.46g	150.13g,in 0.9903	0.2436g	RATA23255 07/12/06	31.3		3B 3B	1341 7/24/06 dcos 7/25/06	
06/07/2006 10:45		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 9:34:28 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179357 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: 6179354, BXTE

Prep Tech: HansenM,AntonsonL

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:
13H797H-1-AD J6F270218-12-SAMP	0.833g	501.88g	150.22g,in 0.9593	0.2493g	RATA23256 07/12/06	lin	30.9	3x50 3C 3C	1341 0605	7/24/06 7/25/06
06/07/2006 11:05		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:
14H797J-1-AD J6F270218-13-SAMP	0.833g	521.25g	154.34g,in 0.9363	0.2466g	RATA23257 07/12/06		31.0	3D 3D	1341 0605	7/24/06 7/25/06
06/07/2006 11:10		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:
15H797K-1-AD J6F270218-14-SAMP	0.833g	506.13g	153.17g,in 0.9581	0.2521g	RATA23258 07/12/06		30.7	4A 4A	1341 0605	7/24/06 7/25/06
06/07/2006 10:05		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:
16H797M-1-AD J6F270218-15-SAMP	0.833g	500.73g	150.39g,in 0.9542	0.2502g	RATA23259 07/12/06		31.1	4 7/24/06 ~~3B~~ 4B	1341 0605	7/24/06 7/25/06
06/07/2006 11:15		AmtRec: FILTER	#Containers: 1				Scr:	Alpha:		Beta:

7/14/2006 9:34:28 AM

Sample Preparation/Analysis

BX Ra-226/228 PrpRC5016, SepRC5005
TF Radium-228 by GPC
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179357 pCi/sampl

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,AntonsonL

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:
17H8DPD-1-AA-B J6F280000-357-BLK			1.00sa,in 0.9361	1.00sa	RATA23260 07/12/06	in	30.6	3x50 4 7/7/06 SC 4C	1341 0605	7/24/06 7/25/06
06/07/2006 10:00	AmtRec:		#Containers: 1				Scr:		Alpha:	Beta:
18H8DPD-1-AC-C J6F280000-357-LCS			1.00sa,in 0.9549	1.00sa	RASC4140 06/13/06		31.2	4 7/7/06 50 4D	1341 0605	7/24/06 7/25/06
06/07/2006 10:00	AmtRec:		#Containers: 1				Scr:		Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AD-SAMP Constituent List:

Ba-133	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	RA-228	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:
RA-228DA	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:						
H8DPD1AA-BLK:											
Ba-133	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	RA-228	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:
RA-228DA	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:						
H8DPD1AC-LCS:											
Ba-133	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20	Ra-226	RDL:	pCi/sam	LCL:70	UCL:130	RPD:20
RA-228	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20

H7DWT1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

7/25/2006 3:22:32 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2005, 7/30/2006, Batch: '6179357', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6179357						
AC		**CalcC**	**HansenM**	7/14/2006 8:47:24		
SC			wagarr	IsBatched	6/28/2006 1:36:13 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	7/14/2006 8:47:24 AM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	7/14/2006 8:47:55 AM	RICH-RC-5016 REVISION 5
SC			LongA	Sep1C	7/17/2006 5:26:27 PM	RICH-RC-5005 REVISION 5
SC			TamosaitisM	Sep2C	7/24/2006 7:53:21 AM	RICH-RC-5005 REVISION 4
SC			BlackCL	InCnt2	7/24/2006 11:05:52 AM	RICH-RD-0003 REVISION 4
SC			BlackCL	CalcC	7/25/2006 7:05:43 AM	RICH-RD-0003 REVISION 4
AC			**HansenM**	7/14/2006 8:47:55		
AC			**LongA**	7/17/2006 5:26:27 PM		
AC			**TamosaitisM**	7/24/2006 7:53:21		
AC			**BlackCL**	7/24/2006 11:05:52		
AC			**BlackCL**	7/25/2006 7:05:43		

AC: Accepting Entry; SC: Status Change

7/25/2006 3:22:32 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mda	Sample Date / Units	Expected	Yield	Volumes
31999	**9H796F10**			**J6F2702181**	000487	FILTER	6/26/2006 9:00:00		6/7/2006 10:00:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.2157E+00**	1.623E+00	1.71E+00	4.523E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.5369E+01**	1.72E+00	2.03E+00	5.537E+00	PCI/SA	1.0	1.0E+0	3.365E-2
RA-226	BXTE		0	7/21/2006 4:44:00 PM	**9.8826E-02**	2.063E-01	2.065E-01	7.875E-01	PCI/SA	0.983	1.0E+0	2.526E-1
RA-228	BXTF		0	7/25/2006 6:10:02 AM	**8.1159E-01**	5.566E-01	5.645E-01	2.513E+00	PCI/SA	0.883	1.0E+0	2.526E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.8822E-01**	1.16E-01	1.172E-01	4.052E-01	PCI/SA	1.079	1.0E+0	3.387E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**6.2836E-01**	1.534E-01	1.629E-01	2.154E-01	PCI/SA	1.079	1.0E+0	3.387E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**-3.5906E-02**	2.539E-02	2.558E-02	2.643E-01	PCI/SA	1.079	1.0E+0	3.387E-2
U-234	7YSR		0	7/18/2006 6:21:43 PM	**2.7995E-01**	1.743E-01	1.758E-01	4.788E-01	PCI/SA	0.975	1.0E+0	3.258E-2
U-235	7YSR		0	7/18/2006 6:21:43 PM	**9.9979E-02**	9.998E-02	1.003E-01	2.709E-01	PCI/SA	0.975	1.0E+0	3.258E-2
U-238	7YSR		0	7/18/2006 6:21:43 PM	**-1.9991E-02**	1.999E-02	2.006E-02	4.788E-01	PCI/SA	0.975	1.0E+0	3.258E-2
31999	**9H796L10**			**J6F2702182**	000488	FILTER	6/26/2006 9:00:00		6/7/2006 10:25:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.4966E+00**	1.672E+00	1.766E+00	4.546E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.7538E+01**	1.725E+00	2.106E+00	5.209E+00	PCI/SA	1.0	1.0E+0	3.479E-2
RA-226	BXTE		0	7/21/2006 4:42:00 PM	**2.7938E-01**	1.9E-01	1.923E-01	6.492E-01	PCI/SA	1.053	1.0E+0	2.509E-1
RA-228	BXTF		0	7/25/2006 6:10:02 AM	**9.0018E-01**	6.015E-01	6.015E-01	2.666E+00	PCI/SA	0.946	1.0E+0	2.509E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**5.5304E-02**	1.237E-01	1.238E-01	6.634E-01	PCI/SA	0.396	1.0E+0	3.517E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**3.165E-01**	1.827E-01	1.857E-01	2.859E-01	PCI/SA	0.396	1.0E+0	3.517E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**0.0E+00**	0.0E+00	1.292E-01	2.859E-01	PCI/SA	0.396	1.0E+0	3.517E-2
U-234	7YSR		0	7/18/2006 6:21:54 PM	**2.8598E-01**	1.651E-01	1.667E-01	2.583E-01	PCI/SA	0.926	1.0E+0	3.23E-2
U-235	7YSR		0	7/18/2006 6:21:54 PM	**2.6691E-01**	1.662E-01	1.676E-01	4.566E-01	PCI/SA	0.926	1.0E+0	3.23E-2
U-238	7YSR		0	7/18/2006 6:21:54 PM	**-3.8129E-02**	2.696E-02	2.713E-02	5.387E-01	PCI/SA	0.926	1.0E+0	3.23E-2
31999	**9H796N10**			**J6F2702183**	000489	FILTER	6/26/2006 9:00:00		6/7/2006 10:35:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**6.4647E+00**	1.658E+00	1.785E+00	3.857E+00	PCI/SA	1.0	1.0E+0	2.107E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.57E+01**	1.626E+00	1.941E+00	4.99E+00	PCI/SA	1.0	1.0E+0	3.648E-2
RA-226	BXTE		0	7/21/2006 4:42:00 PM	**1.8126E-01**	2.109E-01	2.119E-01	7.714E-01	PCI/SA	1.052	1.0E+0	2.549E-1
RA-228	BXTF		0	7/25/2006 5:35:01 AM	**-1.2509E-01**	4.687E-01	4.687E-01	2.257E+00	PCI/SA	0.951	1.0E+0	2.549E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.7654E-01**	8.827E-02	8.968E-02	1.196E-01	PCI/SA	1.023	1.0E+0	3.634E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.5259E-01**	1.031E-01	1.056E-01	1.141E-01	PCI/SA	1.023	1.0E+0	3.634E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**0.0E+00**	0.0E+00	5.156E-02	1.141E-01	PCI/SA	1.023	1.0E+0	3.634E-2
U-234	7YSR		0	7/18/2006 6:22:08 PM	**2.0632E-01**	1.459E-01	1.468E-01	2.796E-01	PCI/SA	0.951	1.0E+0	3.249E-2
U-235	7YSR		0	7/18/2006 6:22:08 PM	**0.0E+00**	0.0E+00	1.263E-01	2.796E-01	PCI/SA	0.951	1.0E+0	3.249E-2
U-238	7YSR		0	7/18/2006 6:22:08 PM	**8.2533E-02**	1.052E-01	1.054E-01	4.941E-01	PCI/SA	0.951	1.0E+0	3.249E-2
31999	**9H796P10**			**J6F2702184**	000490	FILTER	6/26/2006 9:00:00		6/7/2006 10:50:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**3.1E+00**	1.521E+00	1.554E+00	5.409E+00	PCI/SA	1.0	1.0E+0	2.116E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.905E+01**	1.708E+00	2.143E+00	5.03E+00	PCI/SA	1.0	1.0E+0	3.489E-2
RA-226	BXTE		0	7/21/2006 4:43:01 PM	**4.7177E-01**	2.98E-01	3.016E-01	1.016E+00	PCI/SA	0.95	1.0E+0	2.517E-1
RA-228	BXTF		0	7/25/2006 5:35:01 AM	**7.6026E-01**	5.176E-01	5.333E-01	2.387E+00	PCI/SA	0.873	1.0E+0	2.517E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.3167E-01**	7.755E-02	7.84E-02	2.256E-01	PCI/SA	1.107	1.0E+0	3.56E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.8707E-01**	1.015E-01	1.045E-01	9.724E-02	PCI/SA	1.107	1.0E+0	3.56E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**1.7942E-02**	4.012E-02	4.015E-02	2.152E-01	PCI/SA	1.107	1.0E+0	3.56E-2
U-234	7YSR		0	7/18/2006 6:22:38 PM	**-3.0904E-02**	1.545E-02	1.565E-02	5.153E-01	PCI/SA	1.056	1.0E+0	3.234E-2
U-235	7YSR		0	7/18/2006 6:22:38 PM	**8.1011E-02**	9.708E-02	9.729E-02	4.409E-01	PCI/SA	1.056	1.0E+0	3.234E-2
U-238	7YSR		0	7/18/2006 6:22:38 PM	**-4.6356E-02**	1.892E-02	1.928E-02	5.724E-01	PCI/SA	1.056	1.0E+0	3.234E-2
31999	**9H796Q10**			**J6F2702185**	000491	FILTER	6/26/2006 9:00:00		6/7/2006 11:00:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**5.8528E+00**	1.861E+00	1.958E+00	5.57E+00	PCI/SA	1.0	1.0E+0	2.042E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.5815E+01**	1.678E+00	1.993E+00	5.248E+00	PCI/SA	1.0	1.0E+0	3.123E-2
RA-226	BXTE		0	7/21/2006 4:41:00 PM	**9.1334E-01**	3.044E-01	3.184E-01	8.549E-01	PCI/SA	1.002	1.0E+0	2.425E-1
RA-228	BXTF		0	7/25/2006 5:35:01 AM	**1.0228E+00**	5.394E-01	5.41E-01	2.355E+00	PCI/SA	0.894	1.0E+0	2.425E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.7989E-01**	1.039E-01	1.051E-01	3.36E-01	PCI/SA	1.017	1.0E+0	3.115E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.0972E-01**	9.533E-02	9.71E-02	2.287E-01	PCI/SA	1.017	1.0E+0	3.115E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**3.0505E-01**	1.175E-01	1.206E-01	2.806E-01	PCI/SA	1.017	1.0E+0	3.115E-2

6179357, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DPD1AA=> , mat:FILTER | Air *wo:H8DPD1AC=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / mda	Units	Expected	Yield	Volumes
U-234	7YSR	0		7/18/2006 6:22:53 PM	**7.0218E-01**	2.752E-01	2.809E-01	5.183E-01	PCI/SA	0.981	1.0E+0	3.04E-2
U-235	7YSR	0		7/18/2006 6:22:53 PM	**7.8919E-02**	1.049E-01	1.051E-01	5.183E-01	PCI/SA	0.981	1.0E+0	3.04E-2
U-238	7YSR	0		7/18/2006 6:22:53 PM	**4.861E-01**	2.329E-01	2.361E-01	5.549E-01	PCI/SA	0.981	1.0E+0	3.04E-2
31999	**9H796R10**			**J6F2702186**	000492	FILTER	6/26/2006 9:00:00	6/7/2006 11:20:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**4.1775E+00**	1.513E+00	1.574E+00	4.568E+00	PCI/SA	1.0	1.0E+0	2.069E-2
BETA	BDS8	0		7/18/2006 1:34:35 PM	**1.7615E+01**	1.668E+00	2.065E+00	5.009E+00	PCI/SA	1.0	1.0E+0	3.434E-2
RA-226	BXTE	0		7/21/2006 4:44:01 PM	**2.2045E-01**	2.549E-01	2.559E-01	9.301E-01	PCI/SA	1.022	1.0E+0	2.546E-1
RA-228	BXTF	0		7/25/2006 6:05:42 AM	**1.3411E-02**	3.597E-01	3.662E-01	1.851E+00	PCI/SA	0.909	1.0E+0	2.546E-1
TH-228	9NS1	0		7/19/2006 12:16:34	**1.9618E-01**	9.989E-02	1.014E-01	2.615E-01	PCI/SA	0.997	1.0E+0	3.321E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**4.9901E-01**	1.441E-01	1.508E-01	1.127E-01	PCI/SA	0.997	1.0E+0	3.321E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**1.2475E-01**	7.203E-02	7.289E-02	1.127E-01	PCI/SA	0.997	1.0E+0	3.321E-2
U-234	7YSR	0		7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	3.244E-2
U-235	7YSR	0		7/18/2006 6:23:10 PM	**-8.2994E-03**	8.299E-03	8.326E-03	4.172E-01	PCI/SA	1.009	1.0E+0	3.244E-2
U-238	7YSR	0		7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA	1.009	1.0E+0	3.244E-2
31999	**9H796T10**			**J6F2702187**	000493	FILTER	6/26/2006 9:00:00	6/7/2006 10:10:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**-7.4933E-02**	8.593E-01	8.593E-01	4.586E+00	PCI/SA	1.0	1.0E+0	2.117E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.0747E+00**	1.22E+00	1.222E+00	5.046E+00	PCI/SA	1.0	1.0E+0	3.395E-2
RA-226	BXTE	0		7/21/2006 4:43:01 PM	**4.3349E-01**	2.053E-01	2.098E-01	6.313E-01	PCI/SA	1.086	1.0E+0	2.529E-1
RA-228	BXTF	0		7/25/2006 6:05:42 AM	**1.3017E+00**	4.285E-01	4.418E-01	1.773E+00	PCI/SA	0.938	1.0E+0	2.529E-1
TH-228	9NS1	0		7/19/2006 12:16:34	**1.9076E-02**	4.265E-02	4.269E-02	2.288E-01	PCI/SA	0.936	1.0E+0	3.453E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**2.7293E-01**	1.045E-01	1.073E-01	2.183E-01	PCI/SA	0.936	1.0E+0	3.453E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**-3.639E-02**	2.573E-02	2.593E-02	2.678E-01	PCI/SA	0.936	1.0E+0	3.453E-2
U-234	7YSR	0		7/18/2006 6:23:32 PM	**-2.801E-02**	1.617E-02	1.633E-02	5.817E-01	PCI/SA	0.885	1.0E+0	3.256E-2
U-235	7YSR	0		7/18/2006 6:23:32 PM	**-1.8673E-02**	1.32E-02	1.329E-02	5.33E-01	PCI/SA	0.885	1.0E+0	3.256E-2
U-238	7YSR	0		7/18/2006 6:23:32 PM	**1.166E-01**	1.166E-01	1.17E-01	3.16E-01	PCI/SA	0.885	1.0E+0	3.256E-2
31999	**9H796W10**			**J6F2702188**	P-0660	FILTER	6/26/2006 9:00:00	6/7/2006 9:55:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**3.8436E+00**	1.391E+00	1.445E+00	4.008E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.3482E+01**	1.585E+00	1.923E+00	5.061E+00	PCI/SA	1.0	1.0E+0	3.329E-2
RA-226	BXTE	0		7/21/2006 5:11:01 PM	**-3.0368E-01**	2.048E-01	2.07E-01	8.759E-01	PCI/SA	0.998	1.0E+0	2.515E-1
RA-228	BXTF	0		7/25/2006 6:05:42 AM	**8.4367E-01**	4.011E-01	4.182E-01	1.816E+00	PCI/SA	0.873	1.0E+0	2.515E-1
TH-228	9NS1	0		7/19/2006 12:17:22	**-5.5508E-02**	5.549E-02	5.57E-02	3.722E-01	PCI/SA	0.916	1.0E+0	3.475E-2
TH-230	9NS1	0		7/19/2006 12:17:22	**2.6634E+00**	3.08E-01	3.872E-01	2.116E-01	PCI/SA	0.916	1.0E+0	3.475E-2
TH-232	9NS1	0		7/19/2006 12:17:22	**3.5277E-02**	3.528E-02	3.541E-02	9.56E-02	PCI/SA	0.916	1.0E+0	3.475E-2
U-234	7YSR	0		7/18/2006 6:24:30 PM	**1.5766E-01**	1.422E-01	1.427E-01	5.571E-01	PCI/SA	1.006	1.0E+0	3.241E-2
U-235	7YSR	0		7/18/2006 6:24:30 PM	**-3.9462E-02**	2.79E-02	2.808E-02	5.571E-01	PCI/SA	1.006	1.0E+0	3.241E-2
U-238	7YSR	0		7/18/2006 6:24:30 PM	**-5.9194E-02**	3.418E-02	3.45E-02	6.223E-01	PCI/SA	1.006	1.0E+0	3.241E-2
31999	**9H797D10**			**J6F2702189**	P-0661	FILTER	6/26/2006 9:00:00	6/7/2006 10:20:00 AM				
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**2.4154E+00**	1.461E+00	1.482E+00	5.531E+00	PCI/SA	1.0	1.0E+0	2.086E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.2452E+01**	1.549E+00	1.861E+00	5.002E+00	PCI/SA	1.0	1.0E+0	3.541E-2
RA-226	BXTE	0		7/21/2006 5:12:00 PM	**3.5851E-01**	2.991E-01	3.013E-01	1.056E+00	PCI/SA	0.962	1.0E+0	2.573E-1
RA-228	BXTF	0		7/25/2006 6:05:42 AM	**6.4114E-01**	4.448E-01	4.448E-01	1.994E+00	PCI/SA	0.861	1.0E+0	2.573E-1
TH-228	9NS1	0		7/19/2006 12:17:33	**1.1088E-01**	9.667E-02	9.717E-02	3.728E-01	PCI/SA	1.071	1.0E+0	3.341E-2
TH-230	9NS1	0		7/19/2006 12:17:33	**8.4616E-02**	5.983E-02	6.03E-02	1.147E-01	PCI/SA	1.071	1.0E+0	3.341E-2
TH-232	9NS1	0		7/19/2006 12:17:33	**0.0E+00**	0.0E+00	5.182E-02	1.147E-01	PCI/SA	1.071	1.0E+0	3.341E-2
U-234	7YSR	0		7/18/2006 6:24:37 PM	**0.0E+00**	0.0E+00	1.219E-01	2.697E-01	PCI/SA	1.029	1.0E+0	3.248E-2
U-235	7YSR	0		7/18/2006 6:24:37 PM	**-5.9728E-02**	3.448E-02	3.481E-02	6.282E-01	PCI/SA	1.029	1.0E+0	3.248E-2
U-238	7YSR	0		7/18/2006 6:24:37 PM	**3.9782E-02**	1.053E-01	1.054E-01	6.282E-01	PCI/SA	1.029	1.0E+0	3.248E-2
31999	**9H797E10**			**J6F27021810**	P-0662	FILTER	6/26/2006 9:00:00	6/7/2006 10:30:00 AM				
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**6.44E+00**	1.887E+00	2.002E+00	5.424E+00	PCI/SA	1.0	1.0E+0	2.072E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.046E+01**	1.699E+00	1.853E+00	6.064E+00	PCI/SA	1.0	1.0E+0	3.603E-2
RA-226	BXTE	0		7/21/2006 5:10:00 PM	**6.216E-02**	1.618E-01	1.62E-01	6.4E-01	PCI/SA	0.974	1.0E+0	2.517E-1
RA-228	BXTF	0		7/25/2006 6:05:44 AM	**1.0269E+00**	3.808E-01	3.935E-01	1.616E+00	PCI/SA	0.886	1.0E+0	2.517E-1
TH-228	9NS1	0		7/19/2006 12:17:45	**8.9776E-02**	8.399E-02	8.438E-02	3.305E-01	PCI/SA	0.991	1.0E+0	3.433E-2
TH-230	9NS1	0		7/19/2006 12:17:45	**1.7129E-01**	8.565E-02	8.702E-02	1.16E-01	PCI/SA	0.991	1.0E+0	3.433E-2

6179357, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DPD1AA=> , mat:FILTER | Air *wo:H8DPD1AC=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes
TH-232	9NS1	0	7/19/2006 12:17:45	**0.0E+00**	0.0E+00	5.245E-02	1.16E-01	PCI/SA	0.991	1.0E+0	3.433E-2
U-234	7YSR	0	7/18/2006 6:24:49 PM	**-1.4874E-01**	5.622E-02	5.748E-02	8.722E-01	PCI/SA	0.906	1.0E+0	3.215E-2
U-235	7YSR	0	7/18/2006 6:24:49 PM	**-6.3746E-02**	3.68E-02	3.716E-02	6.704E-01	PCI/SA	0.906	1.0E+0	3.215E-2
U-238	7YSR	0	7/18/2006 6:24:49 PM	**-2.1298E-02**	1.183E-01	1.183E-01	8.288E-01	PCI/SA	0.906	1.0E+0	3.215E-2
31999	**9H797F10**		**J6F27021811**	P-0663	FILTER	6/26/2006 9:00:00	6/7/2006 10:45:00 AM				
ALPHA	BAS7	0	7/18/2006 7:02:47 PM	**3.9003E+00**	1.502E+00	1.556E+00	4.671E+00	PCI/SA	1.0	1.0E+0	2.03E-2
BETA	BDS8	0	7/18/2006 1:34:19 PM	**1.6067E+01**	1.616E+00	2.113E+00	4.856E+00	PCI/SA	1.0	1.0E+0	3.165E-2
RA-226	BXTE	0	7/21/2006 5:11:03 PM	**2.4592E-01**	1.489E-01	1.512E-01	4.86E-01	PCI/SA	0.99	1.0E+0	2.436E-1
RA-228	BXTF	0	7/25/2006 6:05:44 AM	**1.8999E+00**	4.472E-01	4.63E-01	1.65E+00	PCI/SA	0.901	1.0E+0	2.436E-1
TH-228	9NS1	0	7/19/2006 12:17:53	**-1.7632E-05**	8.33E-02	8.33E-02	4.466E-01	PCI/SA	0.992	1.0E+0	3.219E-2
TH-230	9NS1	0	7/19/2006 12:17:53	**1.1467E-01**	8.27E-02	8.334E-02	2.751E-01	PCI/SA	0.992	1.0E+0	3.219E-2
TH-232	9NS1	0	7/19/2006 12:17:53	**0.0E+00**	0.0E+00	5.618E-02	1.243E-01	PCI/SA	0.992	1.0E+0	3.219E-2
U-234	7YSR	0	7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	3.092E-2
U-235	7YSR	0	7/18/2006 6:25:00 PM	**-1.9478E-02**	1.948E-02	1.954E-02	4.665E-01	PCI/SA	1.011	1.0E+0	3.092E-2
U-238	7YSR	0	7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	3.092E-2
31999	**9H797H10**		**J6F27021812**	P-0664	FILTER	6/26/2006 9:00:00	6/7/2006 11:05:00 AM				
ALPHA	BAS7	0	7/18/2006 7:02:47 PM	**3.7E+00**	1.475E+00	1.524E+00	4.621E+00	PCI/SA	1.0	1.0E+0	2.075E-2
BETA	BDS8	0	7/18/2006 1:34:19 PM	**1.3205E+01**	1.591E+00	1.827E+00	5.143E+00	PCI/SA	1.0	1.0E+0	3.304E-2
RA-226	BXTE	0	7/21/2006 5:11:01 PM	**1.0716E-01**	1.676E-01	1.68E-01	6.35E-01	PCI/SA	0.959	1.0E+0	2.493E-1
RA-228	BXTF	0	7/25/2006 6:05:44 AM	**1.4284E+00**	4.773E-01	4.865E-01	1.956E+00	PCI/SA	0.862	1.0E+0	2.493E-1
TH-228	9NS1	0	7/19/2006 10:14:05	**1.9535E-06**	8.279E-02	8.279E-02	4.201E-01	PCI/SA	1.047	1.0E+0	3.332E-2
TH-230	9NS1	0	7/19/2006 10:14:05	**1.3025E-01**	7.672E-02	7.757E-02	2.232E-01	PCI/SA	1.047	1.0E+0	3.332E-2
TH-232	9NS1	0	7/19/2006 10:14:05	**3.7213E-02**	3.721E-02	3.736E-02	1.008E-01	PCI/SA	1.047	1.0E+0	3.332E-2
U-234	7YSR	0	7/18/2006 6:25:11 PM	**5.5292E-02**	1.392E-01	1.392E-01	7.569E-01	PCI/SA	1.009	1.0E+0	3.232E-2
U-235	7YSR	0	7/18/2006 6:25:11 PM	**-1.8434E-02**	1.843E-02	1.849E-02	4.414E-01	PCI/SA	1.009	1.0E+0	3.232E-2
U-238	7YSR	0	7/18/2006 6:25:11 PM	**7.3726E-02**	1.379E-01	1.381E-01	7.192E-01	PCI/SA	1.009	1.0E+0	3.232E-2
31999	**9H797J10**		**J6F27021813**	P-0665	FILTER	6/26/2006 9:00:00	6/7/2006 11:10:00 AM				
ALPHA	BAS7	0	7/18/2006 7:02:47 PM	**5.0222E+00**	1.555E+00	1.638E+00	4.09E+00	PCI/SA	1.0	1.0E+0	2.002E-2
BETA	BDS8	0	7/18/2006 1:34:38 PM	**1.2848E+01**	1.59E+00	1.818E+00	5.167E+00	PCI/SA	1.0	1.0E+0	3.455E-2
RA-226	BXTE	0	7/21/2006 5:10:00 PM	**2.4633E-01**	2.038E-01	2.055E-01	7.196E-01	PCI/SA	0.936	1.0E+0	2.466E-1
RA-228	BXTF	0	7/25/2006 6:05:44 AM	**1.5253E+00**	4.63E-01	4.732E-01	1.84E+00	PCI/SA	0.844	1.0E+0	2.466E-1
TH-228	9NS1	0	7/19/2006 10:14:05	**-7.7987E-02**	6.166E-02	6.204E-02	4.197E-01	PCI/SA	1.004	1.0E+0	3.099E-2
TH-230	9NS1	0	7/19/2006 10:14:05	**5.0194E-01**	1.404E-01	1.472E-01	2.23E-01	PCI/SA	1.004	1.0E+0	3.099E-2
TH-232	9NS1	0	7/19/2006 10:14:05	**6.2033E-07**	4.554E-02	4.554E-02	2.737E-01	PCI/SA	1.004	1.0E+0	3.099E-2
U-234	7YSR	0	7/18/2006 6:25:24 PM	**0.0E+00**	0.0E+00	1.219E-01	2.698E-01	PCI/SA	1.091	1.0E+0	3.015E-2
U-235	7YSR	0	7/18/2006 6:25:24 PM	**-1.9916E-02**	1.992E-02	1.998E-02	4.769E-01	PCI/SA	1.091	1.0E+0	3.015E-2
U-238	7YSR	0	7/18/2006 6:25:24 PM	**1.5928E-01**	1.436E-01	1.441E-01	5.626E-01	PCI/SA	1.091	1.0E+0	3.015E-2
31999	**9H797K10**		**J6F27021814**	P-0666	FILTER	6/26/2006 9:00:00	6/7/2006 10:05:00 AM				
ALPHA	BAS7	0	7/18/2006 7:02:47 PM	**-6.0243E-01**	9.947E-01	9.967E-01	5.518E+00	PCI/SA	1.0	1.0E+0	2.066E-2
BETA	BDS8	0	7/18/2006 1:34:38 PM	**1.2862E+01**	1.583E+00	1.813E+00	5.122E+00	PCI/SA	1.0	1.0E+0	3.229E-2
RA-226	BXTE	0	7/21/2006 5:26:00 PM	**3.8954E-01**	1.827E-01	1.869E-01	5.73E-01	PCI/SA	0.958	1.0E+0	2.521E-1
RA-228	BXTF	0	7/25/2006 6:05:54 AM	**9.5959E-01**	5.366E-01	5.366E-01	2.345E+00	PCI/SA	0.855	1.0E+0	2.521E-1
TH-228	9NS1	0	7/19/2006 10:14:05	**2.4133E-01**	1.097E-01	1.118E-01	2.632E-01	PCI/SA	1.024	1.0E+0	3.496E-2
TH-230	9NS1	0	7/19/2006 10:14:05	**3.7652E-01**	1.255E-01	1.3E-01	1.134E-01	PCI/SA	1.024	1.0E+0	3.496E-2
TH-232	9NS1	0	7/19/2006 10:14:05	**0.0E+00**	0.0E+00	5.124E-02	1.134E-01	PCI/SA	1.024	1.0E+0	3.496E-2
U-234	7YSR	0	7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA	0.914	1.0E+0	3.187E-2
U-235	7YSR	0	7/18/2006 6:25:43 PM	**1.0956E-01**	1.096E-01	1.099E-01	2.969E-01	PCI/SA	0.914	1.0E+0	3.187E-2
U-238	7YSR	0	7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA	0.914	1.0E+0	3.187E-2
31999	**9H797M10**		**J6F27021815**	P-0667	FILTER	6/26/2006 9:00:00	6/7/2006 11:15:00 AM				
ALPHA	BAS7	0	7/19/2006 8:30:44 AM	**-2.1818E+00**	8.681E-01	8.973E-01	6.058E+00	PCI/SA	1.0	1.0E+0	2.084E-2
BETA	BDS8	0	7/18/2006 1:34:38 PM	**1.6716E+00**	1.229E+00	1.238E+00	5.002E+00	PCI/SA	1.0	1.0E+0	3.539E-2
RA-226	BXTE	0	7/21/2006 5:26:00 PM	**1.2237E-02**	6.758E-02	6.759E-02	3.199E-01	PCI/SA	0.954	1.0E+0	2.502E-1
RA-228	BXTF	0	7/25/2006 6:05:54 AM	**8.3849E-01**	4.109E-01	4.16E-01	1.796E+00	PCI/SA	0.863	1.0E+0	2.502E-1
TH-228	9NS1	0	7/19/2006 10:14:05	**1.3121E-01**	7.575E-02	7.667E-02	1.185E-01	PCI/SA	1.011	1.0E+0	3.715E-2

6179357, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DPD1AA=> , mat:FILTER | Air *wo:H8DPD1AC=> , mat:FILTER | Air.

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
TH-230	9NS1	0		7/19/2006 10:14:05	**2.0851E-01**	9.325E-02	9.511E-02	1.13E-01	PCI/SA		1.011	1.0E+0	3.715E-2
TH-232	9NS1	0		7/19/2006 10:14:05	**4.1702E-02**	4.17E-02	4.187E-02	1.13E-01	PCI/SA		1.011	1.0E+0	3.715E-2
U-234	7YSR	0		7/18/2006 6:25:53 PM	**0.0E+00**	0.0E+00	1.38E-01	3.054E-01	PCI/SA		0.816	1.0E+0	3.267E-2
U-235	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	3.267E-2
U-238	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA		0.816	1.0E+0	3.267E-2
31902	**9H7DWT10**			**J6F1402701**	000473	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
ALPHA	BAS7	0		7/18/2006 1:26:23 PM	**3.4147E+00**	1.54E+00	1.581E+00	5.324E+00	PCI/SA		1.0	1.0E+0	2.096E-2
BETA	BDS8	0		7/18/2006 1:34:31 PM	**1.2465E+01**	1.665E+00	1.896E+00	5.665E+00	PCI/SA		1.0	1.0E+0	3.326E-2
RA-226	BXTE	0		7/21/2006 4:43:00 PM	**5.0869E-01**	2.598E-01	2.651E-01	8.594E-01	PCI/SA		1.049	1.0E+0	2.539E-1
RA-228	BXTF	0		7/25/2006 6:10:02 AM	**1.3688E+00**	5.661E-01	5.661E-01	2.379E+00	PCI/SA		0.951	1.0E+0	2.539E-1
TH-228	9NS1	0		7/19/2006 12:16:34	**-3.9324E-02**	7.357E-02	7.365E-02	4.233E-01	PCI/SA		1.057	1.0E+0	3.382E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**2.0344E-01**	9.247E-02	9.419E-02	2.219E-01	PCI/SA		1.057	1.0E+0	3.382E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**0.0E+00**	0.0E+00	4.53E-02	1.002E-01	PCI/SA		1.057	1.0E+0	3.382E-2
U-234	7YSR	0		7/18/2006 6:21:38 PM	**8.4174E-02**	1.073E-01	1.075E-01	5.042E-01	PCI/SA		0.936	1.0E+0	3.232E-2
U-235	7YSR	0		7/18/2006 6:21:38 PM	**0.0E+00**	0.0E+00	1.289E-01	2.852E-01	PCI/SA		0.936	1.0E+0	3.232E-2
U-238	7YSR	0		7/18/2006 6:21:38 PM	**-4.2133E-02**	2.979E-02	2.999E-02	5.948E-01	PCI/SA		0.936	1.0E+0	3.232E-2
31999	**H8DPD1AB**			**J6F280000357**	INTRA-LAB BLANK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
RA-228	BXTF	0	B	7/25/2006 6:05:54 AM	**1.135E-01**	8.946E-02	9.868E-02	4.61E-01	PCI/SA		0.833	1.0E+0	1.0E+0
31999	**H8DPD1CS**			**J6F280000357**	INTRA-LAB CHECK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
RA-228	BXTF	0	S	7/25/2006 6:05:54 AM	**3.948E+00**	2.483E-01	3.358E-01	4.439E-01	PCI/SA	5.0742E+00	0.866	1.0E+0	1.0E+0

6179357, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => *wo:H8DPD1AA=> , mat:FILTER | Air *wo:H8DPD1AC=> , mat:FILTER | Air.

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Results

7/25/2006 7:03:09 AM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Ra-228 by GPC				Ra-226/Ra-228 Deem With Out Blk Subt.										
Calc	TF	FILTER	**H7DWT1AD**	RA-228	**0.00E+00**	**(7.72E-01)**	**U4**	PCI/SA	R	1.69E+00	3.70E+00		95%	
Calc	TF	FILTER	**H7DWT1AD**	RA-228	**1.81E+00**	**(1.00E+00)**		PCI/SA	R	1.88E+00	4.11E+00		95%	
Calc	TF	FILTER	**H7DWT1AD**	RA-228	**2.30E+00**	**(1.13E+00)**		PCI/SA	R	2.08E+00	4.56E+00		95%	
Calc	TF	FILTER	**H7DWT1AD**	RA-228	**1.37E+00**	**(5.66E-01)**		PCI/SA	A	1.09E+00	2.38E+00		95%	
Calc	TF	FILTER	**H7DWT1AD**	RA-228	**9.27E+00**	**(6.55E+00)**	**U4**	PCI/SA	R	1.27E+01	2.79E+01		95%	
Calc	TF	FILTER	**H796F1AD**	RA-228	**1.32E+00**	**(9.20E-01)**	**U4**	PCI/SA	R	1.79E+00	3.91E+00		88%	
Calc	TF	FILTER	**H796F1AD**	RA-228	**-3.48E-01**	**(8.77E-01)**	**U4**	PCI/SA	R	1.98E+00	4.34E+00		88%	
Calc	TF	FILTER	**H796F1AD**	RA-228	**1.47E+00**	**(1.12E+00)**	**U4**	PCI/SA	R	2.20E+00	4.81E+00		88%	
Calc	TF	FILTER	**H796F1AD**	RA-228	**8.12E-01**	**(5.64E-01)**	**U4**	PCI/SA	A	1.15E+00	2.51E+00		88%	
Calc	TF	FILTER	**H796F1AD**	RA-228	**3.24E+00**	**(6.34E+00)**	**U4**	PCI/SA	R	1.33E+01	2.93E+01		88%	
Calc	TF	FILTER	**H796L1AD**	RA-228	**3.32E-01**	**(8.95E-01)**	**U4**	PCI/SA	R	1.91E+00	4.15E+00		95%	
Calc	TF	FILTER	**H796L1AD**	RA-228	**7.70E-01**	**(1.02E+00)**	**U4**	PCI/SA	R	2.12E+00	4.60E+00		95%	
Calc	TF	FILTER	**H796L1AD**	RA-228	**1.60E+00**	**(1.19E+00)**	**U4**	PCI/SA	R	2.35E+00	5.10E+00		95%	
Calc	TF	FILTER	**H796L1AD**	RA-228	**9.00E-01**	**(6.02E-01)**	**U4**	PCI/SA	A	1.23E+00	2.67E+00		95%	
Calc	TF	FILTER	**H796L1AD**	RA-228	**2.08E+00**	**(6.50E+00)**	**U4**	PCI/SA	R	1.39E+01	3.03E+01		95%	
Calc	TF	FILTER	**H796N1AD**	RA-228	**1.13E+00**	**(8.22E-01)**	**U4**	PCI/SA	R	1.60E+00	3.51E+00		95%	
Calc	TF	FILTER	**H796N1AD**	RA-228	**-1.51E+00**	**(7.01E-01)**	**U4**	PCI/SA	R	1.78E+00	3.90E+00		95%	
Calc	TF	FILTER	**H796N1AD**	RA-228	**0.00E+00**	**(9.00E-01)**	**U4**	PCI/SA	R	1.97E+00	4.32E+00		95%	
Calc	TF	FILTER	**H796N1AD**	RA-228	**-1.25E-01**	**(4.69E-01)**	**U4**	PCI/SA	A	1.03E+00	2.26E+00		95%	
Calc	TF	FILTER	**H796N1AD**	RA-228	**1.42E+00**	**(4.86E+00)**	**U4**	PCI/SA	R	1.04E+01	2.30E+01		95%	
Calc	TF	FILTER	**H796P1AD**	RA-228	**1.33E+00**	**(8.82E-01)**	**U4**	PCI/SA	R	1.69E+00	3.71E+00		87%	
Calc	TF	FILTER	**H796P1AD**	RA-228	**-7.05E-02**	**(8.47E-01)**	**U4**	PCI/SA	R	1.87E+00	4.12E+00		87%	
Calc	TF	FILTER	**H796P1AD**	RA-228	**1.02E+00**	**(1.03E+00)**	**U4**	PCI/SA	R	2.07E+00	4.57E+00		87%	
Calc	TF	FILTER	**H796P1AD**	RA-228	**7.60E-01**	**(5.33E-01)**	**U4**	PCI/SA	A	1.08E+00	2.39E+00		87%	
Calc	TF	FILTER	**H796P1AD**	RA-228	**-4.33E+00**	**(4.81E+00)**	**U4**	PCI/SA	R	1.14E+01	2.52E+01		87%	
Calc	TF	FILTER	**H796Q1AD**	RA-228	**1.12E+00**	**(8.53E-01)**	**U4**	PCI/SA	R	1.66E+00	3.66E+00		89%	
Calc	TF	FILTER	**H796Q1AD**	RA-228	**2.62E-01**	**(8.63E-01)**	**U4**	PCI/SA	R	1.84E+00	4.07E+00		89%	
Calc	TF	FILTER	**H796Q1AD**	RA-228	**1.69E+00**	**(1.08E+00)**	**U4**	PCI/SA	R	2.05E+00	4.51E+00		89%	
Calc	TF	FILTER	**H796Q1AD**	RA-228	**1.02E+00**	**(5.41E-01)**		PCI/SA	A	1.07E+00	2.36E+00		89%	
Calc	TF	FILTER	**H796Q1AD**	RA-228	**8.14E+00**	**(5.97E+00)**	**U4**	PCI/SA	R	1.15E+01	2.55E+01		89%	
Calc	TF	FILTER	**H796R1AD**	RA-228	**-3.67E-02**	**(5.61E-01)**	**U4**	PCI/SA	R	1.24E+00	2.88E+00		91%	
Calc	TF	FILTER	**H796R1AD**	RA-228	**1.22E-01**	**(6.44E-01)**	**U4**	PCI/SA	R	1.38E+00	3.19E+00		91%	
Calc	TF	FILTER	**H796R1AD**	RA-228	**-4.51E-02**	**(6.91E-01)**	**U4**	PCI/SA	R	1.53E+00	3.54E+00		91%	
Calc	TF	FILTER	**H796R1AD**	RA-228	**1.34E-02**	**(3.66E-01)**	**U4**	PCI/SA	A	7.98E-01	1.85E+00		91%	
Calc	TF	FILTER	**H796R1AD**	RA-228	**-4.73E+00**	**(3.27E+00)**	**U4**	PCI/SA	R	8.69E+00	2.04E+01		91%	
Calc	TF	FILTER	**H796T1AD**	RA-228	**1.23E+00**	**(6.94E-01)**		PCI/SA	R	1.19E+00	2.76E+00		94%	
Calc	TF	FILTER	**H796T1AD**	RA-228	**1.83E+00**	**(8.23E-01)**		PCI/SA	R	1.32E+00	3.06E+00		94%	
Calc	TF	FILTER	**H796T1AD**	RA-228	**8.44E-01**	**(7.74E-01)**	**U4**	PCI/SA	R	1.47E+00	3.40E+00		94%	

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:39
RADCALC v4.8.24
STL Richland

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	TF	FILTER	H796T1AD	RA-228	1.30E+00	(4.42E-01)		PCI/SA	A	7.68E-01	1.77E+00		94%	
Calc	TF	FILTER	H796T1AD	RA-228	-1.56E+00	(3.70E+00)	U4	PCI/SA	R	8.57E+00	2.00E+01		94%	
Calc	TF	FILTER	H796W1AD	RA-228	1.15E+00	(7.01E-01)	U4	PCI/SA	R	1.21E+00	2.82E+00		87%	
Calc	TF	FILTER	H796W1AD	RA-228	1.10E+00	(7.56E-01)	U4	PCI/SA	R	1.34E+00	3.13E+00		87%	
Calc	TF	FILTER	H796W1AD	RA-228	2.82E-01	(7.15E-01)	U4	PCI/SA	R	1.48E+00	3.48E+00		87%	
Calc	TF	FILTER	H796W1AD	RA-228	8.44E-01	(4.18E-01)		PCI/SA	A	7.75E-01	1.82E+00		87%	
Calc	TF	FILTER	H796W1AD	RA-228	3.92E+00	(4.88E+00)	U4	PCI/SA	R	9.60E+00	2.23E+01		87%	
Calc	TF	FILTER	H797D1AD	RA-228	4.49E-01	(6.69E-01)	U4	PCI/SA	R	1.35E+00	3.10E+00		86%	
Calc	TF	FILTER	H797D1AD	RA-228	0.00E+00	(6.82E-01)	U4	PCI/SA	R	1.50E+00	3.44E+00		86%	
Calc	TF	FILTER	H797D1AD	RA-228	1.47E+00	(9.31E-01)	U4	PCI/SA	R	1.66E+00	3.82E+00		86%	
Calc	TF	FILTER	H797D1AD	RA-228	6.41E-01	(4.45E-01)	U4	PCI/SA	A	8.67E-01	1.99E+00		86%	
Calc	TF	FILTER	H797D1AD	RA-228	3.27E+00	(4.31E+00)	U4	PCI/SA	R	8.42E+00	1.99E+01		86%	
Calc	TF	FILTER	H797E1AD	RA-228	1.27E+00	(6.57E-01)		PCI/SA	R	1.07E+00	2.51E+00		89%	
Calc	TF	FILTER	H797E1AD	RA-228	1.10E+00	(6.89E-01)	U4	PCI/SA	R	1.19E+00	2.79E+00		89%	
Calc	TF	FILTER	H797E1AD	RA-228	7.07E-01	(6.97E-01)	U4	PCI/SA	R	1.32E+00	3.09E+00		89%	
Calc	TF	FILTER	H797E1AD	RA-228	1.03E+00	(3.93E-01)		PCI/SA	A	6.87E-01	1.62E+00		89%	
Calc	TF	FILTER	H797E1AD	RA-228	-4.10E+00	(2.65E+00)	U4	PCI/SA	R	7.33E+00	1.75E+01		89%	
Calc	TF	FILTER	H797F1AD	RA-228	1.71E+00	(7.19E-01)		PCI/SA	R	1.10E+00	2.57E+00		90%	
Calc	TF	FILTER	H797F1AD	RA-228	2.05E+00	(8.16E-01)		PCI/SA	R	1.22E+00	2.85E+00		90%	
Calc	TF	FILTER	H797F1AD	RA-228	1.94E+00	(8.64E-01)		PCI/SA	R	1.35E+00	3.16E+00		90%	
Calc	TF	FILTER	H797F1AD	RA-228	1.90E+00	(4.63E-01)		PCI/SA	A	7.05E-01	1.65E+00		90%	
Calc	TF	FILTER	H797F1AD	RA-228	1.26E+01	(5.45E+00)		PCI/SA	R	8.46E+00	1.98E+01		90%	
Calc	TF	FILTER	H797H1AD	RA-228	1.47E+00	(7.75E-01)		PCI/SA	R	1.33E+00	3.04E+00		86%	
Calc	TF	FILTER	H797H1AD	RA-228	9.97E-01	(7.88E-01)	U4	PCI/SA	R	1.47E+00	3.38E+00		86%	
Calc	TF	FILTER	H797H1AD	RA-228	1.81E+00	(9.54E-01)		PCI/SA	R	1.63E+00	3.75E+00		86%	
Calc	TF	FILTER	H797H1AD	RA-228	1.43E+00	(4.87E-01)		PCI/SA	A	8.53E-01	1.96E+00		86%	
Calc	TF	FILTER	H797H1AD	RA-228	-3.14E+00	(3.91E+00)	U4	PCI/SA	R	9.46E+00	2.19E+01		86%	
Calc	TF	FILTER	H797J1AD	RA-228	1.42E+00	(7.39E-01)		PCI/SA	R	1.23E+00	2.86E+00		84%	
Calc	TF	FILTER	H797J1AD	RA-228	1.41E+00	(8.00E-01)		PCI/SA	R	1.36E+00	3.17E+00		84%	
Calc	TF	FILTER	H797J1AD	RA-228	1.75E+00	(9.10E-01)		PCI/SA	R	1.51E+00	3.52E+00		84%	
Calc	TF	FILTER	H797J1AD	RA-228	1.53E+00	(4.73E-01)		PCI/SA	A	7.90E-01	1.84E+00		84%	
Calc	TF	FILTER	H797J1AD	RA-228	-5.96E+00	(3.58E+00)	U4	PCI/SA	R	9.61E+00	2.23E+01		84%	
Calc	TF	FILTER	H797K1AD	RA-228	1.23E-01	(7.57E-01)	U4	PCI/SA	R	1.63E+00	3.65E+00		86%	
Calc	TF	FILTER	H797K1AD	RA-228	1.22E+00	(9.43E-01)	U4	PCI/SA	R	1.81E+00	4.05E+00		86%	
Calc	TF	FILTER	H797K1AD	RA-228	1.53E+00	(1.06E+00)	U4	PCI/SA	R	2.01E+00	4.49E+00		86%	
Calc	TF	FILTER	H797K1AD	RA-228	9.60E-01	(5.37E-01)		PCI/SA	A	1.05E+00	2.34E+00		86%	
Calc	TF	FILTER	H797K1AD	RA-228	-5.32E-01	(5.42E+00)	U4	PCI/SA	R	1.20E+01	2.69E+01		86%	
Calc	TF	FILTER	H797M1AD	RA-228	5.11E-01	(6.14E-01)	U4	PCI/SA	R	1.20E+00	2.79E+00		86%	
Calc	TF	FILTER	H797M1AD	RA-228	1.38E+00	(7.81E-01)		PCI/SA	R	1.33E+00	3.10E+00		86%	

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Results

7/25/2006 7:03:09 AM

Summary Report

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Calc	TF	FILTER	**H797M1AD**	RA-228	**6.29E-01**	**(7.55E-01)**	**U4**	PCI/SA	R	1.48E+00	3.44E+00		86%	
Calc	TF	FILTER	**H797M1AD**	RA-228	**8.38E-01**	**(4.16E-01)**		PCI/SA	A	7.72E-01	1.80E+00		86%	
Calc	TF	FILTER	**H797M1AD**	RA-228	**1.01E+01**	**(5.48E+00)**		PCI/SA	R	9.25E+00	2.15E+01		86%	
Calc	TF	FILTER	**H8DPD1AA**	RA-228	**3.12E-01**	**(1.80E-01)**		PCI/SA	R	3.08E-01	7.17E-01	**B**	83%	
Calc	TF	FILTER	**H8DPD1AA**	RA-228	**5.69E-02**	**(1.63E-01)**	**U4**	PCI/SA	R	3.42E-01	7.96E-01	**B**	83%	
Calc	TF	FILTER	**H8DPD1AA**	RA-228	**-2.87E-02**	**(1.69E-01)**	**U4**	PCI/SA	R	3.79E-01	8.83E-01	**B**	83%	
Calc	TF	FILTER	**H8DPD1AA**	RA-228	**1.14E-01**	**(9.87E-02)**	**U4**	PCI/SA	A	1.98E-01	4.61E-01	**B**	83%	
Calc	TF	FILTER	**H8DPD1AA**	RA-228	**-8.49E-01**	**(9.21E-01)**	**U4**	PCI/SA	R	2.28E+00	5.33E+00	**B**	83%	
Calc	TF	FILTER	**H8DPD1AC**	RA-228	**3.86E+00**	**(5.52E-01)**		PCI/SA	R	2.95E-01	6.91E-01	**S**	87%	76%
Calc	TF	FILTER	**H8DPD1AC**	RA-228	**3.46E+00**	**(5.29E-01)**		PCI/SA	R	3.28E-01	7.66E-01	**S**	87%	68%
Calc	TF	FILTER	**H8DPD1AC**	RA-228	**4.52E+00**	**(6.56E-01)**		PCI/SA	R	3.63E-01	8.50E-01	**S**	87%	89%
Calc	TF	FILTER	**H8DPD1AC**	RA-228	**3.95E+00**	**(3.36E-01)**		PCI/SA	A	1.90E-01	4.44E-01	**S**	87%	78%
Calc	TF	FILTER	**H8DPD1AC**	RA-228	**5.06E+00**	**(1.71E+00)**		PCI/SA	R	2.45E+00	5.65E+00	**S**	87%	100%

P Anderson
7-25-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:90
RADCALC v4.8.24
STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

Detailed Report

7/25/2006 7:03:10 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	FILTER	*STLE	Ra228WoBS	H7DWT1AD	PCI/SA		05/24/06 07:40	07/25/06 06:10	07/17/06 15:12	RATA23244	1	1.00 SA	
536403,000473					,J6F140270-1 v4.8.24		FILTER			31.2	07/24/06 07:35	RATA23244 Alq	105%	0.253927 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:05	RA-228	39	312	GPC7A	1	N	N	5.1841E-01	1.0000E+00	N	95%	N		1.5918E+00	4.5045E-01	1.0181E+00	
			50	400			Y		(1.198E-02)	(0.000E+00)		8%			(0.000E+00)	3.938143		
1	07/24/06 13:01	RA-228	53	312	GPC7A	1	N	N	5.1841E-01	1.0000E+00	N	95%	N		1.7660E+00	4.5045E-01	1.0181E+00	
			50	400			Y		(1.198E-02)	(0.000E+00)		8%			(0.000E+00)	3.938143		
2	07/24/06 13:56	RA-228	55	312	GPC7A	1	N	N	5.1841E-01	1.0000E+00	N	95%	N		1.9592E+00	4.5045E-01	1.0181E+00	
			50	400			Y		(1.198E-02)	(0.000E+00)		8%			(0.000E+00)	3.938143		
3	07/25/06 06:10	RA-228	48	301	GPC7A	1	N	N	5.1841E-01	1.0000E+00	N	95%	N		1.2198E+01	4.5045E-01	1.0181E+00	
			50	400			N		(1.198E-02)	(0.000E+00)		8%			(0.000E+00)	3.938143		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	95%		3.701409		
				(0.772222)		(1.3248E-01)	(0.427595)	(0.427595)	(0.027062)			1.693741		
	07/25/06	RA-228	R	**1.810707**		2.80000E-01	1.002625	1.002625	1.00 SA	95%		4.106328		
				(1.000728)		(1.5215E-01)	(0.551184)	(0.551184)	(0.027062)			1.879029		
	07/25/06	RA-228	R	**2.295761**		3.20000E-01	1.271209	1.271209	1.00 SA	95%		4.555543		
				(1.134146)		(1.5476E-01)	(0.623827)	(0.623827)	(0.027062)			2.084587		
	07/25/06	RA-228	A	**1.368823**		2.00000E-01	0.757945	0.757945	1.00 SA	95%		2.379314		
				(0.566085)		(8.4755E-02)	(0.311947)	(0.311947)	(0.015624)			1.088759		
	07/25/06	RA-228	R	**9.268649**	U4	2.07500E-01	5.132237	5.132237	1.00 SA	95%		27.902195		
				(6.552532)		(1.4519E-01)	(3.616517)	(3.616517)	(0.027062)			12.748159		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	FILTER	*STLE	Ra228WoBS	H796F1AD	PCI/SA		06/07/06 10:00	07/25/06 06:10	07/17/06 15:12	RATA23245	1	1.00 SA	
536403,000487					,J6F270218-1 v4.8.24		FILTER			30.9	07/24/06 07:35	RATA23245 Alq	98%	0.252645 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:05	RA-228	48	300	GPC7B	1	N	N	5.1966E-01	1.0000E+00	N	88%	N		1.5918E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.258E-02)	(0.000E+00)		7%			(0.000E+00)	3.95812		
1	07/24/06 13:01	RA-228	35	300	GPC7B	1	N	N	5.1966E-01	1.0000E+00	N	88%	N		1.7660E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.258E-02)	(0.000E+00)		7%			(0.000E+00)	3.95812		
2	07/24/06 13:56	RA-228	47	300	GPC7B	1	N	N	5.1966E-01	1.0000E+00	N	88%	N		1.9592E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.258E-02)	(0.000E+00)		7%			(0.000E+00)	3.95812		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.24
STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:10 AM

3	07/25/06 06:10	RA-228	39	285	GPC7B	1	N	N	5.1966E-01	1.0000E+00	N	88%	N	1.2198E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.258E-02)	(0.000E+00)		7%		(0.000E+00)	3.95812		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.316514**	U4	2.10000E-01	0.728677	0.728677	1.00 SA	88%		3.910085		
				(0.91978)		(1.4517E-01)	(0.507401)	(0.507401)	(0.027062)			1.78621		
	07/25/06	RA-228	R	**-0.347746**	U4	-5.00000E-02	-0.192474	-0.192474	1.00 SA	88%		4.337832		
				(0.876998)		(1.2600E-01)	(0.485286)	(0.485286)	(0.027062)			1.981614		
	07/25/06	RA-228	R	**1.465996**	U4	1.90000E-01	0.811414	0.811414	1.00 SA	88%		4.812373		
				(1.119288)		(1.4379E-01)	(0.617795)	(0.617795)	(0.027062)			2.198394		
	07/25/06	RA-228	A	**0.811588**	U4	1.16667E-01	0.449206	0.449206	1.00 SA	88%		2.513454		
				(0.564498)		(8.0017E-02)	(0.311739)	(0.311739)	(0.015624)			1.148199		
	07/25/06	RA-228	R	**3.242682**	U4	6.75000E-02	1.794793	1.794793	1.00 SA	88%		29.269945		
				(6.341938)		(1.3184E-01)	(3.508717)	(3.508717)	(0.027062)			13.341017		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	FILTER	*STLE	Ra228WoBS	**H796L1AD**	**PCI/SA**		06/07/06 10:25	07/25/06 06:10	07/17/06 15:12	RATA23246	1	1.00 SA	
536403,000488					,J6F270218-2 v4.8.24		FILTER			30.9	07/24/06 07:35	RATA23246 Alq	105%	0.250932 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:05	RA-228	49	370	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	95%	N		1.5918E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.091E-02)	(0.000E+00)		8%			(0.000E+00)	3.985136		
1	07/24/06 13:01	RA-228	52	370	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	95%	N		1.7660E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.091E-02)	(0.000E+00)		8%			(0.000E+00)	3.985136		
2	07/24/06 13:56	RA-228	57	370	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	95%	N		1.9592E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.091E-02)	(0.000E+00)		8%			(0.000E+00)	3.985136		
3	07/25/06 06:10	RA-228	44	334	GPC7C	1	N	N	5.0675E-01	1.0000E+00	N	95%	N		1.2198E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.091E-02)	(0.000E+00)		8%			(0.000E+00)	3.985136		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**0.332139**	U4	5.50000E-02	0.18259	0.18259	1.00 SA	95%		4.146715		
				(0.894552)		(1.4803E-01)	(0.491662)	(0.491662)	(0.027062)			1.910838		
	07/25/06	RA-228	R	**0.770445**	U4	1.15000E-01	0.423545	0.423545	1.00 SA	95%		4.600348		
				(1.021452)		(1.5203E-01)	(0.561018)	(0.561018)	(0.027062)			2.119876		
	07/25/06	RA-228	R	**1.59797**	U4	2.15000E-01	0.87847	0.87847	1.00 SA	95%		5.103606		
				(1.188703)		(1.5847E-01)	(0.651568)	(0.651568)	(0.027062)			2.351781		
	07/25/06	RA-228	A	**0.900184**	U4	1.28333E-01	0.494869	0.494869	1.00 SA	95%		2.665562		
				(0.601535)		(8.8278E-02)	(0.330154)	(0.330154)	(0.015624)			1.228312		
	07/25/06	RA-228	R	**2.0824**	U4	4.50000E-02	1.144781	1.144781	1.00 SA	95%		30.315694		
				(6.496394)		(1.4031E-01)	(3.570742)	(3.570742)	(0.027062)			13.91204		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24
STL Richland

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	FILTER	*STLE	Ra228WoBS	H796N1AD	PCI/SA		06/07/06 10:35	07/25/06 05:35	07/17/06 15:12	RATA23247	1	1.00 SA	
536403,000489					,J6F270218-3 v4.8.24		FILTER			31.1	07/24/06 07:35	RATA23247 Alq	105%	0.254865 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	47	296	GPC1A	1	N	N	5.2958E-01	1.0000E+00	N	95%	N		1.5924E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.445E-02)	(0.000E+00)		8%			(0.000E+00)	3.923652		
1	07/24/06 13:01	RA-228	25	296	GPC1A	1	N	N	5.2958E-01	1.0000E+00	N	95%	N		1.7665E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.445E-02)	(0.000E+00)		8%			(0.000E+00)	3.923652		
2	07/24/06 13:56	RA-228	37	296	GPC1A	1	N	N	5.2958E-01	1.0000E+00	N	95%	N		1.9598E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.445E-02)	(0.000E+00)		8%			(0.000E+00)	3.923652		
3	07/25/06 05:35	RA-228	32	242	GPC1A	1	N	N	5.2958E-01	1.0000E+00	N	95%	N		1.1422E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.445E-02)	(0.000E+00)		8%			(0.000E+00)	3.923652		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.13299**	U4	2.00000E-01	0.632613	0.632613	1.00 SA	95%		3.511685		
				(0.8222)		(1.4370E-01)	(0.45767)	(0.45767)	(0.027062)			1.603274		
	07/25/06	RA-228	R	**-1.508274**	U4	-2.40000E-01	-0.842155	-0.842155	1.00 SA	95%		3.895727		
				(0.701155)		(1.0886E-01)	(0.388556)	(0.388556)	(0.027062)			1.77861		
	07/25/06	RA-228	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	95%		4.321903		
				(0.899627)		(1.2903E-01)	(0.502313)	(0.502313)	(0.027062)			1.973183		
	07/25/06	RA-228	A	**-0.125095**	U4	-1.33333E-02	-0.069847	-0.069847	1.00 SA	95%		2.257308		
				(0.468681)		(7.3899E-02)	(0.260929)	(0.260929)	(0.015624)			1.030583		
	07/25/06	RA-228	R	**1.422141**	U4	3.50000E-02	0.794062	0.794062	1.00 SA	95%		22.985858		
				(4.863233)		(1.1963E-01)	(2.715044)	(2.715044)	(0.027062)			10.39796		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	FILTER	*STLE	Ra228WoBS	H796P1AD	PCI/SA		06/07/06 10:50	07/25/06 05:35	07/17/06 15:12	RATA23248	1	1.00 SA	
536403,000490					,J6F270218-4 v4.8.24		FILTER			31.6	07/24/06 07:35	RATA23248 Alq	95%	0.251741 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	43	260	GPC1C	1	N	N	5.2063E-01	1.0000E+00	N	87%	N		1.5924E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.165E-02)	(0.000E+00)		7%			(0.000E+00)	3.972331		
1	07/24/06 13:01	RA-228	32	260	GPC1C	1	N	N	5.2063E-01	1.0000E+00	N	87%	N		1.7665E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.165E-02)	(0.000E+00)		7%			(0.000E+00)	3.972331		
2	07/24/06 13:56	RA-228	39	260	GPC1C	1	N	N	5.2063E-01	1.0000E+00	N	87%	N		1.9598E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.165E-02)	(0.000E+00)		7%			(0.000E+00)	3.972331		
3	07/25/06 05:35	RA-228	24	230	GPC1C	1	N	N	5.2063E-01	1.0000E+00	N	87%	N		1.1422E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.165E-02)	(0.000E+00)		7%			(0.000E+00)	3.972331		

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:10 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.334541**	U4	2.10000E-01	0.736021	0.736021	1.00 SA	87%		3.71372		
				(0.882215)		(1.3720E-01)	(0.484754)	(0.484754)	(0.027062)			1.685641		
	07/25/06	RA-228	R	**-0.070499**	U4	-1.00000E-02	-0.038882	-0.038882	1.00 SA	87%		4.119856		
				(0.846757)		(1.2010E-01)	(0.466995)	(0.466995)	(0.027062)			1.869985		
	07/25/06	RA-228	R	**1.016753**	U4	1.30000E-01	0.560756	0.560756	1.00 SA	87%		4.570551		
				(1.031573)		(1.3124E-01)	(0.568035)	(0.568035)	(0.027062)			2.074553		
	07/25/06	RA-228	A	**0.760265**	U4	1.10000E-01	0.419299	0.419299	1.00 SA	87%		2.387175		
				(0.533275)		(7.4889E-02)	(0.293586)	(0.293586)	(0.015624)			1.083529		
	07/25/06	RA-228	R	**-4.330267**	U4	-9.50000E-02	-2.388214	-2.388214	1.00 SA	87%		25.20019		
				(4.808595)		(1.0506E-01)	(2.648541)	(2.648541)	(0.027062)			11.371581		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	FILTER	*STLE	Ra228WoBS	**H796Q1AD**	**PCI/SA**		06/07/06 11:00	07/25/06 05:35	07/17/06 15:12	RATA23249	1	1.00 SA	
536403,000491					,J6F270218-5 v4.8.24		FILTER			30.7	07/24/06 07:35	RATA23249 Alq	100%	0.2425 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	41	257	GPC1D	1	N	N	5.3169E-01	1.0000E+00	N	89%	N		1.5924E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.368E-02)	(0.000E+00)		7%			(0.000E+00)	4.123718		
1	07/24/06 13:01	RA-228	34	257	GPC1D	1	N	N	5.3169E-01	1.0000E+00	N	89%	N		1.7665E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.368E-02)	(0.000E+00)		7%			(0.000E+00)	4.123718		
2	07/24/06 13:56	RA-228	43	257	GPC1D	1	N	N	5.3169E-01	1.0000E+00	N	89%	N		1.9598E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.368E-02)	(0.000E+00)		7%			(0.000E+00)	4.123718		
3	07/25/06 05:35	RA-228	39	240	GPC1D	1	N	N	5.3169E-01	1.0000E+00	N	89%	N		1.1422E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.368E-02)	(0.000E+00)		7%			(0.000E+00)	4.123718		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.11888**	U4	1.77500E-01	0.594428	0.594428	1.00 SA	89%		3.664342		
				(0.853441)		(1.3419E-01)	(0.452147)	(0.452147)	(0.027062)			1.662332		
	07/25/06	RA-228	R	**0.262234**	U4	3.75000E-02	0.139317	0.139317	1.00 SA	89%		4.065078		
				(0.862732)		(1.2331E-01)	(0.458276)	(0.458276)	(0.027062)			1.844126		
	07/25/06	RA-228	R	**1.687345**	U4	2.17500E-01	0.896437	0.896437	1.00 SA	89%		4.50978		
				(1.077574)		(1.3714E-01)	(0.570211)	(0.570211)	(0.027062)			2.045866		
	07/25/06	RA-228	A	**1.02282**		1.44167E-01	0.543394	0.543394	1.00 SA	89%		2.355435		
				(0.54097)		(7.6025E-02)	(0.286665)	(0.286665)	(0.015624)			1.068545		
	07/25/06	RA-228	R	**8.138346**	U4	1.80000E-01	4.323666	4.323666	1.00 SA	89%		25.481251		
				(5.969754)		(1.3077E-01)	(3.162016)	(3.162016)	(0.027062)			11.522194		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:7

RADCALC v4.8.24
STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:10 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	TF	FILTER	*STLE	Ra228WoBS	H796R1AD	PCI/SA		06/07/06 11:20	07/25/06 06:05	07/17/06 15:12	RATA23250	1	1.00 SA	
536403,000492					,J6F270218-6 v4.8.24		FILTER			30.6	07/24/06 07:35	RATA23250 Alq	102%	0.254589 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	13	106	GPC2A	1	N	N	4.2847E-01	1.0000E+00	N	91%	N		1.5930E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.186E-02)	(0.000E+00)		7%			(0.000E+00)	3.927906		
1	07/24/06 13:01	RA-228	14	106	GPC2A	1	N	N	4.2847E-01	1.0000E+00	N	91%	N		1.7673E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.186E-02)	(0.000E+00)		7%			(0.000E+00)	3.927906		
2	07/24/06 13:56	RA-228	13	106	GPC2A	1	N	N	4.2847E-01	1.0000E+00	N	91%	N		1.9606E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.186E-02)	(0.000E+00)		7%			(0.000E+00)	3.927906		
3	07/25/06 06:05	RA-228	7	90	GPC2A	1	N	N	4.2847E-01	1.0000E+00	N	91%	N		1.2099E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.186E-02)	(0.000E+00)		7%			(0.000E+00)	3.927906		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**-0.036661**	U4	-5.00000E-03	-0.020448	-0.020448	1.00 SA	91%		2.879516		
				(0.561412)		(7.6567E-02)	(0.31313)	(0.31313)	(0.027062)			1.241794		
	07/25/06	RA-228	R	**0.122014**	U4	1.50000E-02	0.068054	0.068054	1.00 SA	91%		3.194523		
				(0.643832)		(7.9136E-02)	(0.359081)	(0.359081)	(0.027062)			1.377642		
	07/25/06	RA-228	R	**-0.045121**	U4	-5.00000E-03	-0.025166	-0.025166	1.00 SA	91%		3.543991		
				(0.690963)		(7.6567E-02)	(0.385388)	(0.385388)	(0.027062)			1.52835		
	07/25/06	RA-228	A	**0.013411**	U4	1.66667E-03	0.00748	0.00748	1.00 SA	91%		1.850991		
				(0.366232)		(4.4706E-02)	(0.204264)	(0.204264)	(0.015624)			0.798242		
	07/25/06	RA-228	R	**-4.733654**	U4	-8.50000E-02	-2.640234	-2.640234	1.00 SA	91%		20.38988		
				(3.26518)		(5.7987E-02)	(1.814984)	(1.814984)	(0.027062)			8.6909		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	TF	FILTER	*STLE	Ra228WoBS	H796T1AD	PCI/SA		06/07/06 10:10	07/25/06 06:05	07/17/06 15:12	RATA23251	1	1.00 SA	
536403,000493					,J6F270218-7 v4.8.24		FILTER			29.7	07/24/06 07:35	RATA23251 Alq	109%	0.252887 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	23	112	GPC2B	1	N	N	4.4711E-01	1.0000E+00	N	94%	N		1.5930E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.055E-02)	(0.000E+00)		8%			(0.000E+00)	3.954328		
1	07/24/06 13:01	RA-228	26	112	GPC2B	1	N	N	4.4711E-01	1.0000E+00	N	94%	N		1.7673E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.055E-02)	(0.000E+00)		8%			(0.000E+00)	3.954328		
2	07/24/06 13:56	RA-228	19	112	GPC2B	1	N	N	4.4711E-01	1.0000E+00	N	94%	N		1.9606E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.055E-02)	(0.000E+00)		8%			(0.000E+00)	3.954328		
3	07/25/06 06:05	RA-228	11	100	GPC2B	1	N	N	4.4711E-01	1.0000E+00	N	94%	N		1.2099E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.055E-02)	(0.000E+00)		8%			(0.000E+00)	3.954328		

RecCnt:8 RADCALC v4.8.24

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:10 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.234674**		1.80000E-01	0.684037	0.684037	1.00 SA	94%		2.758633		
				(0.693777)		(9.9499E-02)	(0.382396)	(0.382396)	(0.027062)			1.194138		
	07/25/06	RA-228	R	**1.826323**		2.40000E-01	1.011824	1.011824	1.00 SA	94%		3.060416		
				(0.822651)		(1.0536E-01)	(0.452122)	(0.452122)	(0.027062)			1.324772		
	07/25/06	RA-228	R	**0.844214**	U4	1.00000E-01	0.467714	0.467714	1.00 SA	94%		3.395212		
				(0.773822)		(9.1104E-02)	(0.427889)	(0.427889)	(0.027062)			1.469697		
	07/25/06	RA-228	A	**1.301737**		1.73333E-01	0.721191	0.721191	1.00 SA	94%		1.773285		
				(0.441825)		(5.7057E-02)	(0.243523)	(0.243523)	(0.015624)			0.767608		
	07/25/06	RA-228	R	**-1.56296**	U4	-3.00000E-02	-0.865915	-0.865915	1.00 SA	94%		19.954027		
				(3.696498)		(7.0887E-02)	(2.047351)	(2.047351)	(0.027062)			8.570228		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	TF	FILTER	*STLE	Ra228WoBS	**H796W1AD**	**PCI/SA**		06/07/06 09:55	07/25/06 06:05	07/17/06 15:12	RATA23252	1	1.00 SA	
536403,P-0660					,J6F270218-8 v4.8.24		FILTER			30.1	07/24/06 07:35	RATA23252 Alq	100%	0.251525 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	19	92	GPC2C	1	N	N	4.3317E-01	1.0000E+00	N	87%	N		1.5930E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(9.422E-03)	(0.000E+00)		7%			(0.000E+00)	3.975749		
1	07/24/06 13:01	RA-228	18	92	GPC2C	1	N	N	4.3317E-01	1.0000E+00	N	87%	N		1.7673E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(9.422E-03)	(0.000E+00)		7%			(0.000E+00)	3.975749		
2	07/24/06 13:56	RA-228	13	92	GPC2C	1	N	N	4.3317E-01	1.0000E+00	N	87%	N		1.9606E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(9.422E-03)	(0.000E+00)		7%			(0.000E+00)	3.975749		
3	07/25/06 06:05	RA-228	16	101	GPC2C	1	N	N	4.3317E-01	1.0000E+00	N	87%	N		1.2099E+01	4.5045E-01	1.0133E+00	
			50	400			N		(9.422E-03)	(0.000E+00)		7%			(0.000E+00)	3.975749		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.146488**	U4	1.50000E-01	0.631755	0.631755	1.00 SA	87%		2.82478		
				(0.700614)		(9.0416E-02)	(0.384389)	(0.384389)	(0.027062)			1.205974		
	07/25/06	RA-228	R	**1.102321**	U4	1.30000E-01	0.607418	0.607418	1.00 SA	87%		3.133799		
				(0.755845)		(8.8176E-02)	(0.415063)	(0.415063)	(0.027062)			1.337903		
	07/25/06	RA-228	R	**0.28221**	U4	3.00000E-02	0.155508	0.155508	1.00 SA	87%		3.476624		
				(0.715433)		(7.5993E-02)	(0.39413)	(0.39413)	(0.027062)			1.484264		
	07/25/06	RA-228	A	**0.843673**		1.03333E-01	0.464894	0.464894	1.00 SA	87%		1.815806		
				(0.418198)		(4.9131E-02)	(0.229824)	(0.229824)	(0.015624)			0.775216		
	07/25/06	RA-228	R	**3.91858**	U4	6.75000E-02	2.159276	2.159276	1.00 SA	87%		22.329784		
				(4.883807)		(8.3853E-02)	(2.688349)	(2.688349)	(0.027062)			9.597353		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:10

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:10 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	TF	FILTER	*STLE	Ra228WoBS	**H797D1AD**	**PCI/SA**		06/07/06 10:20	07/25/06 06:05	07/17/06 15:12	RATA23253	1	1.00 SA	
536403,P-0661					,J6F270218-9 v4.8.24		FILTER			30.8	07/24/06 07:35	RATA23253 Alq	96%	0.257349 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	18	120	GPC2D	1	N	N	4.3813E-01	1.0000E+00	N	86%	N		1.5930E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.310E-02)	(0.000E+00)		7%			(0.000E+00)	3.885769		
1	07/24/06 13:01	RA-228	15	120	GPC2D	1	N	N	4.3813E-01	1.0000E+00	N	86%	N		1.7673E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.310E-02)	(0.000E+00)		7%			(0.000E+00)	3.885769		
2	07/24/06 13:56	RA-228	23	120	GPC2D	1	N	N	4.3813E-01	1.0000E+00	N	86%	N		1.9606E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.310E-02)	(0.000E+00)		7%			(0.000E+00)	3.885769		
3	07/25/06 06:05	RA-228	13	81	GPC2D	1	N	N	4.3813E-01	1.0000E+00	N	86%	N		1.2099E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.310E-02)	(0.000E+00)		7%			(0.000E+00)	3.885769		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**0.449183**	U4	6.00000E-02	0.253248	0.253248	1.00 SA	86%		3.10226		
				(0.669095)		(8.9163E-02)	(0.37696)	(0.37696)	(0.027062)			1.34905		
	07/25/06	RA-228	R	**0.00E00**	U4	0.00000E+00	0.00E00	0.00E00	1.00 SA	86%		3.441634		
				(0.682354)		(8.2158E-02)	(0.38471)	(0.38471)	(0.027062)			1.496631		
	07/25/06	RA-228	R	**1.474228**	U4	1.60000E-01	0.831168	0.831168	1.00 SA	86%		3.818135		
				(0.931448)		(9.9750E-02)	(0.523019)	(0.523019)	(0.027062)			1.660356		
	07/25/06	RA-228	A	**0.641137**	U4	7.33333E-02	0.361472	0.361472	1.00 SA	86%		1.994173		
				(0.444833)		(5.2334E-02)	(0.250255)	(0.250255)	(0.015624)			0.867187		
	07/25/06	RA-228	R	**3.269536**	U4	5.75000E-02	1.84336	1.84336	1.00 SA	86%		19.908587		
				(4.30838)		(7.5540E-02)	(2.426797)	(2.426797)	(0.027062)			8.418345		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	TF	FILTER	*STLE	Ra228WoBS	**H797E1AD**	**PCI/SA**		06/07/06 10:30	07/25/06 06:05	07/17/06 15:12	RATA23254	1	1.00 SA	
536403,P-0662					,J6F270218-10 v4.8.24		FILTER			31.3	07/24/06 07:35	RATA23254 Alq	97%	0.251696 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	20	87	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	89%	N		1.5935E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.324E-02)	(0.000E+00)		7%			(0.000E+00)	3.973046		
1	07/24/06 13:01	RA-228	18	87	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	89%	N		1.7679E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.324E-02)	(0.000E+00)		7%			(0.000E+00)	3.973046		
2	07/24/06 13:57	RA-228	15	87	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	89%	N		1.9613E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.324E-02)	(0.000E+00)		7%			(0.000E+00)	3.973046		
3	07/25/06 06:05	RA-228	5	71	GPC3A	1	N	N	4.6800E-01	1.0000E+00	N	89%	N		1.2100E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.324E-02)	(0.000E+00)		7%			(0.000E+00)	3.973046		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:11 RADCALC v4.8.24

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:11 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.271619**		1.82500E-01	0.701189	0.701189	1.00 SA	89%		2.51459		
				(0.657015)		(9.2432E-02)	(0.360088)	(0.360088)	(0.027062)			1.069103		
	07/25/06	RA-228	R	**1.101528**	U4	1.42500E-01	0.607399	0.607399	1.00 SA	89%		2.789676		
				(0.689473)		(8.7999E-02)	(0.378614)	(0.378614)	(0.027062)			1.186059		
	07/25/06	RA-228	R	**0.707491**	U4	8.25000E-02	0.390121	0.390121	1.00 SA	89%		3.094855		
				(0.697468)		(8.0893E-02)	(0.383954)	(0.383954)	(0.027062)			1.315809		
	07/25/06	RA-228	A	**1.026879**		1.35833E-01	0.566236	0.566236	1.00 SA	89%		1.616412		
				(0.393489)		(5.0367E-02)	(0.216136)	(0.216136)	(0.015624)			0.687234		
	07/25/06	RA-228	R	**-4.100343**	U4	-7.75000E-02	-2.26099	-2.26099	1.00 SA	89%		17.525963		
				(2.648774)		(4.9434E-02)	(1.454905)	(1.454905)	(0.027062)			7.333538		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	TF	FILTER	*STLE	Ra228WoBS	**H797F1AD**	**PCI/SA**		06/07/06 10:45	07/25/06 06:05	07/17/06 15:12	RATA23255	1	1.00 SA	
536403,P-0663					,J6F270218-11 v4.8.24		FILTER			31.3	07/24/06 07:35	RATA23255 Alq	99%	0.24356 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	24	93	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	90%	N		1.5935E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.105765		
1	07/24/06 13:01	RA-228	25	93	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	90%	N		1.7679E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.105765		
2	07/24/06 13:57	RA-228	23	93	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	90%	N		1.9613E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.105765		
3	07/25/06 06:05	RA-228	24	96	GPC3B	1	N	N	4.7930E-01	1.0000E+00	N	90%	N		1.2100E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.181E-02)	(0.000E+00)		7%			(0.000E+00)	4.105765		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.711469**		2.47500E-01	0.913226	0.913226	1.00 SA	90%		2.567464		
				(0.718912)		(1.0090E-01)	(0.380076)	(0.380076)	(0.027062)			1.096986		
	07/25/06	RA-228	R	**2.052126**		2.67500E-01	1.094998	1.094998	1.00 SA	90%		2.848334		
				(0.815994)		(1.0287E-01)	(0.430934)	(0.430934)	(0.027062)			1.216992		
	07/25/06	RA-228	R	**1.936191**		2.27500E-01	1.033136	1.033136	1.00 SA	90%		3.15993		
				(0.864214)		(9.8900E-02)	(0.457381)	(0.457381)	(0.027062)			1.350126		
	07/25/06	RA-228	A	**1.899929**		2.47500E-01	1.013787	1.013787	1.00 SA	90%		1.6504		
				(0.463027)		(5.8256E-02)	(0.244804)	(0.244804)	(0.015624)			0.705157		
	07/25/06	RA-228	R	**12.601707**		2.40000E-01	6.72417	6.72417	1.00 SA	90%		19.761654		
				(5.454113)		(1.0100E-01)	(2.885053)	(2.885053)	(0.027062)			8.462909		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:13

RADCALC v4.8.24
STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:11 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	TF	FILTER	*STLE	Ra228WoBS	**H797H1AD**	**PCI/SA**		06/07/06 11:05	07/25/06 06:05	07/17/06 15:12	RATA23256	1	1.00 SA	
536403,P-0664					,J6F270218-12 v4.8.24		FILTER			30.9	07/24/06 07:35	RATA23256 Alq	96%	0.249329 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	26	126	GPC3C	1	N	N	4.7085E-01	1.0000E+00	N	86%	N		1.5935E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.010764		
1	07/24/06 13:01	RA-228	22	126	GPC3C	1	N	N	4.7085E-01	1.0000E+00	N	86%	N		1.7679E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.010764		
2	07/24/06 13:57	RA-228	26	126	GPC3C	1	N	N	4.7085E-01	1.0000E+00	N	86%	N		1.9613E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.010764		
3	07/25/06 06:05	RA-228	11	111	GPC3C	1	N	N	4.7085E-01	1.0000E+00	N	86%	N		1.2100E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.100E-02)	(0.000E+00)		7%			(0.000E+00)	4.010764		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**1.474025**		2.05000E-01	0.805162	0.805162	1.00 SA	86%		3.043556		
				(0.774935)		(1.0577E-01)	(0.420813)	(0.420813)	(0.027062)			1.327707		
	07/25/06	RA-228	R	**0.99712**	**U4**	1.25000E-01	0.544661	0.544661	1.00 SA	86%		3.376508		
				(0.787522)		(9.7916E-02)	(0.429055)	(0.429055)	(0.027062)			1.472953		
	07/25/06	RA-228	R	**1.81417**		2.05000E-01	0.99096	0.99096	1.00 SA	86%		3.745883		
				(0.953758)		(1.0577E-01)	(0.517919)	(0.517919)	(0.027062)			1.634088		
	07/25/06	RA-228	A	**1.428439**		1.78333E-01	0.780261	0.780261	1.00 SA	86%		1.956437		
				(0.486526)		(5.9594E-02)	(0.264452)	(0.264452)	(0.015624)			0.853468		
	07/25/06	RA-228	R	**-3.139376**	**U4**	-5.75000E-02	-1.714832	-1.714832	1.00 SA	86%		21.872834		
				(3.909526)		(7.1371E-02)	(2.133287)	(2.133287)	(0.027062)			9.462434		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	TF	FILTER	*STLE	Ra228WoBS	**H797J1AD**	**PCI/SA**		06/07/06 11:10	07/25/06 06:05	07/17/06 15:12	RATA23257	1	1.00 SA	
536403,P-0665					,J6F270218-13 v4.8.24		FILTER			31.0	07/24/06 07:35	RATA23257 Alq	94%	0.246648 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	22	100	GPC3D	1	N	N	4.6779E-01	1.0000E+00	N	84%	N		1.5935E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.145E-02)	(0.000E+00)		7%			(0.000E+00)	4.054362		
1	07/24/06 13:01	RA-228	21	100	GPC3D	1	N	N	4.6779E-01	1.0000E+00	N	84%	N		1.7679E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.145E-02)	(0.000E+00)		7%			(0.000E+00)	4.054362		
2	07/24/06 13:57	RA-228	22	100	GPC3D	1	N	N	4.6779E-01	1.0000E+00	N	84%	N		1.9613E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.145E-02)	(0.000E+00)		7%			(0.000E+00)	4.054362		
3	07/25/06 06:05	RA-228	8	106	GPC3D	1	N	N	4.6779E-01	1.0000E+00	N	84%	N		1.2100E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.145E-02)	(0.000E+00)		7%			(0.000E+00)	4.054362		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:11 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	1.419598		1.90000E-01	0.767094	0.767094	1.00 SA	84%		2.861646		
				(0.739434)		(9.7082E-02)	(0.397174)	(0.397174)	(0.027062)			1.229073		
	07/25/06	RA-228	R	1.409118		1.70000E-01	0.761431	0.761431	1.00 SA	84%		3.174698		
				(0.800244)		(9.5000E-02)	(0.430247)	(0.430247)	(0.027062)			1.363529		
	07/25/06	RA-228	R	1.747184		1.90000E-01	0.944108	0.944108	1.00 SA	84%		3.521997		
				(0.910065)		(9.7082E-02)	(0.488825)	(0.488825)	(0.027062)			1.512693		
	07/25/06	RA-228	A	1.5253		1.83333E-01	0.824211	0.824211	1.00 SA	84%		1.839504		
				(0.473213)		(5.5653E-02)	(0.254255)	(0.254255)	(0.015624)			0.790064		
	07/25/06	RA-228	R	-5.956972	U4	-1.05000E-01	-3.21891	-3.21891	1.00 SA	84%		22.280499		
				(3.577018)		(6.2149E-02)	(1.924195)	(1.924195)	(0.027062)			9.608489		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	TF	FILTER	*STLE	Ra228WoBS	H797K1AD	PCI/SA		06/07/06 10:05	07/25/06 06:05	07/17/06 15:12	RATA23258	1	1.00 SA	
536403,P-0666					,J6F270218-14 v4.8.24		FILTER			30.7	07/24/06 07:35	RATA23258 Alq	96%	0.252091 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	26	201	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	86%	N		1.5942E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	3.966828		
1	07/24/06 13:01	RA-228	33	201	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	86%	N		1.7685E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	3.966828		
2	07/24/06 13:57	RA-228	34	201	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	86%	N		1.9620E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	3.966828		
3	07/25/06 06:05	RA-228	23	188	GPC4A	1	N	N	4.8160E-01	1.0000E+00	N	86%	N		1.2104E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.103E-02)	(0.000E+00)		7%			(0.000E+00)	3.966828		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	0.122672	U4	1.75000E-02	0.067749	0.067749	1.00 SA	86%		3.647635		
				(0.75691)		(1.0796E-01)	(0.418005)	(0.418005)	(0.027062)			1.634822		
	07/25/06	RA-228	R	1.224786	U4	1.57500E-01	0.67642	0.67642	1.00 SA	86%		4.046544		
				(0.943103)		(1.2023E-01)	(0.519432)	(0.519432)	(0.027062)			1.813608		
	07/25/06	RA-228	R	1.531315	U4	1.77500E-01	0.845708	0.845708	1.00 SA	86%		4.489219		
				(1.062792)		(1.2189E-01)	(0.584982)	(0.584982)	(0.027062)			2.012009		
	07/25/06	RA-228	A	0.959591		1.17500E-01	0.529959	0.529959	1.00 SA	86%		2.344696		
				(0.536644)		(6.7469E-02)	(0.295661)	(0.295661)	(0.015624)			1.050862		
	07/25/06	RA-228	R	-0.532219	U4	-1.00000E-02	-0.293932	-0.293932	1.00 SA	86%		26.878869		
				(5.421326)		(1.0186E-01)	(2.994021)	(2.994021)	(0.027062)			12.004249		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:16

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:11 AM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
16	Calc	TF	FILTER	*STLE	Ra228WoBS	H797M1AD	PCI/SA		06/07/06 11:15	07/25/06 06:05	07/17/06 15:12	RATA23259	1	1.00 SA	
536403,P-0667					,J6F270218-15 v4.8.24		FILTER			31.1	07/24/06 07:35	RATA23259 Alq	95%	0.250184 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	16	100	GPC4B	1	N	N	4.6207E-01	1.0000E+00	N	86%	N		1.5942E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.048E-02)	(0.000E+00)		7%			(0.000E+00)	3.997051		
1	07/24/06 13:01	RA-228	21	100	GPC4B	1	N	N	4.6207E-01	1.0000E+00	N	86%	N		1.7685E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.048E-02)	(0.000E+00)		7%			(0.000E+00)	3.997051		
2	07/24/06 13:57	RA-228	16	100	GPC4B	1	N	N	4.6207E-01	1.0000E+00	N	86%	N		1.9620E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.048E-02)	(0.000E+00)		7%			(0.000E+00)	3.997051		
3	07/25/06 06:05	RA-228	22	103	GPC4B	1	N	N	4.6207E-01	1.0000E+00	N	86%	N		1.2104E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.048E-02)	(0.000E+00)		7%			(0.000E+00)	3.997051		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**0.510769**	U4	7.00000E-02	0.279957	0.279957	1.00 SA	86%		2.794668		
				(0.613735)		(8.3815E-02)	(0.336017)	(0.336017)	(0.027062)			1.200306		
	07/25/06	RA-228	R	**1.376094**		1.70000E-01	0.754249	0.754249	1.00 SA	86%		3.100296		
				(0.781386)		(9.5000E-02)	(0.426132)	(0.426132)	(0.027062)			1.331573		
	07/25/06	RA-228	R	**0.628613**	U4	7.00000E-02	0.344549	0.344549	1.00 SA	86%		3.439455		
				(0.755336)		(8.3815E-02)	(0.413543)	(0.413543)	(0.027062)			1.477242		
	07/25/06	RA-228	A	**0.838492**		1.03333E-01	0.459585	0.459585	1.00 SA	86%		1.79641		
				(0.416035)		(5.0635E-02)	(0.227429)	(0.227429)	(0.015624)			0.771556		
	07/25/06	RA-228	R	**10.110499**		1.82500E-01	5.541654	5.541654	1.00 SA	86%		21.489674		
				(5.479193)		(9.7179E-02)	(2.986621)	(2.986621)	(0.027062)			9.248989		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
17	Calc	TF	FILTER	*STLE	Ra228WoBS	H8DPD1AA	PCI/SA	B	06/07/06 10:00	07/25/06 06:05	07/17/06 15:12	RATA23260	1	1.00 SA	
0,INTRA-LAB BLANK					,J6F280000-357		FILTER			30.6	07/24/06 07:35	RATA23260 Alq	94%	1.00 SA	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	21	101	GPC4C	1	N	N	4.6870E-01	1.0000E+00	N	83%	N		1.5942E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.147E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		
1	07/24/06 13:01	RA-228	14	101	GPC4C	1	N	N	4.6870E-01	1.0000E+00	N	83%	N		1.7685E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.147E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		
2	07/24/06 13:57	RA-228	12	101	GPC4C	1	N	N	4.6870E-01	1.0000E+00	N	83%	N		1.9620E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(1.147E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		
3	07/25/06 06:05	RA-228	9	96	GPC4C	1	N	N	4.6870E-01	1.0000E+00	N	83%	N		1.2104E+01	4.5045E-01	1.0133E+00	
			50	400			N		(1.147E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:17

RADCALC v4.8.24

STL Richland

Batch Nbr: 6179357

Alpha Beta, Ra-228 by GPC , Calculated Results

7/25/2006 7:03:11 AM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**0.312303**		1.67500E-01	0.684187	0.684187	1.00 SA	83%		0.717167		
				(0.179865)		(9.5033E-02)	(0.392378)	(0.392378)	(0.017321)			0.308239		
	07/25/06	RA-228	R	**0.056881**	U4	2.75000E-02	0.124614	0.124614	1.00 SA	83%		0.795597		
				(0.163373)		(7.8938E-02)	(0.357853)	(0.357853)	(0.017321)			0.341948		
	07/25/06	RA-228	R	**-0.028683**	U4	-1.25000E-02	-0.062839	-0.062839	1.00 SA	83%		0.882632		
				(0.169134)		(7.3697E-02)	(0.370521)	(0.370521)	(0.017321)			0.379356		
	07/25/06	RA-228	A	**0.1135**	U4	6.08333E-02	0.248654	0.248654	1.00 SA	83%		0.460994		
				(0.098685)		(4.7951E-02)	(0.215846)	(0.215846)	(0.01)			0.198136		
	07/25/06	RA-228	R	**-0.849367**	U4	-6.00000E-02	-1.860778	-1.860778	1.00 SA	83%		5.32782		
				(0.921267)		(6.4807E-02)	(2.01589)	(2.01589)	(0.017321)			2.281634		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
18	Calc	TF	FILTER	*STLE	Ra228WoBS	**H8DPD1AC**	**PCI/SA**	**S**	06/07/06 10:00	07/25/06 06:05	07/17/06 15:12	RASC4140	1	1.00 SA	
0,INTRA-LAB CHECK					,J6F280000-357		FILTER			31.2	07/24/06 07:35	RASC4140 Alq	95%	1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	07/24/06 12:06	RA-228	116	94	GPC4D	1	N	N	4.5382E-01	1.0000E+00	N	87%	N		1.5942E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(9.344E-03)	(0.000E+00)		7%			(0.000E+00)	1.00		
1	07/24/06 13:01	RA-228	96	94	GPC4D	1	N	N	4.5382E-01	1.0000E+00	N	87%	N		1.7685E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(9.344E-03)	(0.000E+00)		7%			(0.000E+00)	1.00		
2	07/24/06 13:57	RA-228	111	94	GPC4D	1	N	N	4.5382E-01	1.0000E+00	N	87%	N		1.9620E+00	4.5045E-01	1.0133E+00	
			50	400			Y		(9.344E-03)	(0.000E+00)		7%			(0.000E+00)	1.00		
3	07/25/06 06:05	RA-228	32	112	GPC4D	1	N	N	4.5382E-01	1.0000E+00	N	87%	N		1.2104E+01	4.5045E-01	1.0133E+00	
			50	400			N		(9.344E-03)	(0.000E+00)		7%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/25/06	RA-228	R	**3.860211**		2.08500E+00	8.456878	8.456878	1.00 Sa	87%	76%	0.690557		
				(0.551788)		(2.1677E-01)	(1.122969)	(1.122969)	(0.017321)			0.295281		
	07/25/06	RA-228	R	**3.460811**		1.68500E+00	7.581879	7.581879	1.00 Sa	87%	68%	0.766078		
				(0.528901)		(1.9745E-01)	(1.087033)	(1.087033)	(0.017321)			0.327573		
	07/25/06	RA-228	R	**4.522983**		1.98500E+00	9.908866	9.908866	1.00 Sa	87%	89%	0.849883		
				(0.656089)		(2.1210E-01)	(1.3383)	(1.3383)	(0.017321)			0.363408		
	07/25/06	RA-228	A	**3.948002**		1.91833E+00	8.649207	8.649207	1.00 Sa	87%	78%	0.44389		
				(0.335768)		(1.2063E-01)	(0.685869)	(0.685869)	(0.01)			0.189806		
	07/25/06	RA-228	R	**5.060473**		3.60000E-01	11.086388	11.086388	1.00 Sa	87%	100%	5.653309		
				(1.707042)		(1.1619E-01)	(3.693458)	(3.693458)	(0.017321)			2.447166		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:18

RADCALC v4.8.24

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/5/2006 3:34:32 PM

Lot No., Due Date: J6F140270; 07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6167188; RRA2267 Ra-226 by ASC-7

SDG, Matrix: 31902; FILTER

1.0 COC

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

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

No sample H7DW51AC is in the batch. It did not arrive.

First Level Review Pam Anderson **Date** 7-5-06

SEVERN TRENT **STL**

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6167188

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: Sherryl A. Adam Date: 7-6-06

6/26/2006 11:31:55 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Balance Id:1120373922

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech: 6/27/06 17:08 SG

Batch: 6167188 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6167192, BXTF

Sep2 DT/Tm Tech:

Prep Tech: HansenM

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 H7DWT-1-AC J6F140270-1-SAMP	0.833g	505.76g		0.00E00g						
NO sample UMA 6/26/06										
05/24/2006 07:40		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
2 H7DXC-1-AC J6F140270-2-SAMP	0.833sa,g	501.98sa,g	150.08g,in	0.249g	RATA22876 06/26/06,pd 10/04/04,r			65	0630	6/28/06
				7.4894				6/28/06	1401 R	
				6.490				1HB7 1/06	1423 R	
				= 1.1540						
05/24/2006 08:10		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
3 H7DXD-1-AC J6F140270-3-SAMP	0.833sa,g	502.56sa,g	150.16g,in	0.2489g	RATA22877 06/26/06,pd 10/04/04,r			67	0633	6/28/06
				7.4993				6/28/06	1401 R	
				7.127				2RC 7/1/06	1422 R	
				= 1.0522						
05/24/2006 10:30		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:
4 H7DXF-1-AC J6F140270-4-SAMP	0.833sa,g	500.58sa,g	150.41g,in	0.2503g	RATA22878 06/26/06,pd 10/04/04,r			610	0633	6/28/06
				7.5092				6/28/06	1401 R	
				6.985				3RC 7/1/06	1422 R	
				= 1.0750						
05/24/2006 11:20		AmtRec: FILTER		#Containers: 1				Scr:	Alpha:	Beta:

6/26/2006 11:31:56 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167188 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6167192, BXTF

Sep2 DT/Tm Tech:

Prep Tech: HansenM,LongA

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:
5 H7DXH-1-AC J6F140270-5-SAMP	0.833sa,g	501.49sa,g	150.25g,in	0.2496g	RATA22879 06/26/06,pd 10/04/04,r		66	0634	6/28/06 1401 R	
				7.4993 / 7.231 = 1.0371				4UA	7/1/06 1421 R	
05/24/2006 09:15		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
6 H7DXJ-1-AC J6F140270-6-SAMP	0.833sa,g	500.55sa,g	150.17g,in	0.2499g	RATA22880 06/26/06,pd 10/04/04,r		68	0634	6/28/06 1401 R	
				7.4993 / 6.899 = 1.0870				7UA	7/1/06 1425 R	
05/24/2006 07:30		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
7 H7DXK-1-AC J6F140270-7-SAMP	0.833sa,g	500.16sa,g	150.50g,in	0.2507g	RATA22881 06/26/06,pd 10/04/04,r		613	0634	6/28/06 1401 R	
				7.4993 / 6.183 = 1.2129				8RD	7/1/06 1417 R	
05/24/2006 08:00		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
8 H7DXL-1-AC J6F140270-8-SAMP	0.833sa,g	504.49sa,g	150.60g,in	0.2487g	RATA22882 06/26/06,pd 10/04/04,r		611	0634	6/28/06 1401 R	
				7.4894 / 7.202 = 1.0399				9RA	7/1/06 1457 R	
05/24/2006 08:30		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:

6/26/2006 11:31:56 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167188 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6167192, BXTF

Sep2 DT/Tm Tech:

Prep Tech: HansenM,LongA

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:
9 H7DXM-1-AC J6F140270-9-SAMP	0.833sa,g	507.47sa,g	150.07g,in	0.2463g	RATA22883 06/26/06,pd 10/04/04,r		612	0634	6/28/06	
				7.4894					6/28/06 1418 R	
				7.051				DSA	7/1/06 1454 R	
05/24/2006 09:00		AmtRec: FILTER		= 1.0622 #Containers: 1			Scr:	Alpha:		Beta:
10H7DXP-1-AC J6F140270-10-SAMP	0.833sa,g	506.00sa,g	150.70g,in	0.2481g	RATA22884 06/26/06,pd 10/04/04,r		9"	0707	6/28/06	
				7.4993					6/28/06 1418 R	
				7.18				GSA	7/1/06 1458 R	
05/24/2006 10:20		AmtRec: FILTER		= 1.0445 #Containers: 1			Scr:	Alpha:		Beta:
11H7DXQ-1-AC J6F140270-11-SAMP	0.833sa	505.01sa	150.38g,in	0.248g	RATA22885 06/26/06,pd 10/04/04,r		65	0708	6/28/06	
				7.5190					6/28/06 1418 R	
				6.273	PA 7-5-04			JSB	7/1/06 1455 R	
05/24/2006 11:10		AmtRec: FILTER		= 1.2101 #Containers: 1 1.1968			Scr:	Alpha:		Beta:
12H7DXV-1-AC J6F140270-12-SAMP	0.833sa,g	504.85sa,g	150.19g,in	0.2478g	RATA22886 06/26/06,pd 10/04/04,r		67	0708	6/28/06	
				7.4894					6/28/06 1418 R	
				6.724				NMA	7/1/06 1452 R	
05/24/2006 07:35		AmtRec: FILTER		= 1.1138 #Containers: 1			Scr:	Alpha:		Beta:

6/26/2006 11:31:56 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167188 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6167192, BXTF

Sep2 DT/Tm Tech:

Prep Tech: HansenM,LongA

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:
13H7DX0-1-AC J6F140270-13-SAMP	0.833sa,g	512.80sa,g	150.13g,in	0.2439g	RATA22887 06/26/06,pd 10/04/04,r	610	070V		4/Jones 6/28/06 1418 R	
				7.4993 / 7.051 = 1.0636					QMB 7/1/06 1454 R	
05/24/2006 08:15		AmtRec: FILTER		#Containers: 1			Scr:	Alpha:		Beta:
14H7JQF-1-AA-B J6F160000-188-BLK			1.00sa,in	1.00sa	RATA22888 06/26/06,pd 10/04/04,r	66	070V		4/Jones 6/28/06 1418 R	
				7.4993 / 6.524 = 1.1495					KME 7/1/06 1452 R	
05/24/2006 07:40		AmtRec:		#Containers: 1			Scr:	Alpha:		Beta:
15H7JQF-1-AC-C J6F160000-188-LCS			1.00sa,in	1.00sa	RASC4129 06/09/06	6X	070V		4/Jones 6/28/06 1418 R	
				7.5321 / 6.739 = 1.1177					PMB 7/1/06 1426 R	
05/24/2006 07:40		AmtRec:		#Containers: 1			Scr:	Alpha:		Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AC-SAMP Constituent List:
Ba-133 RDL: pCi/sam LCL:20 UCL:115 RPD:20 Ra-226 RDL:1.00E+00 pCi/sam LCL: UCL: RPD:

7/5/2006 3:21:58 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/5/2005, 7/10/2006, Batch: '6167188', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6167188						
AC		**CalcC**	**LongA**	6/26/2006 11:21:42		
SC			wagarr	IsBatched	6/16/2006 4:55:22 PM	ICOC_RADCALC v4.8.24
SC			LongA	InPrep	6/26/2006 11:21:42 AM	RICH-RC-5005 Revision 5
SC			DAWKINSO	InCnt1	6/27/2006 9:56:17 PM	RICH-RD-0007 REVISION 5
SC			BlackCL	Cnt1C	6/28/2006 7:21:47 AM	RICH-RD-0007 REVISION 5
SC			StringerR	InSep2	6/28/2006 2:10:02 PM	RICH-RC-5005 REVISION 5
SC			StringerR	CalcC	7/1/2006 8:38:58 PM	RICH-RC-5005 REVISION 5
AC			**DAWKINSO**	6/27/2006 9:56:17 PM		
AC			**BlackCL**	6/28/2006 7:21:47		
AC			**StringerR**	6/28/2006 2:10:02 PM		
AC			**StringerR**	7/1/2006 8:38:58 PM		

AC: Accepting Entry; SC: Status Change

7/5/2006 3:21:57 PM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
31902	9H7DX010			J6F14027013	P-0652	FILTER	6/14/2006 10:00:00	5/24/2006 8:15:00 AM					
RA-226	BXTE	0		7/1/2006 5:54:02 PM	3.0674E-01	1.589E-01	1.619E-01	5.026E-01	PCI/SA		0.94	1.0E+0	2.439E-1
31902	9H7DXC10			J6F1402702	000474	FILTER	6/14/2006 10:00:00	5/24/2006 8:10:00 AM					
RA-226	BXTE	0		7/1/2006 5:23:00 PM	3.0178E-01	2.836E-01	2.853E-01	1.008E+00	PCI/SA		0.867	1.0E+0	2.49E-1
31902	9H7DXD10			J6F1402703	000477	FILTER	6/14/2006 10:00:00	5/24/2006 10:30:00 AM					
RA-226	BXTE	0		7/1/2006 5:22:00 PM	4.4327E-01	2.36E-01	2.404E-01	7.719E-01	PCI/SA		0.95	1.0E+0	2.489E-1
31902	9H7DXF10			J6F1402704	000478	FILTER	6/14/2006 10:00:00	5/24/2006 11:20:00 AM					
RA-226	BXTE	0		7/1/2006 5:22:01 PM	-1.1411E-01	1.323E-01	1.328E-01	6.297E-01	PCI/SA		0.93	1.0E+0	2.503E-1
31902	9H7DXH10			J6F1402705	000479	FILTER	6/14/2006 10:00:00	5/24/2006 9:15:00 AM					
RA-226	BXTE	0		7/1/2006 5:21:00 PM	-1.8428E-01	1.907E-01	1.918E-01	8.373E-01	PCI/SA		0.964	1.0E+0	2.496E-1
31902	9H7DXJ10			J6F1402706	P-0644	FILTER	6/14/2006 10:00:00	5/24/2006 7:30:00 AM					
RA-226	BXTE	0		7/1/2006 5:25:00 PM	2.0883E-01	2.01E-01	2.023E-01	7.254E-01	PCI/SA		0.92	1.0E+0	2.499E-1
31902	9H7DXK10			J6F1402707	P-0645	FILTER	6/14/2006 10:00:00	5/24/2006 8:00:00 AM					
RA-226	BXTE	0		7/1/2006 5:17:00 PM	-2.6994E-01	2.303E-01	2.32E-01	1.088E+00	PCI/SA		0.824	1.0E+0	2.507E-1
31902	9H7DXL10			J6F1402708	P-0646	FILTER	6/14/2006 10:00:00	5/24/2006 8:30:00 AM					
RA-226	BXTE	0		7/1/2006 5:57:00 PM	0.0E+00	0.0E+00	2.114E-01	8.351E-01	PCI/SA		0.962	1.0E+0	2.487E-1
31902	9H7DXM10			J6F1402709	P-0647	FILTER	6/14/2006 10:00:00	5/24/2006 9:00:00 AM					
RA-226	BXTE	0		7/1/2006 5:54:00 PM	6.0055E-01	2.624E-01	2.692E-01	8.065E-01	PCI/SA		0.941	1.0E+0	2.463E-1
31902	9H7DXP10			J6F14027010	P-0648	FILTER	6/14/2006 10:00:00	5/24/2006 10:20:00 AM					
RA-226	BXTE	0		7/1/2006 5:58:00 PM	2.4791E-01	1.56E-01	1.581E-01	5.186E-01	PCI/SA		0.957	1.0E+0	2.481E-1
31902	9H7DXQ10			J6F14027011	P-0649	FILTER	6/14/2006 10:00:00	5/24/2006 11:10:00 AM					
RA-226	BXTE	0		7/1/2006 5:55:00 PM	-1.0043E-01	2.029E-01	2.032E-01	8.745E-01	PCI/SA		0.836	1.0E+0	2.48E-1
31902	9H7DXV10			J6F14027012	P-0651	FILTER	6/14/2006 10:00:00	5/24/2006 7:35:00 AM					
RA-226	BXTE	0		7/1/2006 5:52:00 PM	-2.0083E-01	2.26E-01	2.27E-01	9.441E-01	PCI/SA		0.898	1.0E+0	2.478E-1
31902	H7JQF1AB			J6F160000188	INTRA-LAB BLANK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
RA-226	BXTE	0	B	7/1/2006 5:52:00 PM	4.4177E-01	9.292E-02	1.023E-01	2.192E-01	PCI/SA		0.87	1.0E+0	1.0E+0
31902	H7JQF1CS			J6F160000188	INTRA-LAB CHECK	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
RA-226	BXTE	0	S	7/1/2006 5:26:00 PM	1.4989E+00	1.243E-01	1.98E-01	1.276E-01	PCI/SA	1.4031E+00	0.895	1.0E+0	1.0E+0

6167188, **Samples Inserted | Updated | NotUpdated => 14 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 14 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

Batch Nbr: 6167188

Alpha Beta, Ra-226 by ASC-7 , Results Summary Report

7/5/2006 2:33:42 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Ra-226 by ASC-7				Richland Standard Ra-226/Ra-228 Deem Wo Blk Subt.										
Calc	TE	FILTER	H7DXC1AC	RA-226	3.02E-01	(2.85E-01)	U4	PCI/SA	R	4.47E-01	1.01E+00		87%	
Calc	TE	FILTER	H7DXD1AC	RA-226	4.43E-01	(2.40E-01)		PCI/SA	R	3.26E-01	7.72E-01		95%	
Calc	TE	FILTER	H7DXF1AC	RA-226	-1.14E-01	(1.33E-01)	U4	PCI/SA	R	2.57E-01	6.30E-01		93%	
Calc	TE	FILTER	H7DXH1AC	RA-226	-1.84E-01	(1.92E-01)	U4	PCI/SA	R	3.61E-01	8.37E-01		96%	
Calc	TE	FILTER	H7DXJ1AC	RA-226	2.09E-01	(2.02E-01)	U4	PCI/SA	R	3.04E-01	7.25E-01		92%	
Calc	TE	FILTER	H7DXK1AC	RA-226	-2.70E-01	(2.32E-01)	U4	PCI/SA	R	4.56E-01	1.09E+00		82%	
Calc	TE	FILTER	H7DXL1AC	RA-226	0.00E+00	(2.11E-01)	U4	PCI/SA	R	3.63E-01	8.35E-01		96%	
Calc	TE	FILTER	H7DXM1AC	RA-226	6.01E-01	(2.69E-01)		PCI/SA	R	3.33E-01	8.07E-01		94%	
Calc	TE	FILTER	H7DXP1AC	RA-226	2.48E-01	(1.58E-01)	U4	PCI/SA	R	2.02E-01	5.19E-01		96%	
Calc	TE	FILTER	H7DXQ1AC	RA-226	-1.00E-01	(2.03E-01)	U4	PCI/SA	R	3.69E-01	8.74E-01		84%	
Calc	TE	FILTER	H7DXV1AC	RA-226	-2.01E-01	(2.27E-01)	U4	PCI/SA	R	4.18E-01	9.44E-01		90%	
Calc	TE	FILTER	H7DX01AC	RA-226	3.07E-01	(1.62E-01)		PCI/SA	R	1.99E-01	5.03E-01		94%	
Calc	TE	FILTER	H7JQF1AA	RA-226	4.42E-01	(1.02E-01)		PCI/SA	R	9.20E-02	2.19E-01	B	87%	
Calc	TE	FILTER	H7JQF1AC	RA-226	1.50E+00	(1.98E-01)		PCI/SA	R	5.06E-02	1.28E-01	S	89%	107%

P Anderson
7-5-06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14
RADCALC v4.8.24
STL Richland

Batch Nbr: 6167188

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

Detailed Report

7/5/2006 2:33:43 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXC1AC**	**PCI/SA**		05/24/06 08:10	07/01/06 17:23	06/28/06 14:01	RATA22876	1	1.00 Sa	
CID:000474LOT:J6F1402702 v4.8.24							FILTER				07/01/06 14:23	RATA22876 Alq	87%	0.249047 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:23	RA-226	28	25	ASC1HB	ASC		N	2.4125E+00	1.0000E+00	N	87%	N		2.4335E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(7.648E-02)	(0.000E+00)		7%			(0.000E+00)	4.015305		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.301783**	**U4**	1.43333E-01	0.166844	0.166844	1.00 Sa	87%		1.007852		
				(0.285322)		(1.3470E-01)	(0.157452)	(0.157452)	(0.028284)			0.447134		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXD1AC**	**PCI/SA**		05/24/06 10:30	07/01/06 17:22	06/28/06 14:01	RATA22877	1	1.00 Sa	
CID:000477LOT:J6F1402703 v4.8.24							FILTER				07/01/06 14:22	RATA22877 Alq	95%	0.248892 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:22	RA-226	20	12	ASC2RC	ASC		N	2.0913E+00	1.0000E+00	N	95%	N		2.4339E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(6.818E-02)	(0.000E+00)		8%			(0.000E+00)	4.017803		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.443275**		2.00000E-01	0.244917	0.244917	1.00 Sa	95%		0.771944		
				(0.240391)		(1.0646E-01)	(0.132073)	(0.132073)	(0.028284)			0.326102		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXF1AC**	**PCI/SA**		05/24/06 11:20	07/01/06 17:22	06/28/06 14:01	RATA22878	1	1.00 Sa	
CID:000478LOT:J6F1402704 v4.8.24							FILTER				07/01/06 14:22	RATA22878 Alq	93%	0.250293 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:22	RA-226	4	8	ASC3RC	ASC		N	2.2010E+00	1.0000E+00	N	93%	N		2.4339E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(8.122E-02)	(0.000E+00)		7%			(0.000E+00)	3.995322		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**-0.114107**	**U4**	-5.33333E-02	-0.063401	-0.063401	1.00 Sa	93%		0.629712		
				(0.132817)		(6.1824E-02)	(0.073707)	(0.073707)	(0.028284)			0.257028		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXH1AC**	**PCI/SA**		05/24/06 09:15	07/01/06 17:21	06/28/06 14:01	RATA22879	1	1.00 Sa	
CID:000479LOT:J6F1402705 v4.8.24							FILTER				07/01/06 14:21	RATA22879 Alq	96%	0.249573 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:21	RA-226	9	16	ASC4UA	ASC		N	2.1431E+00	1.0000E+00	N	96%	N		2.4344E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(1.080E-01)	(0.000E+00)		8%			(0.000E+00)	4.006847		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Batch Nbr: 6167188

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

7/5/2006 2:33:43 PM

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**-0.184284**	**U4**	-8.66667E-02	-0.102099	-0.102099	1.00 Sa	96%		0.837332		
				(0.191801)		(8.9691E-02)	(0.106101)	(0.106101)	(0.028284)			0.361256		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXJ1AC**	**PCI/SA**		05/24/06 07:30	07/01/06 17:25	06/28/06 14:01	RATA22880	1	1.00 Sa	
CID:P-0644LOT:J6F1402706 v4.8.24							FILTER				07/01/06 14:25	RATA22880 Alq	92%	0.249908 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:25	RA-226	14	11	ASC7UA	ASC		N	2.2064E+00	1.0000E+00	N	92%	N		2.4327E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(1.072E-01)	(0.000E+00)		7%			(0.000E+00)	4.001467		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.208825**	**U4**	9.66667E-02	0.115851	0.115851	1.00 Sa	92%		0.725353		
				(0.202285)		(9.3035E-02)	(0.112025)	(0.112025)	(0.028284)			0.304314		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXK1AC**	**PCI/SA**		05/24/06 08:00	07/01/06 17:17	06/28/06 14:01	RATA22881	1	1.00 Sa	
CID:P-0645LOT:J6F1402707 v4.8.24							FILTER				07/01/06 14:17	RATA22881 Alq	82%	0.250653 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:17	RA-226	5	11	ASC8RD	ASC		N	1.6393E+00	1.0000E+00	N	82%	N		2.4360E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(4.623E-02)	(0.000E+00)		7%			(0.000E+00)	3.989583		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**-0.269939**	**U4**	-8.33333E-02	-0.150201	-0.150201	1.00 Sa	82%		1.087652		
				(0.231974)		(7.1102E-02)	(0.128788)	(0.128788)	(0.028284)			0.456313		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXL1AC**	**PCI/SA**		05/24/06 08:30	07/01/06 17:57	06/28/06 14:01	RATA22882	1	1.00 Sa	
CID:P-0646LOT:J6F1402708 v4.8.24							FILTER				07/01/06 14:57	RATA22882 Alq	96%	0.248667 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:57	RA-226	15	18	ASC9RA	ASC		N	2.2615E+00	1.0000E+00	N	96%	N		2.4193E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(4.229E-02)	(0.000E+00)		8%			(0.000E+00)	4.021449		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.00E00**	**U4**	0.00000E+00	0.00E00	0.00E00	1.00 Sa	96%		0.835113		
				(0.211366)		(1.0488E-01)	(0.116678)	(0.116678)	(0.028284)			0.363158		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXM1AC**	**PCI/SA**		05/24/06 09:00	07/01/06 17:54	06/28/06 14:18	RATA22883	1	1.00 Sa	
CID:P-0647LOT:J6F1402709 v4.8.24							FILTER				07/01/06 14:54	RATA22883 Alq	94%	0.246336 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

1	07/01/06 17:54	RA-226	19	9	ASCDSA	ASC		N	1.8059E+00	1.0000E+00	N	94%	N		2.4276E+00	4.5045E-01	1.0000E+00
			50	60			Y		(3.449E-02)	(0.000E+00)		8%			(0.000E+00)	4.05949	

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.600554**		2.30000E-01	0.328409	0.328409	1.00 Sa	94%		0.806546		
				(0.26924)		(1.0050E-01)	(0.146019)	(0.146019)	(0.028284)			0.33271		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXP1AC**	**PCI/SA**		05/24/06 10:20	07/01/06 17:58	06/28/06 14:18	RATA22884	1	1.00 Sa	
CID:P-0648LOT:J6F14027010 v4.8.24							FILTER				07/01/06 14:58	RATA22884 Alq	96%	0.248089 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:58	RA-226	10	5	ASCGSA	ASC		N	2.1653E+00	1.0000E+00	N	96%	N		2.4260E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(7.622E-02)	(0.000E+00)		8%			(0.000E+00)	4.030809		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.247906**	**U4**	1.16667E-01	0.136531	0.136531	1.00 Sa	96%		0.518554		
				(0.158128)		(7.3409E-02)	(0.086733)	(0.086733)	(0.028284)			0.201812		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXQ1AC**	**PCI/SA**		05/24/06 11:10	07/01/06 17:55	06/28/06 14:18	RATA22885	1	1.00 Sa	
CID:P-0649LOT:J6F14027011 v4.8.24							FILTER				07/01/06 14:55	RATA22885 Alq	84%	0.248048 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:55	RA-226	8	12	ASCJSB	ASC		N	2.1011E+00	1.0000E+00	N	84%	N		2.4272E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(7.837E-02)	(0.000E+00)		7%			(0.000E+00)	4.031484		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**-0.10043**	**U4**	-4.00000E-02	-0.055301	-0.055301	1.00 Sa	84%		0.874474		
				(0.203217)		(8.0829E-02)	(0.111855)	(0.111855)	(0.028284)			0.369415		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DXV1AC**	**PCI/SA**		05/24/06 07:35	07/01/06 17:52	06/28/06 14:18	RATA22886	1	1.00 Sa	
CID:P-0651LOT:J6F14027012 v4.8.24							FILTER				07/01/06 14:52	RATA22886 Alq	90%	0.247813 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:52	RA-226	15	24	ASCNMA	ASC		N	2.4482E+00	1.0000E+00	N	90%	N		2.4285E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(6.292E-02)	(0.000E+00)		7%			(0.000E+00)	4.035305		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**-0.200831**	**U4**	-1.00000E-01	-0.110482	-0.110482	1.00 Sa	90%		0.944125		
				(0.22695)		(1.1255E-01)	(0.124689)	(0.124689)	(0.028284)			0.417885		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7DX01AC**	**PCI/SA**		05/24/06 08:15	07/01/06 17:54	06/28/06 14:18	RATA22887	1	1.00 Sa	
CID:P-0652LOT:J6F14027013 v4.8.24							FILTER				07/01/06 14:54	RATA22887 Alq	94%	0.243873 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:54	RA-226	13	6	ASCQMB	ASC		N	2.4878E+00	1.0000E+00	N	94%	N		2.4276E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(6.220E-02)	(0.000E+00)		8%			(0.000E+00)	4.100488		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/05/06	RA-226	R	**0.306737**		1.60000E-01	0.166061	0.166061	1.00 Sa	94%		0.502578		
				(0.161891)		(8.2865E-02)	(0.087123)	(0.087123)	(0.028284)			0.199454		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7JQF1AA**	**PCI/SA**	**B**	05/24/06 07:40	07/01/06 17:52	06/28/06 14:18	RATA22888	1	1.00 Sa	
CID:INTRA-LAB BLANKLOT:J6F160000188 v4.8.24							FILTER				07/01/06 14:52	RATA22888 Alq	87%	1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:52	RA-226	43	11	ASCKME	ASC		N	1.9262E+00	1.0000E+00	N	87%	N		2.4285E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(2.562E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/01/06	RA-226	R	**0.441765**		6.76667E-01	0.980678	0.980678	1.00 Sa	87%		0.21921		
				(0.10229)		(1.4232E-01)	(0.221066)	(0.221066)	(0.017321)			0.091967		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	TE	FILTER	*STLE	Ra226WoBS	**H7JQF1AC**	**PCI/SA**	**S**	05/24/06 07:40	07/01/06 17:26	06/28/06 14:18	RASC4129	1	1.00 Sa	
CID:INTRA-LAB CHECKLOT:J6F160000188 v4.8.24							FILTER				07/01/06 14:26	RASC4129 Alq	89%	1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/01/06 17:26	RA-226	159	6	ASCPMB	ASC		N	2.5237E+00	1.0000E+00	N	89%	N		2.4394E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(9.363E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/01/06	RA-226	R	**1.49895**		3.08000E+00	3.327532	3.327532	1.00 Sa	89%	107%	0.127583		
				(0.198045)		(2.5547E-01)	(0.402844)	(0.402844)	(0.017321)			0.050633		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:14

RADCALC v4.8.24

STL Richland

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXC1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.154
Technician: RS

Analysis Size: 0.249 Analysis Unit: SA

Report Date: 1-JUL-2006 18:13:00.63
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:23:00.00

Detector ID: 1 Cell ID: 1HB

Bkg Date: 1-JUL-2006 11:47:20.54
Bkg Counts: 000025 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:23:00.28
Counts: 000028 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXD1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.0522
Technician: RS

Analysis Size: 0.2489 Analysis Unit: SA

Report Date: 1-JUL-2006 18:12:00.87
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:22:00.00

Detector ID: 2 Cell ID: 2RC

Bkg Date: 1-JUL-2006 11:47:26.95
Bkg Counts: 000012 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:22:00.42
Counts: 000020 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXF1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.075
Technician: RS

Analysis Size: 0.2503 Analysis Unit: SA

Report Date: 1-JUL-2006 18:12:01.00
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:22:00.00

Detector ID: 3 Cell ID: 3RC

Bkg Date: 1-JUL-2006 11:47:52.33
Bkg Counts: 000008 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:22:00.51
Counts: 000004 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXH1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.0371
Technician: RS

Analysis Size: 0.2496 Analysis Unit: SA

Report Date: 1-JUL-2006 18:11:00.62
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:21:00.00

Detector ID: 4 Cell ID: 4UA

Bkg Date: 1-JUL-2006 11:48:09.33
Bkg Counts: 000016 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:21:00.25
Counts: 000009 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXJ1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.087
Technician: RS

Analysis Size: 0.2499 Analysis Unit: SA

Report Date: 1-JUL-2006 18:15:00.56
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:25:00.00

Detector ID: 7 Cell ID: 7UA

Bkg Date: 1-JUL-2006 11:48:20.73
Bkg Counts: 000011 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:25:00.25
Counts: 000014 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXK1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.2129
Technician: RS

Analysis Size: 0.2507 Analysis Unit: SA

Report Date: 1-JUL-2006 18:07:00.59
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:17:00.00

Detector ID: 8 Cell ID: 8RD

Bkg Date: 1-JUL-2006 11:48:28.41
Bkg Counts: 000011 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:17:00.26
Counts: 000005 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXL1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.0399
Technician: RS

Analysis Size: 0.2487 Analysis Unit: SA

Report Date: 1-JUL-2006 18:47:00.56
First Separation Date: 28-JUN-2006 14:01:00.00
Second Separation Date: 1-JUL-2006 14:57:00.00

Detector ID: 9 Cell ID: 9RA

Bkg Date: 1-JUL-2006 11:55:24.37
Bkg Counts: 000018 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:57:00.24
Counts: 000015 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXM1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.0622
Technician: RS

Analysis Size: 0.2463 Analysis Unit: SA

Report Date: 1-JUL-2006 18:44:00.71
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:54:00.00

Detector ID: 13 Cell ID: DSA

Bkg Date: 1-JUL-2006 11:48:50.50
Bkg Counts: 000009 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:54:00.39
Counts: 000019 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXP1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.0445
Technician: RS

Analysis Size: 0.2481 Analysis Unit: SA

Report Date: 1-JUL-2006 18:48:00.58
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:58:00.00

Detector ID: 16 Cell ID: GSA

Bkg Date: 1-JUL-2006 11:49:02.92
Bkg Counts: 000005 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:58:00.25
Counts: 000010 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXQ1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.2101
Technician: RS

Analysis Size: 0.248 Analysis Unit: SA

Report Date: 1-JUL-2006 18:45:00.57
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:55:00.00

Detector ID: 18 Cell ID: JSB

Bkg Date: 1-JUL-2006 11:49:58.56
Bkg Counts: 000012 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:55:00.24
Counts: 000008 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DXV1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.1138
Technician: RS

Analysis Size: 0.2478 Analysis Unit: SA

Report Date: 1-JUL-2006 18:42:01.00
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:52:00.00

Detector ID: 22 Cell ID: NMA

Bkg Date: 30-JUN-2006 11:21:55.29
Bkg Counts: 000024 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:52:00.40
Counts: 000015 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7DX01AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.0636
Technician: RS

Analysis Size: 0.2439 Analysis Unit: SA

Report Date: 1-JUL-2006 18:44:02.72
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:54:00.00

Detector ID: 24 Cell ID: QMB

Bkg Date: 1-JUL-2006 11:50:19.80
Bkg Counts: 000006 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:54:02.41
Counts: 000013 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7JQF1AA Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.1495
Technician: RS

Analysis Size: 1.0 Analysis Unit: SA

Report Date: 1-JUL-2006 18:42:00.99
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:52:00.00

Detector ID: 19 Cell ID: KME

Bkg Date: 1-JUL-2006 11:50:08.43
Bkg Counts: 000011 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:52:00.42
Counts: 000043 Count Duration: 000050.0

End of Report

ALPHA SCINTILLATION REPORT
(Version: 17-Oct-1998)

Sample ID: H7JQF1AC Isotope: RA-226

Client: STL Matrix Code: 103

Batch Nbr: 6167188 Activity Unit: PCI/SA Multiplier: 1.1177
Technician: RS

Analysis Size: 1.0 Analysis Unit: SA

Report Date: 1-JUL-2006 18:16:00.62
First Separation Date: 28-JUN-2006 14:18:00.00
Second Separation Date: 1-JUL-2006 14:26:00.00

Detector ID: 23 Cell ID: PMB

Bkg Date: 30-JUN-2006 12:49:19.05
Bkg Counts: 000006 Bkg Duration: 000060.0

Count Date: 1-JUL-2006 17:26:00.28
Counts: 000159 Count Duration: 000050.0

End of Report

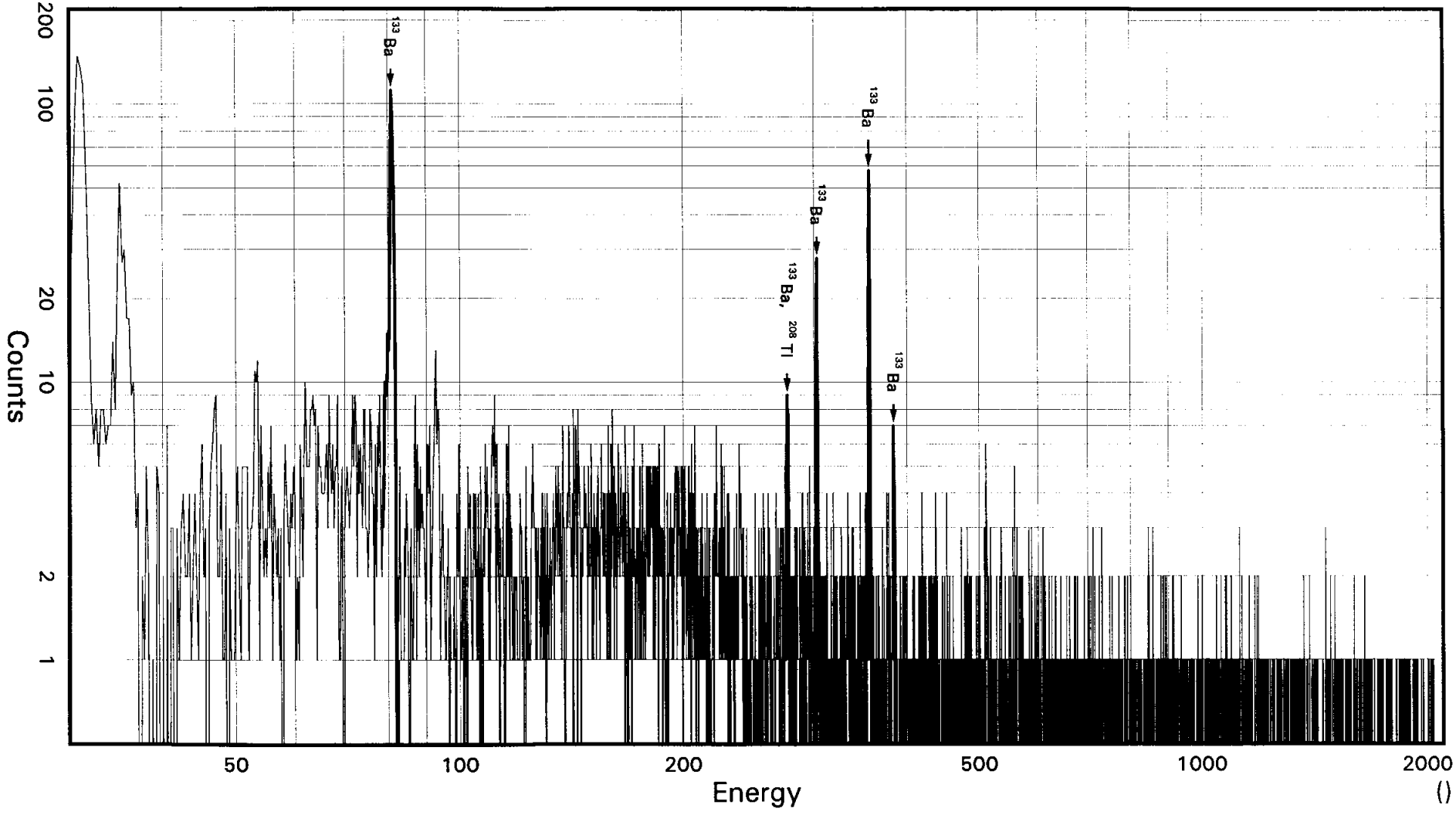
STL Richland WA.

BA133

Sample ID: H7DXC1AC

Detector ID: GER5 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:03:24.41

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: -3.73693E-01

Slope: 2.49400E-01

Quadrature: 1.33221E-09

SAMPLE IDENTIFICATION: H7DXC1AC

CONFIGURATION ID: GER5:H7DXC1AC_280660603
TITLE : BA133
SAMPLE ID : H7DXC1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:03:24
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:08:28.08
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: -.3737E+00 keV
ENERGY SLOPE: 2.4940E-01 keV/C
ENERGY Q COEFF: 1.3322E-09 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 7.7531E-01 keV
FWHM SLOPE: 2.5845E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:33:40

Configuration : RDND06$DKA100:[GER5.SAMPLE]H7DXC1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:24
Sample ID : H7DXC1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Start energy : 19.58 End energy : 2042.80
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	30.96	584	141	0.96	125.64	118	16	3.25E-01	6.2	
2	0	35.42	179	57	0.78	143.52	136	16	9.97E-02	12.4	
3	0	54.29	21	55	0.67	219.19	207	15	1.16E-02	81.3	
4	0	80.91	415	25	0.78	325.90	317	15	2.31E-01	5.5	
5	0	276.27	46	15	1.47	1109.22	1102	15	2.56E-02	23.5	
6	0	303.07	104	19	0.67	1216.68	1206	20	5.76E-02	14.4	
7	0	356.04	251	25	0.92	1429.07	1419	20	1.40E-01	8.0	
8	0	383.79	28	5	1.27	1540.35	1535	11	1.56E-02	24.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 28-JUN-2006 06:33:40

Configuration : RDND06$DKA100:[GER5.SAMPLE]H7DXC1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:24
Sample ID : H7DXC1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	415	33.00	1.924E+00	2.180E+03	2.180E+03	7.75
	276.40	46	6.90	2.077E+00	1.070E+03	1.070E+03	24.15
	302.84	104	17.80	2.080E+00	9.342E+02	9.345E+02	15.37
	356.00	251	62.05*	2.082E+00	6.488E+02	6.490E+02	9.61
	383.85	28	8.70	2.081E+00	5.171E+02	5.173E+02	25.28

Flag: "*" = Keyline

Unidentified Energy Lines

Sample ID : H7DXC1AC
Acquisition date : 28-JUN-2006 06:03:24

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	30.96	584	141	0.96	125.64	118	16	3.25E-01	6.2	1.68E+00	
0	35.42	179	57	0.78	143.52	136	16	9.97E-02	12.4	1.72E+00	
0	54.29	21	55	0.67	219.19	207	15	1.16E-02	81.3	1.83E+00	

Flags: "T" = Tentatively associated

Sample ID : H7DXC1AC
Acquisition date : 28-JUN-2006 06:03:24

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	1.086E+03	24.15	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.1 Generated 28-JUN-2006 06:33:41

Configuration : RDND06$DKA100:[GER5.SAMPLE]H7DXC1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:24
Sample ID : H7DXC1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.490E+02	6.240E+01	5.660E+01	1.132E+00	11.467

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	7.268E-01		6.738E+01	2.640E+02	5.297E+00	0.003
NA-22	-1.084E-01		4.211E+00	1.830E+01	3.879E-01	-0.006
NA-24	-2.564E+01		2.494E+01	8.876E+01	1.895E+00	-0.289
K-40	-1.270E+00		5.461E+01	2.922E+02	6.278E+00	-0.004
SC-46	3.453E+00		4.158E+00	2.045E+01	4.287E-01	0.169
CR-51	1.899E+02		9.522E+01	4.065E+02	8.134E+00	0.467
MN-54	1.341E+00		4.357E+00	1.955E+01	4.013E-01	0.069
CO-57	2.087E+02		1.353E+02	5.176E+02	1.070E+01	0.403
CO-58	2.328E-01		4.826E+00	2.050E+01	4.201E-01	0.011
FE-59	6.210E+00		7.430E+00	3.659E+01	7.661E-01	0.170
CO-60	-2.368E-01		4.236E+00	1.826E+01	3.888E-01	-0.013
ZN-65	-2.675E+00		7.480E+00	3.165E+01	6.633E-01	-0.085
SE-75	-2.790E+01		1.625E+01	5.163E+01	1.036E+00	-0.540
SR-85	-3.099E+01		1.151E+01	3.319E+01	6.670E-01	-0.934
Y-88	1.742E+00		3.142E+00	1.666E+01	3.670E-01	0.105
NB-94	7.015E-01		4.879E+00	2.078E+01	4.277E-01	0.034
NB-95	3.413E+00		4.795E+00	2.223E+01	4.540E-01	0.154
TC-95M	-1.732E+00		2.222E+01	7.979E+01	1.614E+00	-0.022
ZR-95	1.160E+01		9.446E+00	4.475E+01	9.134E-01	0.259
ZRNB-95	6.719E+00		9.439E+00	4.375E+01	8.937E-01	0.154
MO-99	-1.415E+01		2.642E+01	9.367E+01	1.932E+00	-0.151
RH-101	-1.547E+01		2.132E+01	7.376E+01	1.494E+00	-0.210
RH-102M	-1.030E+01		7.621E+00	2.540E+01	5.095E-01	-0.405
RU-103	-2.397E-01		7.514E+00	2.954E+01	5.932E-01	-0.008
RU-106DA	1.829E+01		5.334E+01	2.312E+02	4.676E+00	0.079
AG-108M	-1.951E+01		9.218E+00	2.803E+01	5.613E-01	-0.696
AG-110M	7.867E+00		7.866E+00	3.539E+01	7.292E-01	0.222

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	1.119E+01		1.109E+01	4.730E+01	9.463E-01	0.237
SB-124	-2.495E+00		6.744E+00	2.531E+01	5.112E-01	-0.099
SB-125	-3.159E+01		2.661E+01	9.114E+01	1.825E+00	-0.347
SN-126DA	1.893E+00		5.299E+00	2.288E+01	4.640E-01	0.083
I-131	1.971E+01		1.073E+01	4.791E+01	9.582E-01	0.411
CS-134	-1.354E+01		5.840E+00	1.413E+01	2.893E-01	-0.958
CS-137DA	1.905E+00		7.195E+00	2.983E+01	6.049E-01	0.064
LA-138	0.000E+00		1.287E-01	6.958E+00	1.492E-01	0.000
CE-139	1.590E+01		1.798E+01	6.814E+01	1.392E+00	0.233
BA-140	-1.118E+01		2.768E+01	1.044E+02	2.101E+00	-0.107
BALA-140	3.375E+00		1.039E+01	4.712E+01	1.022E+00	0.072
LA-140	3.899E+00		9.927E+00	4.524E+01	9.811E-01	0.086
CE-141	-3.079E+01		3.198E+01	1.109E+02	2.282E+00	-0.278
CE-144	-7.831E+01		1.299E+02	4.441E+02	9.194E+00	-0.176
CEPR-144	-1.616E+02		2.595E+02	8.861E+02	1.834E+01	-0.182
PM-144	9.324E-01		4.622E+00	2.034E+01	4.113E-01	0.046
PM-146	6.888E+00		1.123E+01	4.600E+01	9.220E-01	0.150
EU-152	1.579E+01		3.110E+01	1.247E+02	2.495E+00	0.127
EU-154	-3.048E-01		1.184E+01	5.146E+01	1.091E+00	-0.006
EU-155	-7.009E+01		6.854E+01	2.300E+02	4.853E+00	-0.305
HF-181	-4.221E+00		9.418E+00	3.476E+01	6.976E-01	-0.121
BI-207	-1.204E+00		6.696E+00	2.619E+01	5.280E-01	-0.046
TL-208	-1.823E+00		7.414E+00	3.015E+01	6.084E-01	-0.060
BI-210M	1.615E+01		1.823E+01	7.275E+01	1.459E+00	0.222
BI-212	-1.405E+02		9.261E+01	3.023E+02	9.243E+00	-0.465
PB-212	3.384E+01		2.859E+01	1.161E+02	2.336E+00	0.291
BI-214	5.436E+00		1.560E+01	6.334E+01	1.280E+00	0.086
PB-214	-6.198E+00		3.214E+01	1.032E+02	2.065E+00	-0.060
RA-223	-1.692E+01		7.701E+01	2.788E+02	5.591E+00	-0.061
RA-224DA	3.390E+01		2.864E+01	1.163E+02	2.340E+00	0.291
RA-226DA	5.436E+00		1.560E+01	6.334E+01	1.280E+00	0.086
AC-227DA	-1.471E+02		1.070E+02	3.545E+02	7.133E+00	-0.415
AC-228	2.293E+01		2.098E+01	9.461E+01	1.953E+00	0.242
RA-228DA	2.294E+01		2.099E+01	9.466E+01	1.954E+00	0.242
TH-228DA	-5.084E+00		2.067E+01	8.408E+01	1.696E+00	-0.060
TH-232DA	1.259E+02		7.085E+01	3.041E+02	6.082E+00	0.414
TH-234DA	-9.703E+02		6.075E+02	1.882E+03	3.912E+01	-0.516
U-234DA	6.680E+01		5.163E+01	2.074E+02	4.154E+00	0.322
U-235HP	2.205E+02		1.478E+02	5.705E+02	1.175E+01	0.387
NP-237DA	1.663E+01		2.250E+01	9.035E+01	1.808E+00	0.184
U-238DA	-6.198E+00		3.214E+01	1.032E+02	2.065E+00	-0.060
U-238DHP	6.241E+02		5.190E+02	2.043E+03	4.548E+01	0.306
AM-241HP	-2.020E+01		4.503E+01	1.587E+02	3.561E+00	-0.127

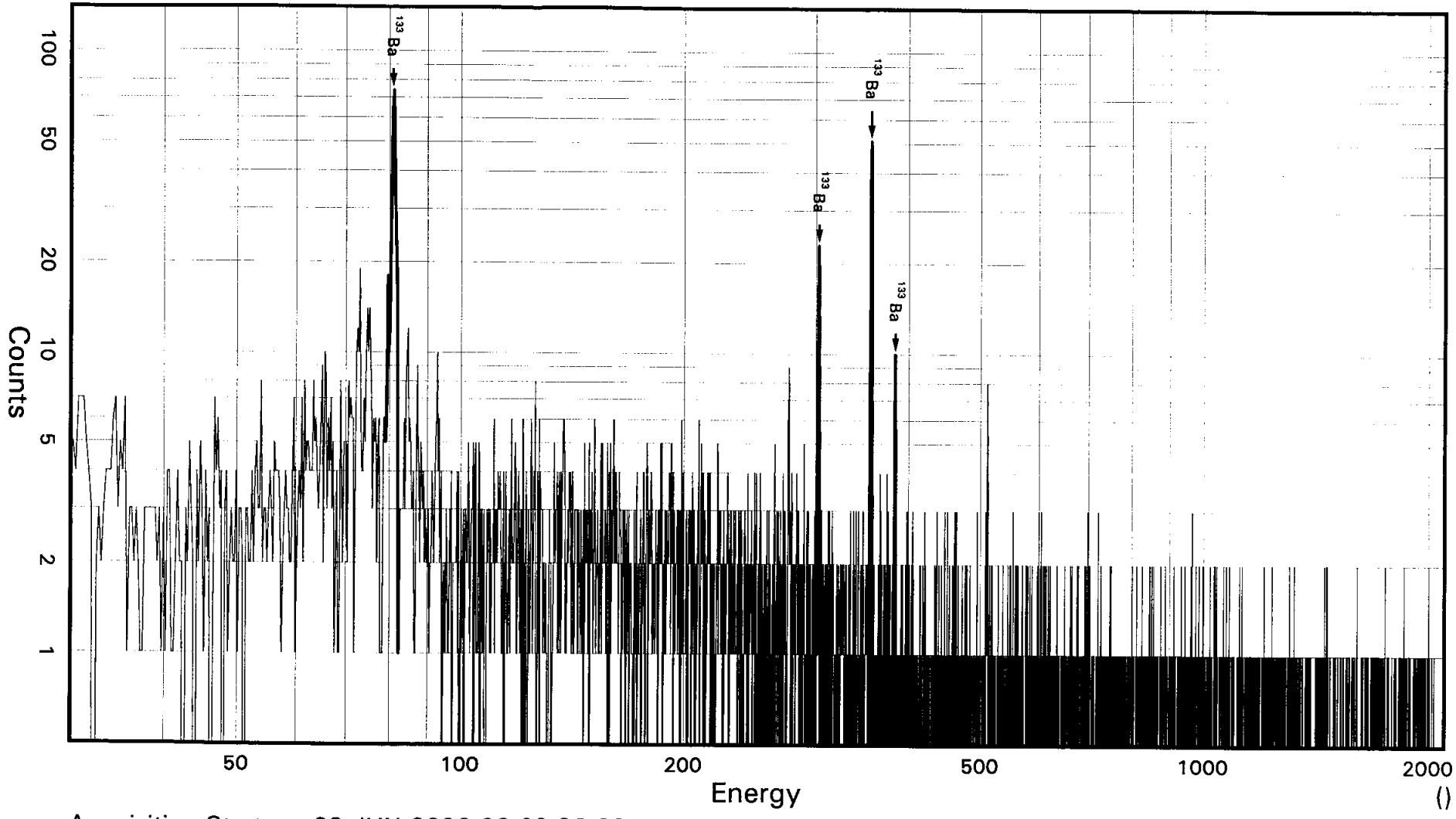
STL Richland WA.

BA133

Sample ID: H7DXD1AC

Detector ID: GER7 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:03:36.22

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 5.64187E-01

Slope: 2.49258E-01

Quadrature: 1.23721E-07

SAMPLE IDENTIFICATION: H7DXD1AC

CONFIGURATION ID: GER7:H7DXD1AC_280660603
TITLE : BA133
SAMPLE ID : H7DXD1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:03:36
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:09:11.06
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 5.6419E-01 keV
ENERGY SLOPE: 2.4926E-01 keV/C
ENERGY Q COEFF: 1.2372E-07 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 6.0738E-01 keV
FWHM SLOPE: 3.7080E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:33:54

Configuration : $DISK1:[GER7.SAMPLE]H7DXD1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:36
Sample ID : H7DXD1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.21 0.0%
Start energy : 20.51 End energy : 2050.79
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	73.28*	4	58	0.33	291.67	283	11	2.15E-03	405.3	
2	0	80.88	312	45	0.78	322.16	313	16	1.73E-01	7.4	
3	0	302.81	102	16	1.08	1211.84	1201	21	5.69E-02	13.8	
4	0	355.98	276	9	1.33	1424.87	1416	18	1.53E-01	6.5	
5	0	383.40	41	3	1.24	1534.75	1526	15	2.27E-02	18.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:33:55

Configuration : $DISK1:[GER7.SAMPLE]H7DXD1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:36
Sample ID : H7DXD1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.21 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	312	33.00	1.923E+00	1.638E+03	1.639E+03	9.19
	276.40	------	6.90	2.076E+00	------	Line Not Found	------
	302.84	102	17.80	2.078E+00	9.225E+02	9.228E+02	14.85
	356.00	276	62.05*	2.080E+00	7.125E+02	7.127E+02	8.47
	383.85	41	8.70	2.080E+00	7.527E+02	7.530E+02	19.41

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DXD1AC Acquisition date : 28-JUN-2006 06:03:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	73.28	4	58	0.33	291.67	283	11	2.15E-03	****	1.90E+00	

Flags: "T" = Tentatively associated

Sample ID : H7DXD1AC
Acquisition date : 28-JUN-2006 06:03:36

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:33:57

Configuration : $DISK1:[GER7.SAMPLE]H7DXD1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:36
Sample ID : H7DXD1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.21 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	7.127E+02	6.037E+01	6.410E+01	1.282E+00	11.120

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	5.389E+01		6.736E+01	2.860E+02	5.738E+00	0.188
NA-22	1.610E-01		4.104E+00	1.831E+01	3.882E-01	0.009
NA-24	3.633E+01		2.705E+01	1.450E+02	3.095E+00	0.251
K-40	-9.589E-01		8.026E+01	3.790E+02	8.144E+00	-0.003
SC-46	-6.953E+00		5.446E+00	1.834E+01	3.844E-01	-0.379
CR-51	-1.015E+02		8.678E+01	3.003E+02	6.009E+00	-0.338
MN-54	3.591E+00		4.752E+00	2.198E+01	4.513E-01	0.163
CO-57	1.084E+02		1.342E+02	4.997E+02	1.033E+01	0.217
CO-58	3.358E+00		4.121E+00	2.017E+01	4.133E-01	0.166
FE-59	6.101E+00		4.327E+00	2.831E+01	5.926E-01	0.216
CO-60	-3.328E+00		3.376E+00	1.255E+01	2.672E-01	-0.265
ZN-65	-1.957E-01		1.158E+01	4.686E+01	9.822E-01	-0.004
SE-75	1.967E+01		1.701E+01	6.770E+01	1.358E+00	0.291
SR-85	-6.017E+01		1.309E+01	3.110E+01	6.249E-01	-1.935
Y-88	-1.886E+00		4.058E+00	1.667E+01	3.672E-01	-0.113
NB-94	-5.106E+00		3.769E+00	1.212E+01	2.496E-01	-0.421
NB-95	-4.920E+00		5.042E+00	1.826E+01	3.730E-01	-0.269
TC-95M	2.299E+01		1.800E+01	7.109E+01	1.438E+00	0.323
ZR-95	4.232E+00		6.930E+00	3.385E+01	6.909E-01	0.125
ZRNB-95	-9.685E+00		9.926E+00	3.595E+01	7.343E-01	-0.269
MO-99	-3.381E+01		2.524E+01	8.265E+01	1.705E+00	-0.409
RH-101	1.200E+01		1.624E+01	6.235E+01	1.262E+00	0.193
RH-102M	-5.714E+00		6.968E+00	2.547E+01	5.109E-01	-0.224
RU-103	6.539E+00		7.176E+00	3.142E+01	6.310E-01	0.208
RU-106DA	-5.300E+01		6.078E+01	2.173E+02	4.395E+00	-0.244
AG-108M	-5.011E+00		7.195E+00	2.604E+01	5.215E-01	-0.192
AG-110M	-8.361E+00		6.820E+00	2.303E+01	4.745E-01	-0.363

Sample ID : H7DXD1AC Acquisition date : 28-JUN-2006 06:03:36

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	1.772E+01		1.041E+01	4.719E+01	9.441E-01	0.375
SB-124	-6.910E+00		7.247E+00	2.542E+01	5.135E-01	-0.272
SB-125	-1.935E+01		1.834E+01	6.381E+01	1.278E+00	-0.303
SN-126DA	3.480E+00		5.830E+00	2.492E+01	5.055E-01	0.140
I-131	7.533E+00		1.053E+01	4.349E+01	8.699E-01	0.173
CS-134	-1.104E-01		6.042E+00	2.503E+01	5.124E-01	-0.004
CS-137DA	1.490E+00		6.460E+00	2.691E+01	5.456E-01	0.055
LA-138	-7.107E-02		6.339E+00	2.771E+01	5.943E-01	-0.003
CE-139	-7.662E+00		1.458E+01	5.260E+01	1.074E+00	-0.146
BA-140	1.638E+01		2.462E+01	1.078E+02	2.169E+00	0.152
BALA-140	-7.610E+00		7.820E+00	2.944E+01	6.383E-01	-0.259
LA-140	-8.712E+00		6.968E+00	2.368E+01	5.136E-01	-0.368
CE-141	-2.623E+01		2.695E+01	9.068E+01	1.867E+00	-0.289
CE-144	1.194E+02		1.070E+02	4.176E+02	8.646E+00	0.286
CEPR-144	2.375E+02		2.140E+02	8.347E+02	1.728E+01	0.285
PM-144	3.096E+00		5.737E+00	2.461E+01	4.976E-01	0.126
PM-146	9.241E+00		9.419E+00	4.110E+01	8.237E-01	0.225
EU-152	-7.509E+00		3.393E+01	1.264E+02	2.529E+00	-0.059
EU-154	4.534E-01		1.154E+01	5.149E+01	1.092E+00	0.009
EU-155	2.728E+01		6.040E+01	2.270E+02	4.789E+00	0.120
HF-181	-7.769E+00		7.660E+00	2.742E+01	5.503E-01	-0.283
BI-207	1.340E+01		6.667E+00	3.120E+01	6.289E-01	0.429
TL-208	-4.595E+00		8.558E+00	3.352E+01	6.764E-01	-0.137
BI-210M	1.147E+01		2.081E+01	7.931E+01	1.591E+00	0.145
BI-212	1.272E+02		8.885E+01	4.130E+02	1.263E+01	0.308
PB-212	-5.685E+01		2.322E+01	7.937E+01	1.597E+00	-0.716
BI-214	-1.897E+01		1.762E+01	6.563E+01	1.326E+00	-0.289
PB-214	2.523E+00		2.684E+01	9.830E+01	1.966E+00	0.026
RA-223	-6.055E+01		7.657E+01	2.642E+02	5.299E+00	-0.229
RA-224DA	-5.695E+01		2.326E+01	7.951E+01	1.599E+00	-0.716
RA-226DA	-1.883E+01		1.763E+01	6.573E+01	1.328E+00	-0.287
AC-227DA	2.995E+01		9.080E+01	3.437E+02	6.917E+00	0.087
AC-228	3.480E+01		2.119E+01	1.073E+02	2.215E+00	0.324
RA-228DA	3.482E+01		2.121E+01	1.074E+02	2.216E+00	0.324
TH-228DA	-1.281E+01		2.386E+01	9.347E+01	1.886E+00	-0.137
TH-232DA	-4.321E+00		6.143E+01	2.370E+02	4.740E+00	-0.018
TH-234DA	-2.296E+02		6.678E+02	2.755E+03	5.726E+01	-0.083
U-234DA	7.953E+00		4.884E+01	1.828E+02	3.660E+00	0.044
U-235HP	-3.247E+01		1.204E+02	4.256E+02	8.767E+00	-0.076
NP-237DA	3.595E+00		2.457E+01	9.487E+01	1.899E+00	0.038
U-238DA	2.523E+00		2.684E+01	9.830E+01	1.966E+00	0.026
U-238DHP	-8.607E+02		5.223E+02	1.692E+03	3.767E+01	-0.509
AM-241HP	-4.195E+01		4.446E+01	1.484E+02	3.329E+00	-0.283

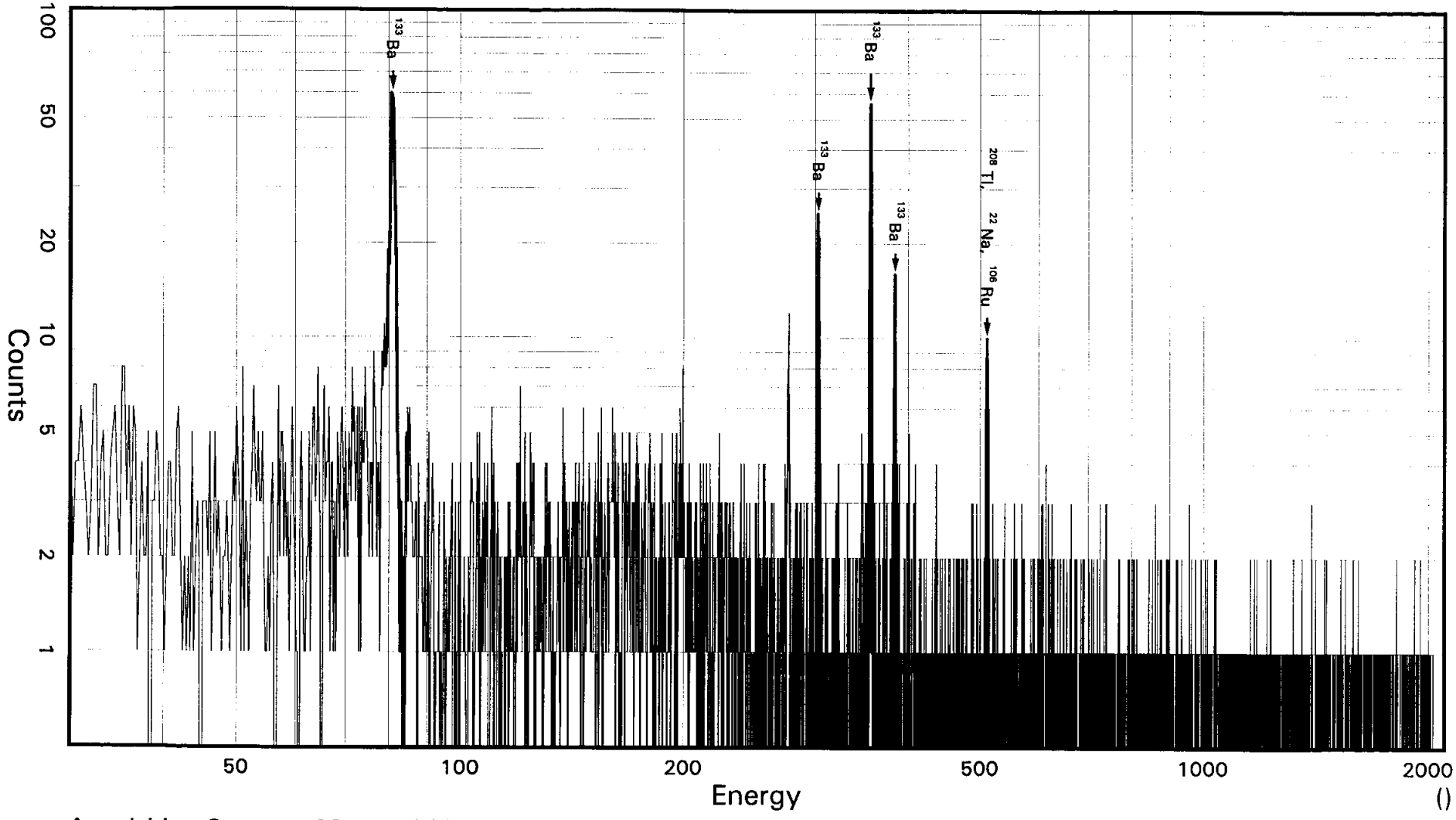
STL Richland WA.

BA133

Sample ID: H7DXF1AC

Detector ID: GER10 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:03:41.40

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 1.56802E+01

Slope: 2.46972E-01

Quadrature: 3.56657E-09

SAMPLE IDENTIFICATION: H7DXF1AC

CONFIGURATION ID: GER10:H7DXF1AC_280660603
TITLE : BA133
SAMPLE ID : H7DXF1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:03:41
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:09:43.29
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 1.5680E+01 keV
ENERGY SLOPE: 2.4697E-01 keV/C
ENERGY Q COEFF: 3.5666E-09 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 8.5214E-01 keV
FWHM SLOPE: 3.0556E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:34:11

Configuration : $DISK1:[GER10.SAMPLE]H7DXF1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:41
Sample ID : H7DXF1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.22 0.0%
Start energy : 18.15 End energy : 2039.11
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	81.03	282	79	1.08	264.59	257	20	1.56E-01	10.6	
2	0	302.92	120	13	1.18	1163.04	1157	15	6.64E-02	11.5	
3	0	356.07	336	27	1.37	1378.21	1368	25	1.87E-01	6.8	
4	0	384.10	53	21	0.70	1491.70	1480	21	2.94E-02	25.6	
5	0	510.78*	14	15	2.54	2004.62	1992	23	7.69E-03	86.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:12

Configuration : $DISK1:[GER10.SAMPLE]H7DXF1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:03:41
Sample ID : H7DXF1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.22 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	282	33.00	2.399E+00	1.186E+03	1.186E+03	11.89
	276.40	------	6.90	2.578E+00	------ Line Not Found		------
	302.84	120	17.80	2.582E+00	8.675E+02	8.677E+02	12.70
	356.00	336	62.05*	2.584E+00	6.983E+02	6.985E+02	8.66
	383.85	53	8.70	2.583E+00	7.860E+02	7.863E+02	26.17

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DXF1AC

Acquisition date : 28-JUN-2006 06:03:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	510.78	14	15	2.54	2004.62	1992	23	7.69E-03	86.1	2.57E+00	T

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXF1AC

Acquisition date : 28-JUN-2006 06:03:41

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
NA-22	2.60Y	0.00	511.00	179.68	9.998E+00	86.26	Abun.
			1274.54*	99.94	--- Not Found ---		
		% Abundances Found =		64.26			
RU-106DA	368.20D	0.00	511.85	20.60	8.738E+01	86.26	Abun.
			621.84*	9.80	--- Not Found ---		
		% Abundances Found =		67.76			
TL-208	1.41E+10Y	0.00	277.35	6.80	--- Not Found ---		Abun.
			510.84	21.60	8.306E+01	86.26	
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		17.27			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:14

Configuration : $DISK1:[GER10.SAMPLE]H7DXF1AC_280660603.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXF1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:03:41
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.22 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.985E+02	6.050E+01	4.808E+01	9.617E-01	14.527

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	-9.349E+01		5.943E+01	1.906E+02	3.824E+00	-0.490
NA-22	1.540E+00		2.397E+00	1.292E+01	2.730E-01	0.119
NA-24	9.659E+00		1.681E+01	8.993E+01	1.913E+00	0.107
K-40	-5.390E+01		5.287E+01	2.140E+02	4.580E+00	-0.252
SC-46	4.058E+00		3.090E+00	1.643E+01	3.436E-01	0.247
CR-51	1.987E+01		8.533E+01	3.188E+02	6.379E+00	0.062
MN-54	-6.092E+00		4.297E+00	1.441E+01	2.955E-01	-0.423
CO-57	7.196E+01		8.810E+01	3.370E+02	6.954E+00	0.213
CO-58	8.695E-01		4.961E+00	2.018E+01	4.129E-01	0.043
FE-59	2.231E+00		6.566E+00	2.941E+01	6.140E-01	0.076
CO-60	4.120E+00		3.626E+00	1.794E+01	3.806E-01	0.230
ZN-65	-5.703E+00		6.697E+00	2.478E+01	5.179E-01	-0.230
SE-75	-2.239E+00		1.279E+01	4.706E+01	9.439E-01	-0.048
SR-85	2.719E+01		8.184E+00	3.518E+01	7.068E-01	0.773
Y-88	-1.453E+00		1.455E+00	3.888E+00	8.519E-02	-0.374
NB-94	2.776E+00		3.708E+00	1.736E+01	3.569E-01	0.160
NB-95	3.762E+00		3.603E+00	1.762E+01	3.596E-01	0.213
TC-95M	8.471E+00		1.484E+01	5.630E+01	1.138E+00	0.150
ZR-95	-5.256E+00		7.800E+00	2.909E+01	5.932E-01	-0.181
ZRNB-95	2.353E+00		8.176E+00	3.521E+01	7.183E-01	0.067
MO-99	-2.534E+01		1.862E+01	6.214E+01	1.280E+00	-0.408
RH-101	4.288E+00		1.628E+01	6.226E+01	1.260E+00	0.069
RH-102M	-4.457E+00		6.032E+00	2.162E+01	4.335E-01	-0.206
RU-103	-2.015E+00		6.299E+00	2.376E+01	4.770E-01	-0.085
RU-106DA	-1.076E+02		6.945E+01	2.282E+02	4.613E+00	-0.471
AG-108M	-1.580E+01		6.979E+00	2.036E+01	4.078E-01	-0.776
AG-110M	2.543E-01		5.727E+00	2.406E+01	4.949E-01	0.011

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	-2.371E+01		9.783E+00	2.813E+01	5.627E-01	-0.843
SB-124	-1.232E+01		7.619E+00	2.495E+01	5.037E-01	-0.494
SB-125	-6.675E+00		1.560E+01	5.998E+01	1.201E+00	-0.111
SN-126DA	-1.272E+00		5.057E+00	1.963E+01	3.978E-01	-0.065
I-131	1.613E+00		9.015E+00	3.540E+01	7.080E-01	0.046
CS-134	-8.590E-02		5.028E+00	2.050E+01	4.191E-01	-0.004
CS-137DA	7.570E+00		6.316E+00	2.773E+01	5.618E-01	0.273
LA-138	8.192E+00		5.885E+00	2.911E+01	6.220E-01	0.281
CE-139	-1.049E+01		1.411E+01	4.947E+01	1.009E+00	-0.212
BA-140	2.142E+01		2.338E+01	9.969E+01	2.005E+00	0.215
BALA-140	-6.012E+00		7.702E+00	2.977E+01	6.427E-01	-0.202
LA-140	-5.666E+00		7.257E+00	2.805E+01	6.056E-01	-0.202
CE-141	-2.856E+00		2.321E+01	8.228E+01	1.691E+00	-0.035
CE-144	-1.412E+02		8.665E+01	2.772E+02	5.728E+00	-0.510
CEPR-144	-2.814E+02		1.734E+02	5.550E+02	1.147E+01	-0.507
PM-144	7.175E+00		6.050E+00	2.592E+01	5.238E-01	0.277
PM-146	1.229E+01		8.074E+00	3.637E+01	7.288E-01	0.338
EU-152	-2.317E+00		2.646E+01	1.004E+02	2.008E+00	-0.023
EU-154	1.275E-01		7.619E+00	3.564E+01	7.533E-01	0.004
EU-155	1.061E+00		5.044E+01	1.833E+02	3.856E+00	0.006
HF-181	-3.664E+00		6.933E+00	2.550E+01	5.117E-01	-0.144
BI-207	6.282E+00		6.464E+00	2.701E+01	5.442E-01	0.233
TL-208	-1.883E+00		5.774E+00	2.250E+01	4.537E-01	-0.084
BI-210M	-1.038E-01		1.491E+01	5.567E+01	1.117E+00	-0.002
BI-212	1.945E+01		6.691E+01	2.823E+02	8.628E+00	0.069
PB-212	-7.688E-02		1.892E+01	6.995E+01	1.407E+00	-0.001
BI-214	-2.373E+01		1.484E+01	5.293E+01	1.069E+00	-0.448
PB-214	-4.178E+01		2.747E+01	7.838E+01	1.568E+00	-0.533
RA-223	5.873E+01		5.664E+01	2.263E+02	4.537E+00	0.260
RA-224DA	-7.701E-02		1.895E+01	7.008E+01	1.409E+00	-0.001
RA-226DA	-2.373E+01		1.484E+01	5.293E+01	1.069E+00	-0.448
AC-227DA	-1.624E+02		7.818E+01	2.431E+02	4.890E+00	-0.668
AC-228	4.993E+00		1.065E+01	5.162E+01	1.064E+00	0.097
RA-228DA	4.996E+00		1.065E+01	5.165E+01	1.064E+00	0.097
TH-228DA	-5.252E+00		1.610E+01	6.273E+01	1.265E+00	-0.084
TH-232DA	6.388E+01		4.993E+01	2.138E+02	4.276E+00	0.299
TH-234DA	-3.526E+00		5.833E+02	2.470E+03	5.122E+01	-0.001
U-234DA	1.775E+01		3.580E+01	1.401E+02	2.805E+00	0.127
U-235HP	5.938E+01		1.024E+02	3.782E+02	7.778E+00	0.157
NP-237DA	1.111E+01		1.788E+01	7.132E+01	1.427E+00	0.156
U-238DA	-4.178E+01		2.747E+01	7.838E+01	1.568E+00	-0.533
U-238DHP	2.377E+02		3.486E+02	1.301E+03	2.880E+01	0.183
AM-241HP	5.946E+00		3.247E+01	1.202E+02	2.680E+00	0.049

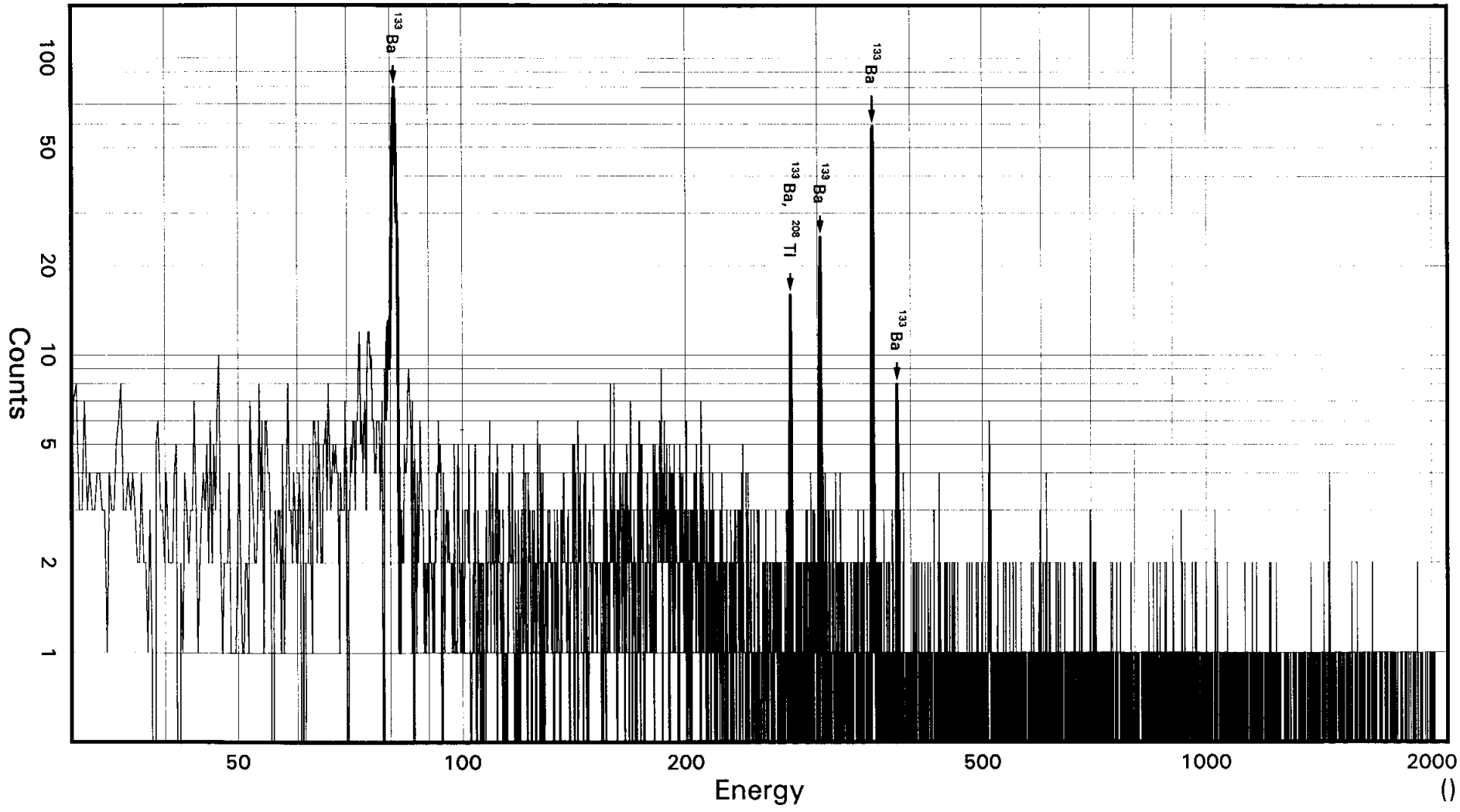
STL Richland WA.

BA133

Sample ID: H7DXH1AC

Detector ID: GER6 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:04:01.26

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 2.95630E-02

Slope: 2.49319E-01

Quadrature: 2.25669E-08

SAMPLE IDENTIFICATION: H7DXH1AC

CONFIGURATION ID: GER6:H7DXH1AC_280660604
TITLE : BA133
SAMPLE ID : H7DXH1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:04:01
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:08:55.68
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 2.9563E-02 keV
ENERGY SLOPE: 2.4932E-01 keV/C
ENERGY Q COEFF: 2.2567E-08 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 2.4904E-01 keV
FWHM SLOPE: 5.8849E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:34:27

Configuration : $DISK1:[GER6.SAMPLE]H7DXH1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:01
Sample ID : H7DXH1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Start energy : 19.98 End energy : 2043.97
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	80.98	343	74	0.97	324.68	316	15	1.90E-01	7.6	
2	0	276.36	62	4	0.83	1108.22	1101	14	3.42E-02	14.3	
3	0	302.96	109	17	1.09	1214.89	1207	17	6.06E-02	12.9	
4	0	355.96	315	19	1.17	1427.43	1419	16	1.75E-01	6.5	
5	0	383.97	35	0	1.21	1539.74	1531	14	1.94E-02	16.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:27

Configuration : $DISK1:[GER6.SAMPLE]H7DXH1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:01
Sample ID : H7DXH1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	343	33.00	2.167E+00	1.598E+03	1.599E+03	9.37
	276.40	62	6.90	2.334E+00	1.273E+03	1.274E+03	15.27
	302.84	109	17.80	2.337E+00	8.736E+02	8.738E+02	14.00
	356.00	315	62.05*	2.339E+00	7.228E+02	7.231E+02	8.41
	383.85	35	8.70	2.338E+00	5.735E+02	5.737E+02	17.74

Flag: "*" = Keyline

None

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXH1AC

Acquisition date : 28-JUN-2006 06:04:01

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	1.292E+03	15.27	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:30

Configuration : $DISK1:[GER6.SAMPLE]H7DXH1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXH1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:04:01
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.23 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	7.231E+02	6.084E+01	5.452E+01	1.090E+00	13.262

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	5.202E+01		5.653E+01	2.429E+02	4.873E+00	0.214
NA-22	-3.082E+00		3.730E+00	1.402E+01	2.968E-01	-0.220
NA-24	4.067E+00		2.204E+01	1.051E+02	2.238E+00	0.039
K-40	-2.242E+01		7.401E+01	3.438E+02	7.370E+00	-0.065
SC-46	-4.787E+00		4.632E+00	1.629E+01	3.410E-01	-0.294
CR-51	-1.052E+02		8.306E+01	2.817E+02	5.637E+00	-0.373
MN-54	3.035E+00		4.120E+00	1.923E+01	3.944E-01	0.158
CO-57	4.111E+01		8.953E+01	3.465E+02	7.155E+00	0.119
CO-58	-1.389E+00		2.528E+00	1.098E+01	2.249E-01	-0.126
FE-59	-8.377E+00		7.278E+00	2.515E+01	5.257E-01	-0.333
CO-60	2.985E+00		3.058E+00	1.630E+01	3.464E-01	0.183
ZN-65	-3.678E-01		9.457E+00	3.869E+01	8.099E-01	-0.010
SE-75	1.941E+01		1.443E+01	5.862E+01	1.176E+00	0.331
SR-85	-2.409E+01		1.034E+01	3.212E+01	6.454E-01	-0.750
Y-88	-3.124E+00		2.216E+00	4.306E+00	9.459E-02	-0.726
NB-94	1.497E+00		4.852E+00	2.065E+01	4.248E-01	0.072
NB-95	2.896E+00		4.315E+00	1.977E+01	4.036E-01	0.147
TC-95M	-3.994E+00		1.665E+01	6.080E+01	1.229E+00	-0.066
ZR-95	1.870E+01		8.121E+00	4.248E+01	8.667E-01	0.440
ZRNB-95	5.701E+00		8.494E+00	3.892E+01	7.944E-01	0.146
MO-99	-5.916E+00		1.709E+01	6.232E+01	1.285E+00	-0.095
RH-101	2.384E+01		1.556E+01	6.039E+01	1.222E+00	0.395
RH-102M	-2.887E-01		6.098E+00	2.388E+01	4.791E-01	-0.012
RU-103	-2.309E+00		6.998E+00	2.629E+01	5.279E-01	-0.088
RU-106DA	-2.415E+00		4.742E+01	1.932E+02	3.907E+00	-0.012
AG-108M	-1.234E+01		7.734E+00	2.517E+01	5.041E-01	-0.490
AG-110M	8.102E+00		7.053E+00	3.219E+01	6.627E-01	0.252

Sample ID : H7DXH1AC
Acquisition date : 28-JUN-2006 06:04:01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	-8.783E-01		9.886E+00	3.865E+01	7.732E-01	-0.023
SB-124	-7.846E+00		6.633E+00	2.252E+01	4.547E-01	-0.348
SB-125	2.156E+00		1.552E+01	6.553E+01	1.312E+00	0.033
SN-126DA	-2.510E+00		5.310E+00	2.037E+01	4.131E-01	-0.123
I-131	9.770E+00		1.120E+01	4.489E+01	8.979E-01	0.218
CS-134	-3.949E+00		6.081E+00	2.240E+01	4.582E-01	-0.176
CS-137DA	3.882E+00		7.092E+00	2.955E+01	5.990E-01	0.131
LA-138	2.339E+00		6.844E+00	2.996E+01	6.411E-01	0.078
CE-139	-3.829E+00		1.494E+01	5.315E+01	1.085E+00	-0.072
BA-140	2.636E+01		2.500E+01	1.098E+02	2.210E+00	0.240
BALA-140	-1.530E+01		9.630E+00	3.022E+01	6.537E-01	-0.506
LA-140	-1.294E+01		9.338E+00	3.106E+01	6.719E-01	-0.417
CE-141	1.026E+00		2.033E+01	7.625E+01	1.568E+00	0.013
CE-144	-2.495E+01		8.221E+01	3.055E+02	6.318E+00	-0.082
CEPR-144	-5.100E+01		1.643E+02	6.104E+02	1.262E+01	-0.084
PM-144	-1.106E+00		5.829E+00	2.249E+01	4.546E-01	-0.049
PM-146	-6.525E+00		1.011E+01	3.670E+01	7.354E-01	-0.178
EU-152	2.708E+01		2.709E+01	1.118E+02	2.236E+00	0.242
EU-154	-8.669E+00		1.049E+01	3.944E+01	8.348E-01	-0.220
EU-155	-5.374E+00		4.004E+01	1.488E+02	3.133E+00	-0.036
HF-181	-3.125E+00		7.781E+00	2.896E+01	5.811E-01	-0.108
BI-207	2.970E+00		4.642E+00	2.072E+01	4.175E-01	0.143
TL-208	6.313E+00		7.210E+00	3.062E+01	6.176E-01	0.206
BI-210M	8.750E+00		1.636E+01	6.351E+01	1.274E+00	0.138
BI-212	6.568E+01		7.972E+01	3.496E+02	1.068E+01	0.188
PB-212	-5.319E+00		2.303E+01	8.500E+01	1.710E+00	-0.063
BI-214	6.938E+00		1.507E+01	6.250E+01	1.263E+00	0.111
PB-214	1.293E+00		2.296E+01	7.459E+01	1.492E+00	0.017
RA-223	-4.649E+01		5.527E+01	1.923E+02	3.856E+00	-0.242
RA-224DA	-5.328E+00		2.307E+01	8.515E+01	1.713E+00	-0.063
RA-226DA	5.706E-01		1.573E+01	6.250E+01	1.263E+00	0.009
AC-227DA	-4.649E+00		9.367E+01	3.418E+02	6.877E+00	-0.014
AC-228	2.079E+01		1.805E+01	8.836E+01	1.822E+00	0.235
RA-228DA	2.080E+01		1.806E+01	8.841E+01	1.823E+00	0.235
TH-228DA	1.760E+01		2.010E+01	8.538E+01	1.722E+00	0.206
TH-232DA	1.386E+01		6.002E+01	2.327E+02	4.654E+00	0.060
TH-234DA	7.090E+02		8.143E+02	3.608E+03	7.491E+01	0.196
U-234DA	-1.331E+01		4.406E+01	1.633E+02	3.269E+00	-0.082
U-235HP	-1.982E-01		9.934E+01	3.679E+02	7.571E+00	-0.001
NP-237DA	-1.907E+01		2.417E+01	8.554E+01	1.712E+00	-0.223
U-238DA	1.293E+00		2.296E+01	7.459E+01	1.492E+00	0.017
U-238DHP	3.138E+02		3.326E+02	1.262E+03	2.800E+01	0.249
AM-241HP	2.000E+01		3.007E+01	1.143E+02	2.556E+00	0.175

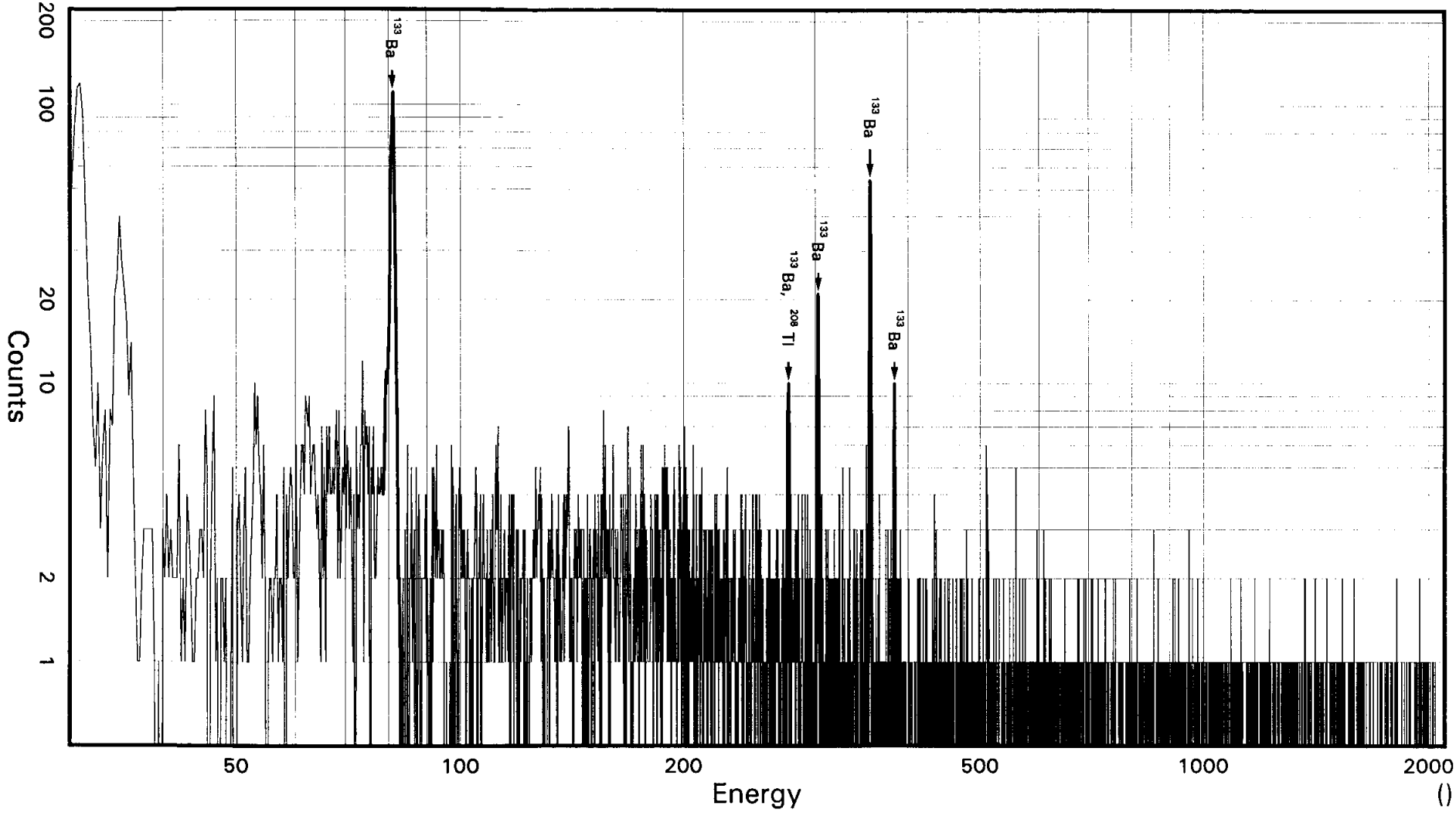
STL Richland WA.

BA133

Sample ID: H7DXJ1AC

Detector ID: GER8 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:04:06.04

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 2.20038E-01

Slope: 2.49828E-01

Quadrature: 1.42949E-08

SAMPLE IDENTIFICATION: H7DXJ1AC

CONFIGURATION ID: GER8:H7DXJ1AC_280660604
TITLE : BA133
SAMPLE ID : H7DXJ1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:04:06
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:09:27.45
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 2.2004E-01 keV
ENERGY SLOPE: 2.4983E-01 keV/C
ENERGY Q COEFF: 1.4295E-08 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 9.0735E-01 keV
FWHM SLOPE: 2.2582E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:34:43

Configuration : $DISK1:[GER8.SAMPLE]H7DXJ1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:06
Sample ID : H7DXJ1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.21 0.0%
Start energy : 20.21 End energy : 2047.77
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	30.86	475	152	1.02	122.64	116	14	2.64E-01	7.2	
2	0	35.15	171	42	0.98	139.81	132	16	9.53E-02	11.5	
3	0	53.31	47	17	1.74	212.49	203	17	2.61E-02	24.8	
4	0	80.97	450	49	0.93	323.22	313	20	2.50E-01	6.1	
5	0	276.21	52	8	1.43	1104.66	1096	16	2.89E-02	18.4	
6	0	302.93	103	13	1.04	1211.60	1203	18	5.71E-02	12.9	
7	0	356.04	305	0	1.18	1424.14	1414	20	1.69E-01	5.7	
8	0	383.64	40	6	0.70	1534.59	1527	14	2.20E-02	21.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:44

Configuration : $DISK1:[GER8.SAMPLE]H7DXJ1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:06
Sample ID : H7DXJ1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.21 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	450	33.00	2.202E+00	2.064E+03	2.065E+03	8.16
	276.40	52	6.90	2.370E+00	1.060E+03	1.060E+03	19.22
	302.84	103	17.80	2.374E+00	8.112E+02	8.114E+02	14.01
	356.00	305	62.05*	2.376E+00	6.896E+02	6.899E+02	7.86
	383.85	40	8.70	2.375E+00	6.392E+02	6.394E+02	21.86

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DXJ1AC

Acquisition date : 28-JUN-2006 06:04:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	30.86	475	152	1.02	122.64	116	14	2.64E-01	7.2	1.93E+00	
0	35.15	171	42	0.98	139.81	132	16	9.53E-02	11.5	1.97E+00	
0	53.31	47	17	1.74	212.49	203	17	2.61E-02	24.8	2.10E+00	

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXJ1AC

Acquisition date : 28-JUN-2006 06:04:06

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	1.075E+03	19.22	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:46

Configuration : $DISK1:[GER8.SAMPLE]H7DXJ1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXJ1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:04:06
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.21 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.899E+02	5.423E+01	4.686E+01	9.373E-01	14.721

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	6.063E+01		5.392E+01	2.369E+02	4.752E+00	0.256
NA-22	5.949E+00		2.992E+00	1.785E+01	3.778E-01	0.333
NA-24	5.231E+01		2.827E+01	1.488E+02	3.170E+00	0.351
K-40	5.076E+01		4.908E+01	2.453E+02	5.257E+00	0.207
SC-46	2.984E+00		3.652E+00	1.789E+01	3.744E-01	0.167
CR-51	4.718E-01		8.851E+01	3.327E+02	6.656E+00	0.001
MN-54	1.226E+00		3.882E+00	1.729E+01	3.547E-01	0.071
CO-57	-1.140E+02		1.101E+02	3.740E+02	7.722E+00	-0.305
CO-58	-8.108E-02		2.996E+00	1.367E+01	2.800E-01	-0.006
FE-59	8.032E+00		7.059E+00	3.494E+01	7.303E-01	0.230
CO-60	4.474E+00		2.595E+00	1.604E+01	3.408E-01	0.279
ZN-65	-8.686E+00		7.693E+00	2.697E+01	5.645E-01	-0.322
SE-75	6.973E+00		1.439E+01	5.606E+01	1.125E+00	0.124
SR-85	-1.823E+01		9.507E+00	3.066E+01	6.162E-01	-0.594
Y-88	-3.668E-02		2.243E+00	1.153E+01	2.531E-01	-0.003
NB-94	-2.161E-01		3.623E+00	1.552E+01	3.191E-01	-0.014
NB-95	-4.556E+00		2.642E+00	4.015E+00	8.195E-02	-1.135
TC-95M	-1.189E+01		1.626E+01	5.580E+01	1.128E+00	-0.213
ZR-95	-2.846E+00		7.059E+00	2.837E+01	5.787E-01	-0.100
ZRNB-95	-8.967E+00		5.200E+00	7.904E+00	1.613E-01	-1.135
MO-99	1.760E+01		2.018E+01	7.636E+01	1.574E+00	0.230
RH-101	1.285E+00		1.650E+01	5.908E+01	1.196E+00	0.022
RH-102M	2.570E+00		6.081E+00	2.479E+01	4.973E-01	0.104
RU-103	4.609E+00		5.001E+00	2.301E+01	4.619E-01	0.200
RU-106DA	4.457E+01		5.198E+01	2.299E+02	4.648E+00	0.194
AG-108M	-4.014E+00		8.105E+00	2.930E+01	5.868E-01	-0.137
AG-110M	-3.203E-01		5.028E+00	2.150E+01	4.425E-01	-0.015

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	1.791E+00		1.056E+01	4.111E+01	8.225E-01	0.044
SB-124	-3.315E+00		4.511E+00	1.704E+01	3.440E-01	-0.195
SB-125	-2.815E+01		1.869E+01	5.997E+01	1.201E+00	-0.469
SN-126DA	-4.228E+00		3.756E+00	1.320E+01	2.677E-01	-0.320
I-131	2.859E+00		7.925E+00	3.263E+01	6.527E-01	0.088
CS-134	-1.887E+00		4.531E+00	1.810E+01	3.703E-01	-0.104
CS-137DA	-1.611E+00		4.994E+00	2.006E+01	4.065E-01	-0.080
LA-138	-8.662E+00		4.357E+00	6.082E+00	1.301E-01	-1.424
CE-139	-4.492E+00		1.441E+01	5.094E+01	1.040E+00	-0.088
BA-140	1.299E+01		1.500E+01	7.455E+01	1.500E+00	0.174
BALA-140	0.000E+00		0.000E+00	9.449E+00	2.043E-01	0.000
LA-140	0.000E+00		0.000E+00	8.904E+00	1.925E-01	0.000
CE-141	2.075E+01		2.224E+01	8.581E+01	1.765E+00	0.242
CE-144	1.161E+02		9.629E+01	3.780E+02	7.817E+00	0.307
CEPR-144	2.354E+02		1.928E+02	7.574E+02	1.566E+01	0.311
PM-144	5.878E+00		4.531E+00	2.159E+01	4.363E-01	0.272
PM-146	3.867E+00		7.621E+00	3.243E+01	6.498E-01	0.119
EU-152	-4.497E+01		2.874E+01	9.382E+01	1.876E+00	-0.479
EU-154	1.673E+01		8.416E+00	5.021E+01	1.062E+00	0.333
EU-155	3.254E+01		5.380E+01	2.040E+02	4.295E+00	0.160
HF-181	-2.307E+00		5.974E+00	2.292E+01	4.599E-01	-0.101
BI-207	-5.330E+00		5.300E+00	1.896E+01	3.820E-01	-0.281
TL-208	1.055E+01		4.841E+00	2.557E+01	5.158E-01	0.412
BI-210M	1.804E+01		1.656E+01	6.725E+01	1.349E+00	0.268
BI-212	-3.236E+01		6.398E+01	2.493E+02	7.618E+00	-0.130
PB-212	2.400E+01		2.140E+01	8.748E+01	1.759E+00	0.274
BI-214	-1.388E+00		1.253E+01	5.236E+01	1.058E+00	-0.027
PB-214	1.159E+01		2.228E+01	8.282E+01	1.656E+00	0.140
RA-223	-9.350E+01		6.233E+01	2.079E+02	4.168E+00	-0.450
RA-224DA	2.404E+01		2.143E+01	8.764E+01	1.763E+00	0.274
RA-226DA	4.691E+00		1.180E+01	5.243E+01	1.059E+00	0.089
AC-227DA	-1.906E+02		8.242E+01	2.564E+02	5.158E+00	-0.743
AC-228	-4.262E+00		1.346E+01	5.618E+01	1.159E+00	-0.076
RA-228DA	-4.265E+00		1.347E+01	5.621E+01	1.159E+00	-0.076
TH-228DA	2.940E+01		1.350E+01	7.131E+01	1.438E+00	0.412
TH-232DA	4.526E+01		6.761E+01	2.652E+02	5.305E+00	0.171
TH-234DA	-2.005E+02		5.839E+02	2.410E+03	5.001E+01	-0.083
U-234DA	2.857E+01		3.931E+01	1.581E+02	3.167E+00	0.181
U-235HP	1.448E+01		1.083E+02	3.952E+02	8.133E+00	0.037
NP-237DA	3.786E+01		2.043E+01	8.860E+01	1.773E+00	0.427
U-238DA	1.159E+01		2.228E+01	8.282E+01	1.656E+00	0.140
U-238DHP	2.011E+01		4.563E+02	1.703E+03	3.777E+01	0.012
AM-241HP	-7.927E+01		4.513E+01	1.424E+02	3.182E+00	-0.557

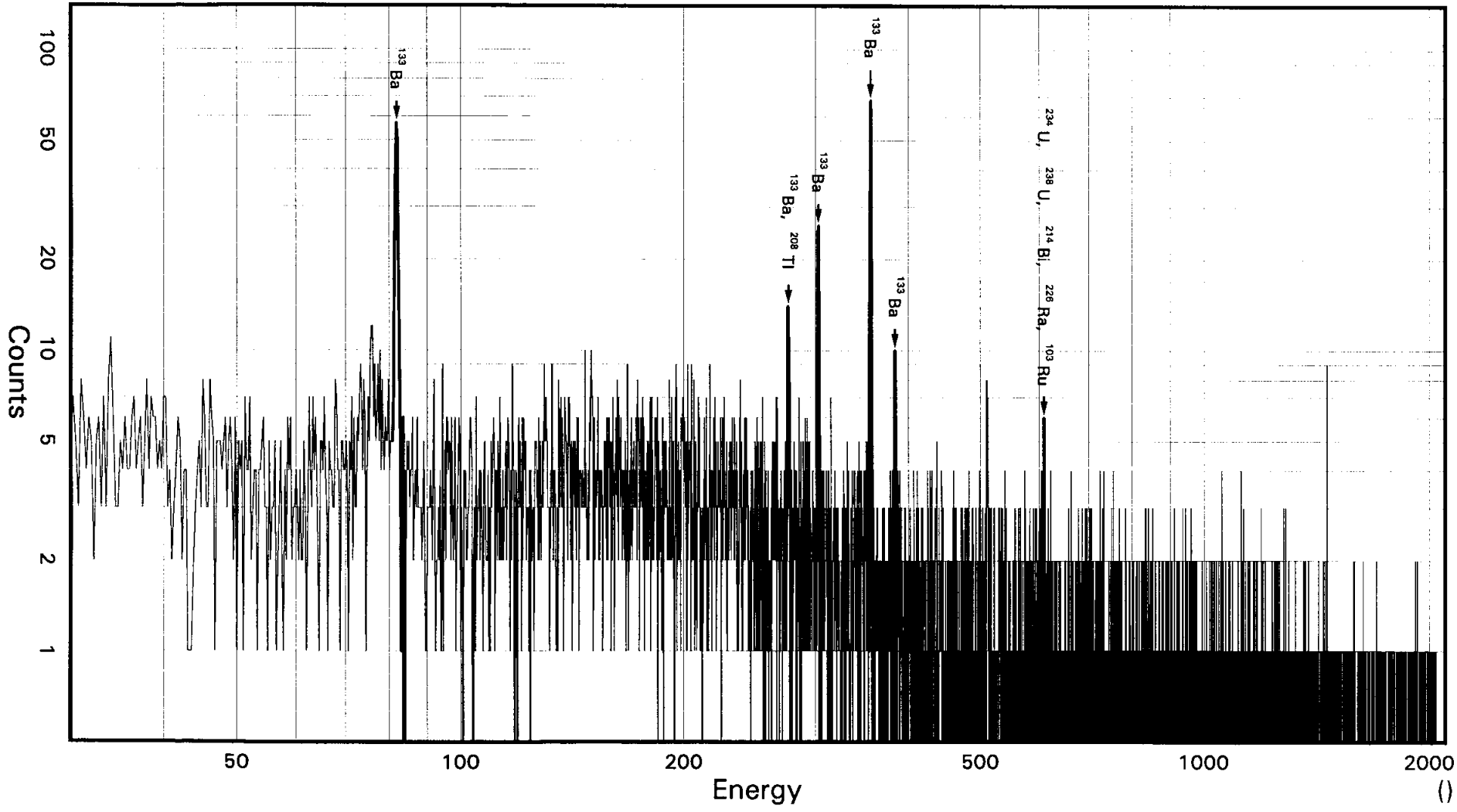
STL Richland WA.

BA133

Sample ID: H7DXK1AC

Detector ID: GER13 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:04:13.81

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: -6.48752E-01

Slope: 2.50770E-01

Quadrature: -9.99654E-08

SAMPLE IDENTIFICATION: H7DXK1AC

CONFIGURATION ID: GER13:H7DXK1AC_280660604
TITLE : BA133
SAMPLE ID : H7DXK1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:04:13
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:46:53.00
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: -.6488E+00 keV
ENERGY SLOPE: 2.5077E-01 keV/C
ENERGY Q COEFF: -.9997E-07 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 4.5382E-01 keV
FWHM SLOPE: 4.1426E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:34:58

Configuration : $DISK1:[GER13.SAMPLE]H7DXK1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:13
Sample ID : H7DXK1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.38 0.0%
Start energy : 19.41 End energy : 2046.95
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	81.98	184	44	0.76	329.53	324	14	1.02E-01	10.9	
2	0	276.21	80	18	1.14	1104.53	1095	18	4.45E-02	16.7	
3	0	302.65	125	24	1.06	1210.06	1201	16	6.94E-02	12.5	
4	0	355.81	334	10	1.00	1422.28	1413	20	1.86E-01	5.9	
5	0	383.61	49	15	1.24	1533.24	1522	19	2.75E-02	23.2	
6	0	608.98*	10	3	1.10	2433.38	2425	15	5.32E-03	70.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:34:59

Configuration : $DISK1:[GER13.SAMPLE]H7DXK1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXK1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:04:13
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.38 0.0%
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	184	33.00	2.705E+00	6.878E+02	6.880E+02	12.14
	276.40	80	6.90	2.897E+00	1.335E+03	1.336E+03	17.55
	302.84	125	17.80	2.900E+00	8.071E+02	8.073E+02	13.63
	356.00	334	62.05*	2.903E+00	6.181E+02	6.183E+02	8.02
	383.85	49	8.70	2.902E+00	6.527E+02	6.529E+02	23.83

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DXK1AC

Acquisition date : 28-JUN-2006 06:04:13

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	608.98	10	3	1.10	2433.38	2425	15	5.32E-03	70.1	2.88E+00	T

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXK1AC

Acquisition date : 28-JUN-2006 06:04:13

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
RU-103	39.35D	0.04	497.08*	89.00	--- Not Found ---		Abun.
			610.33	5.60	2.046E+02	70.35	
		% Abundances Found =		5.92			
TL-208	1.41E+10Y	0.00	277.35	6.80	1.355E+03	17.55	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			
BI-214	4.47E+09Y	0.00	609.31*	46.30	2.399E+01	70.35	Abun.
			768.36	5.04	--- Not Found ---		
			1120.29	15.10	--- Not Found ---		
			1764.49	15.80	--- Not Found ---		
		% Abundances Found =		56.30			
RA-226DA	1600.00Y	0.00	186.21	3.50	--- Not Found ---		Abun.
			241.98	7.49	--- Not Found ---		
			295.22	19.20	--- Not Found ---		
			351.92	37.20	--- Not Found ---		
			609.32*	46.30	2.399E+01	70.35	
			1120.28	15.10	--- Not Found ---		
			1238.11	5.94	--- Not Found ---		
			1764.49	15.80	--- Not Found ---		
		% Abundances Found =		30.76			
U-234DA	4.47E+09Y	0.00	241.98	7.49	--- Not Found ---		Abun.
			295.22*	19.20	--- Not Found ---		
			351.92	37.20	--- Not Found ---		
			609.31	46.30	2.399E+01	70.35	
		% Abundances Found =		42.02			
U-238DA	4.47E+09Y	0.00	241.98	7.49	--- Not Found ---		Abun.
			295.22	19.20	--- Not Found ---		
			351.92*	37.20	--- Not Found ---		
			609.31	46.30	2.399E+01	70.35	
		% Abundances Found =		42.02			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:35:01

Configuration : $DISK1:[GER13.SAMPLE]H7DXK1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXK1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:04:13
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.38 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.183E+02	4.958E+01	5.425E+01	1.085E+00	11.398

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	4.821E+00		6.516E+01	2.453E+02	4.920E+00	0.020
NA-22	6.156E+00		3.627E+00	1.821E+01	3.842E-01	0.338
NA-24	-3.111E+01		3.241E+01	1.155E+02	2.451E+00	-0.269
K-40	3.841E+01		9.886E+01	4.690E+02	1.001E+01	0.082
SC-46	1.389E+01		6.012E+00	2.819E+01	5.887E-01	0.493
CR-51	8.946E+01		9.387E+01	3.585E+02	7.173E+00	0.250
MN-54	6.623E+00		6.168E+00	2.548E+01	5.218E-01	0.260
CO-57	6.890E+01		1.039E+02	3.889E+02	8.016E+00	0.177
CO-58	7.505E+00		4.809E+00	2.189E+01	4.477E-01	0.343
FE-59	6.561E+00		5.762E+00	2.853E+01	5.949E-01	0.230
CO-60	1.218E-01		3.809E+00	1.594E+01	3.375E-01	0.008
ZN-65	-2.515E+01		9.984E+00	2.674E+01	5.582E-01	-0.941
SE-75	8.263E+00		1.781E+01	6.576E+01	1.319E+00	0.126
SR-85	-2.104E+01		1.065E+01	3.342E+01	6.715E-01	-0.629
Y-88	4.550E-01		3.277E+00	1.445E+01	3.157E-01	0.031
NB-94	5.878E+00		4.581E+00	2.052E+01	4.213E-01	0.286
NB-95	-1.620E+00		5.585E+00	2.128E+01	4.338E-01	-0.076
TC-95M	-1.443E+00		1.703E+01	5.998E+01	1.212E+00	-0.024
ZR-95	2.679E+01		1.174E+01	5.178E+01	1.055E+00	0.517
ZRNB-95	-2.903E+00		1.103E+01	4.209E+01	8.581E-01	-0.069
MO-99	-1.297E+00		1.916E+01	6.921E+01	1.424E+00	-0.019
RH-101	-1.004E+01		1.697E+01	5.801E+01	1.173E+00	-0.173
RH-102M	1.270E+00		7.049E+00	2.673E+01	5.361E-01	0.048
RU-103	4.125E+00		8.305E+00	3.180E+01	6.383E-01	0.130
RU-106DA	7.589E+01		6.724E+01	2.743E+02	5.543E+00	0.277
AG-108M	-9.841E+00		7.823E+00	2.645E+01	5.297E-01	-0.372
AG-110M	-1.168E+01		6.794E+00	2.131E+01	4.380E-01	-0.548

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	5.082E+00		1.158E+01	4.458E+01	8.920E-01	0.114
SB-124	9.328E+00		7.210E+00	2.896E+01	5.845E-01	0.322
SB-125	-3.132E+01		2.382E+01	8.023E+01	1.606E+00	-0.390
SN-126DA	-2.529E+00		5.975E+00	2.189E+01	4.435E-01	-0.116
I-131	8.311E+00		1.044E+01	4.041E+01	8.082E-01	0.206
CS-134	1.653E+00		5.255E+00	2.181E+01	4.455E-01	0.076
CS-137DA	-4.342E+00		7.896E+00	2.830E+01	5.733E-01	-0.153
LA-138	-3.734E+00		4.525E+00	1.703E+01	3.630E-01	-0.219
CE-139	-1.298E+01		1.402E+01	4.793E+01	9.771E-01	-0.271
BA-140	1.296E+00		2.715E+01	1.022E+02	2.054E+00	0.013
BALA-140	-2.765E+00		2.769E+00	7.701E+00	1.658E-01	-0.359
LA-140	-2.606E+00		2.609E+00	7.257E+00	1.563E-01	-0.359
CE-141	-8.710E+00		2.314E+01	8.235E+01	1.691E+00	-0.106
CE-144	-5.238E+01		9.723E+01	3.457E+02	7.136E+00	-0.152
CEPR-144	-1.039E+02		1.945E+02	6.918E+02	1.428E+01	-0.150
PM-144	-7.822E+00		6.907E+00	2.364E+01	4.775E-01	-0.331
PM-146	1.060E+01		9.030E+00	3.766E+01	7.546E-01	0.282
EU-152	4.528E+00		3.321E+01	1.207E+02	2.414E+00	0.038
EU-154	1.732E+01		1.020E+01	5.122E+01	1.081E+00	0.338
EU-155	-2.199E+01		4.937E+01	1.715E+02	3.601E+00	-0.128
HF-181	1.323E+00		8.331E+00	3.151E+01	6.320E-01	0.042
BI-207	-1.494E+01		6.392E+00	1.922E+01	3.872E-01	-0.778
TL-208	6.685E+00		8.177E+00	3.397E+01	6.848E-01	0.197
BI-210M	2.742E+01		2.068E+01	7.937E+01	1.592E+00	0.345
BI-212	-1.929E+02		1.072E+02	3.350E+02	1.023E+01	-0.576
PB-212	-1.123E+01		2.361E+01	8.705E+01	1.750E+00	-0.129
BI-214	2.399E+01	+	1.688E+01	7.223E+01	1.458E+00	0.332
PB-214	9.338E+00		2.884E+01	9.918E+01	1.984E+00	0.094
RA-223	-8.195E+01		6.924E+01	2.352E+02	4.715E+00	-0.348
RA-224DA	-1.125E+01		2.365E+01	8.721E+01	1.753E+00	-0.129
RA-226DA	2.399E+01	+	1.688E+01	7.219E+01	1.458E+00	0.332
AC-227DA	-1.067E+02		9.097E+01	3.120E+02	6.275E+00	-0.342
AC-228	4.814E+00		1.925E+01	8.308E+01	1.710E+00	0.058
RA-228DA	4.816E+00		1.926E+01	8.313E+01	1.711E+00	0.058
TH-228DA	1.864E+01		2.280E+01	9.471E+01	1.909E+00	0.197
TH-232DA	-3.191E+01		7.307E+01	2.560E+02	5.120E+00	-0.125
TH-234DA	-4.896E+02		6.439E+02	2.397E+03	4.965E+01	-0.204
U-234DA	-2.343E+01		4.927E+01	1.735E+02	3.475E+00	-0.135
U-235HP	6.485E+01		1.003E+02	3.756E+02	7.718E+00	0.173
NP-237DA	-4.820E+00		2.336E+01	8.407E+01	1.682E+00	-0.057
U-238DA	9.338E+00		2.884E+01	9.918E+01	1.984E+00	0.094
U-238DHP	6.493E+01		2.913E+02	1.075E+03	2.371E+01	0.060
AM-241HP	2.817E+01		2.706E+01	1.057E+02	2.348E+00	0.267

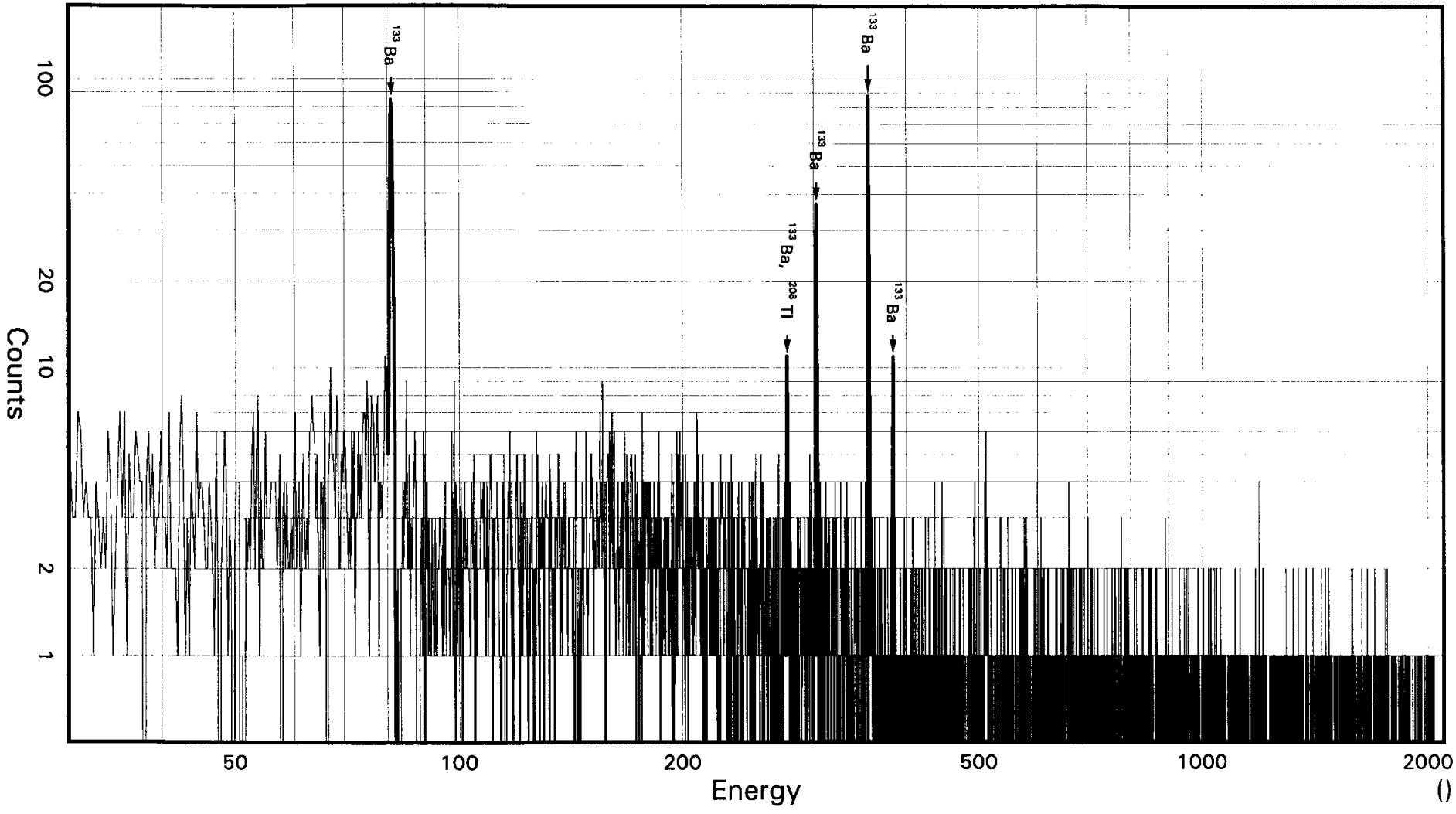
STL Richland WA.

BA133

Sample ID: H7DXL1AC

Detector ID: GER11 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:04:20.66

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: -1.94689E+00

Slope: 2.50323E-01

Quadrature: 3.95633E-08

SAMPLE IDENTIFICATION: H7DXL1AC

CONFIGURATION ID: GER11:H7DXL1AC_280660604
TITLE : BA133
SAMPLE ID : H7DXL1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:04:20
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:10:13.17
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: -.1947E+01 keV
ENERGY SLOPE: 2.5032E-01 keV/C
ENERGY Q COEFF: 3.9563E-08 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 2.0020E-01 keV
FWHM SLOPE: 4.1950E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:35:15

Configuration : $DISK1:[GER11.SAMPLE]H7DXL1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:20
Sample ID : H7DXL1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.96 0.1%
Start energy : 0.56 End energy : 2051.36
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	81.11	246	46	0.70	331.77	327	10	1.37E-01	8.4	
2	0	276.38	51	22	0.91	1111.66	1104	18	2.84E-02	25.8	
3	0	302.75	153	18	0.95	1216.99	1210	15	8.48E-02	10.2	
4	0	355.79	386	29	1.01	1428.76	1422	18	2.14E-01	6.0	
5	0	383.66	54	13	1.26	1540.08	1530	16	3.02E-02	19.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:35:15

Configuration : $DISK1:[GER11.SAMPLE]H7DXL1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:20
Sample ID : H7DXL1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.96 0.1%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	246	33.00	2.679E+00	9.269E+02	9.272E+02	9.98
	276.40	51	6.90	2.873E+00	8.606E+02	8.609E+02	26.35
	302.84	153	17.80	2.876E+00	9.934E+02	9.937E+02	11.52
	356.00	386	62.05*	2.879E+00	7.200E+02	7.202E+02	8.06
	383.85	54	8.70	2.878E+00	7.242E+02	7.245E+02	20.43

Flag: "*" = Keyline

None

Flags: "T" = Tentatively associated

Sample ID : H7DXL1AC Acquisition date : 28-JUN-2006 06:04:20

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	8.732E+02	26.35	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:35:17

Configuration : $DISK1:[GER11.SAMPLE]H7DXL1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:20
Sample ID : H7DXL1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.96 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	7.202E+02	5.808E+01	3.850E+01	7.700E-01	18.708

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	-7.738E+00		3.358E+01	1.382E+02	2.772E+00	-0.056
NA-22	3.650E+00		2.753E+00	1.469E+01	3.099E-01	0.248
NA-24	-4.335E-01		1.260E+01	6.388E+01	1.356E+00	-0.007
K-40	-9.959E+01		4.001E+01	1.930E+02	4.121E+00	-0.516
SC-46	7.551E+00		4.559E+00	2.136E+01	4.460E-01	0.354
CR-51	2.729E+01		6.949E+01	2.722E+02	5.446E+00	0.100
MN-54	-2.255E-01		2.998E+00	1.278E+01	2.618E-01	-0.018
CO-57	7.055E+01		7.339E+01	2.872E+02	5.921E+00	0.246
CO-58	7.321E-01		3.665E+00	1.560E+01	3.190E-01	0.047
FE-59	2.401E+00		4.822E+00	2.362E+01	4.926E-01	0.102
CO-60	4.556E+00		2.972E+00	1.575E+01	3.336E-01	0.289
ZN-65	-1.563E+00		7.079E+00	2.913E+01	6.081E-01	-0.054
SE-75	-6.452E+00		1.064E+01	3.765E+01	7.552E-01	-0.171
SR-85	-1.036E+01		7.408E+00	2.471E+01	4.964E-01	-0.419
Y-88	3.863E+00		2.240E+00	1.385E+01	3.027E-01	0.279
NB-94	4.146E+00		3.595E+00	1.715E+01	3.522E-01	0.242
NB-95	-3.459E+00		4.173E+00	1.513E+01	3.086E-01	-0.229
TC-95M	6.784E+00		1.132E+01	4.416E+01	8.923E-01	0.154
ZR-95	2.050E+00		6.566E+00	2.849E+01	5.805E-01	0.072
ZRNB-95	-6.809E+00		8.214E+00	2.979E+01	6.075E-01	-0.229
MO-99	-6.531E+00		1.281E+01	4.713E+01	9.698E-01	-0.139
RH-101	3.330E+00		1.221E+01	4.619E+01	9.344E-01	0.072
RH-102M	5.231E+00		4.819E+00	2.130E+01	4.271E-01	0.246
RU-103	-7.667E+00		5.300E+00	1.764E+01	3.542E-01	-0.434
RU-106DA	-6.931E+00		5.257E+01	1.996E+02	4.034E+00	-0.035
AG-108M	-3.516E+00		5.699E+00	2.045E+01	4.095E-01	-0.172
AG-110M	3.353E+00		3.270E+00	1.772E+01	3.641E-01	0.189

Sample ID : H7DXL1AC Acquisition date : 28-JUN-2006 06:04:20

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	2.535E+00		6.209E+00	2.634E+01	5.270E-01	0.096
SB-124	-5.297E+00		5.378E+00	1.853E+01	3.740E-01	-0.286
SB-125	1.176E+01		1.360E+01	6.019E+01	1.205E+00	0.195
SN-126DA	-3.155E+00		4.134E+00	1.537E+01	3.115E-01	-0.205
I-131	-1.697E+00		7.231E+00	2.761E+01	5.523E-01	-0.061
CS-134	-1.791E+00		5.479E+00	2.082E+01	4.253E-01	-0.086
CS-137DA	-4.474E+00		7.348E+00	3.238E+01	6.558E-01	-0.138
LA-138	1.943E+00		4.098E+00	1.991E+01	4.244E-01	0.098
CE-139	-2.062E+00		1.073E+01	3.785E+01	7.717E-01	-0.054
BA-140	-3.533E+01		2.136E+01	6.793E+01	1.366E+00	-0.520
BALA-140	2.747E+00		6.484E+00	3.091E+01	6.657E-01	0.089
LA-140	1.731E+00		5.917E+00	2.795E+01	6.019E-01	0.062
CE-141	-5.532E+01		1.626E+01	4.028E+01	8.271E-01	-1.374
CE-144	-2.152E+01		7.179E+01	2.589E+02	5.344E+00	-0.083
CEPR-144	-4.481E+01		1.434E+02	5.168E+02	1.067E+01	-0.087
PM-144	2.900E+00		5.002E+00	2.052E+01	4.146E-01	0.141
PM-146	-5.068E+00		6.552E+00	2.441E+01	4.892E-01	-0.208
EU-152	-2.767E+01		2.255E+01	7.698E+01	1.540E+00	-0.360
EU-154	1.027E+01		7.744E+00	4.131E+01	8.717E-01	0.248
EU-155	-3.035E+01		3.494E+01	1.239E+02	2.602E+00	-0.245
HF-181	-3.873E+00		4.679E+00	1.739E+01	3.488E-01	-0.223
BI-207	-4.672E+00		5.214E+00	1.832E+01	3.691E-01	-0.255
TL-208	-1.029E+01		5.549E+00	1.664E+01	3.354E-01	-0.619
BI-210M	-2.301E-01		1.186E+01	4.464E+01	8.953E-01	-0.005
BI-212	-4.482E+01		5.507E+01	2.036E+02	6.219E+00	-0.220
PB-212	-2.014E+00		1.477E+01	5.482E+01	1.102E+00	-0.037
BI-214	-1.313E+00		1.102E+01	4.204E+01	8.488E-01	-0.031
PB-214	2.779E+00		1.760E+01	6.569E+01	1.314E+00	0.042
RA-223	3.604E+01		4.375E+01	1.762E+02	3.532E+00	0.205
RA-224DA	-2.018E+00		1.480E+01	5.492E+01	1.104E+00	-0.037
RA-226DA	-1.313E+00		1.102E+01	4.204E+01	8.488E-01	-0.031
AC-227DA	-1.115E+02		6.013E+01	1.891E+02	3.802E+00	-0.590
AC-228	1.762E+01		1.482E+01	6.823E+01	1.405E+00	0.258
RA-228DA	1.763E+01		1.483E+01	6.826E+01	1.406E+00	0.258
TH-228DA	-2.869E+01		1.547E+01	4.639E+01	9.353E-01	-0.619
TH-232DA	-5.146E+01		4.860E+01	1.692E+02	3.384E+00	-0.304
TH-234DA	3.312E+02		5.205E+02	2.387E+03	4.945E+01	0.139
U-234DA	2.849E+01		3.718E+01	1.506E+02	3.016E+00	0.189
U-235HP	1.081E+02		6.352E+01	2.667E+02	5.480E+00	0.405
NP-237DA	1.454E+01		1.870E+01	7.487E+01	1.498E+00	0.194
U-238DA	2.779E+00		1.760E+01	6.569E+01	1.314E+00	0.042
U-238DHP	5.378E+02		2.525E+02	1.018E+03	2.246E+01	0.528
AM-241HP	1.005E+01		2.244E+01	8.530E+01	1.895E+00	0.118

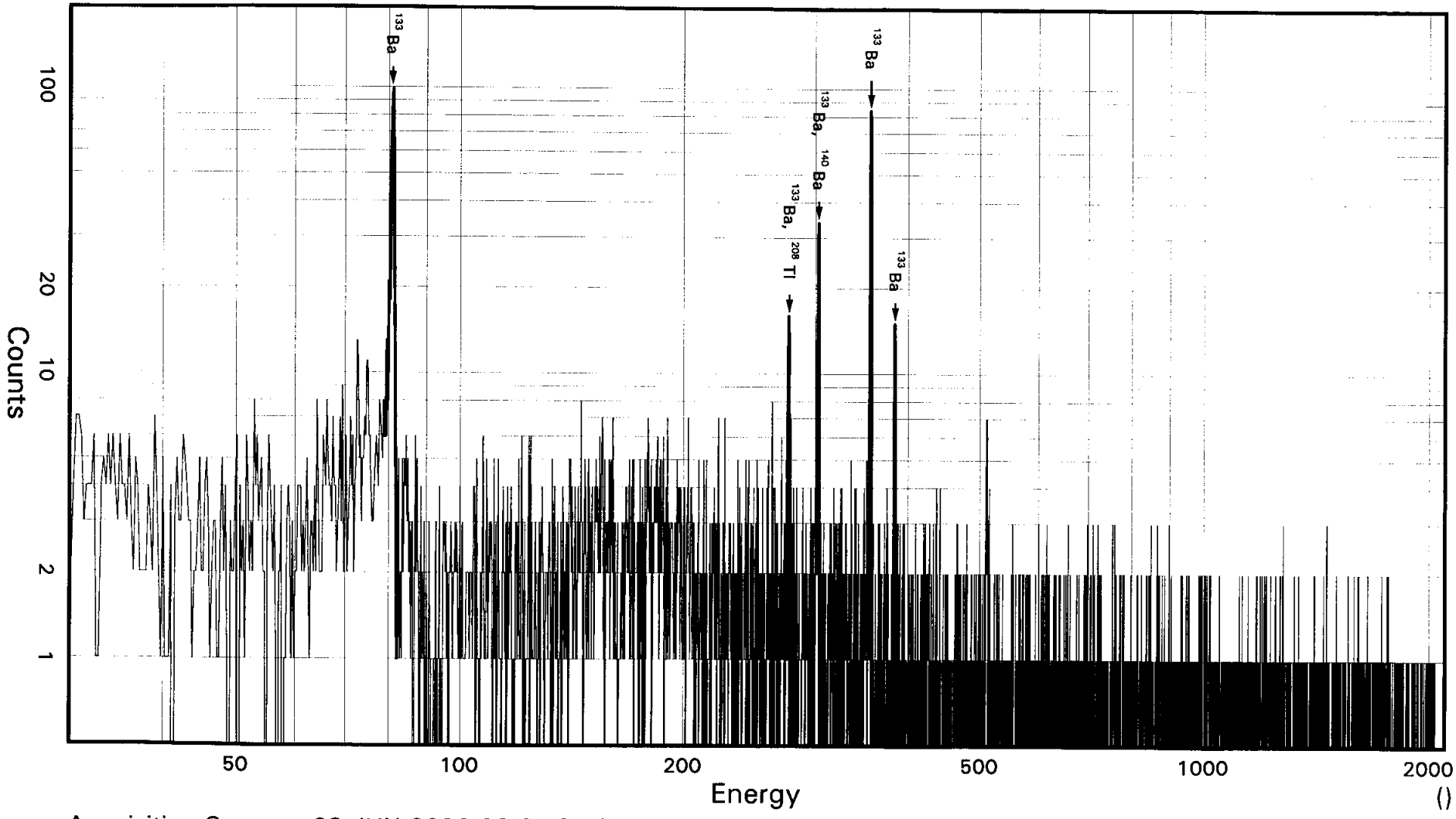
STL Richland WA.

BA133

Sample ID: H7DXM1AC

Detector ID: GER12 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:04:35.06

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 1.25330E+01

Slope: 2.47513E-01

Quadrature: 6.39114E-10

SAMPLE IDENTIFICATION: H7DXM1AC

CONFIGURATION ID: GER12:H7DXM1AC_280660604
TITLE : BA133
SAMPLE ID : H7DXM1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:04:35
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:10:27.31
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 1.2533E+01 keV
ENERGY SLOPE: 2.4751E-01 keV/C
ENERGY Q COEFF: 6.3911E-10 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 2.9940E-01 keV
FWHM SLOPE: 4.1558E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 2.000 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 06:35:30

Configuration : $DISK1:[GER12.SAMPLE]H7DXM1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:35
Sample ID : H7DXM1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.35 0.0%
Start energy : 12.78 End energy : 2040.21
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	80.89	314	59	0.69	276.16	268	14	1.74E-01	7.6	
2	0	276.83	53	26	0.91	1067.79	1059	15	2.96E-02	25.0	
3	0	302.95	143	20	0.92	1173.32	1167	15	7.97E-02	11.0	
4	0	356.08	408	20	1.03	1388.00	1380	16	2.27E-01	5.5	
5	0	383.88	65	12	0.96	1500.29	1493	16	3.64E-02	17.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:35:30

Configuration : $DISK1:[GER12.SAMPLE]H7DXM1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:35
Sample ID : H7DXM1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.35 0.0%
Energy tolerance : 2.00 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	314	33.00	2.899E+00	1.094E+03	1.095E+03	9.34
	276.40	53	6.90	3.105E+00	8.298E+02	8.301E+02	25.55
	302.84	143	17.80	3.109E+00	8.638E+02	8.641E+02	12.22
	356.00	408	62.05*	3.111E+00	7.048E+02	7.051E+02	7.71
	383.85	65	8.70	3.111E+00	8.067E+02	8.069E+02	17.90

Flag: "*" = Keyline

Sample ID : H7DXM1AC
Acquisition date : 28-JUN-2006 06:04:35

None

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXM1AC

Acquisition date : 28-JUN-2006 06:04:35

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
BA-140	12.79D	0.14	162.64	6.70	--- Not Found ---		Abun.
			304.84	4.50	3.760E+03	12.22	
			423.70	3.20	--- Not Found ---		
			537.32*	25.00	--- Not Found ---		
		% Abundances Found =		11.42			
TL-208	1.41E+10Y	0.00	277.35	6.80	8.420E+02	25.55	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 06:35:32

Configuration : $DISK1:[GER12.SAMPLE]H7DXM1AC_280660604.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:04:35
Sample ID : H7DXM1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.35 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 2.00 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	7.051E+02	5.438E+01	4.197E+01	8.395E-01	16.798

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	-1.484E+01		3.886E+01	1.478E+02	2.964E+00	-0.100
NA-22	1.020E+01		4.102E+00	2.049E+01	4.317E-01	0.498
NA-24	-3.269E+01		2.298E+01	7.451E+01	1.580E+00	-0.439
K-40	8.975E+00		5.158E+01	2.509E+02	5.351E+00	0.036
SC-46	-1.412E+00		3.742E+00	1.528E+01	3.188E-01	-0.092
CR-51	-1.821E+01		6.963E+01	2.516E+02	5.034E+00	-0.072
MN-54	-2.518E+00		4.116E+00	1.530E+01	3.133E-01	-0.165
CO-57	-7.678E+01		6.067E+01	2.075E+02	4.275E+00	-0.370
CO-58	-4.469E+00		3.886E+00	1.345E+01	2.750E-01	-0.332
FE-59	3.893E+00		7.085E+00	3.047E+01	6.347E-01	0.128
CO-60	-3.060E+00		3.071E+00	1.107E+01	2.342E-01	-0.276
ZN-65	1.080E+01		7.390E+00	3.498E+01	7.297E-01	0.309
SE-75	-1.386E+01		1.140E+01	3.868E+01	7.757E-01	-0.358
SR-85	-2.124E+01		8.448E+00	2.611E+01	5.245E-01	-0.813
Y-88	2.149E-01		1.719E+00	9.145E+00	1.994E-01	0.023
NB-94	9.480E-01		3.692E+00	1.549E+01	3.179E-01	0.061
NB-95	-2.036E+00		4.183E+00	1.597E+01	3.256E-01	-0.127
TC-95M	1.965E+01		1.262E+01	4.935E+01	9.968E-01	0.398
ZR-95	-1.182E+01		7.356E+00	2.376E+01	4.840E-01	-0.497
ZRNB-95	-6.208E+00		8.518E+00	3.142E+01	6.404E-01	-0.198
MO-99	1.142E+01		1.291E+01	5.182E+01	1.066E+00	0.220
RH-101	1.722E+00		1.168E+01	4.327E+01	8.750E-01	0.040
RH-102M	7.391E-01		4.468E+00	1.791E+01	3.591E-01	0.041
RU-103	5.353E-01		4.945E+00	1.961E+01	3.937E-01	0.027
RU-106DA	-5.474E+01		4.638E+01	1.581E+02	3.194E+00	-0.346
AG-108M	-1.203E+01		6.164E+00	1.899E+01	3.803E-01	-0.633
AG-110M	3.209E+00		4.943E+00	2.181E+01	4.480E-01	0.147

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	-4.169E+00		7.556E+00	2.799E+01	5.601E-01	-0.149
SB-124	1.627E-01		3.589E+00	1.493E+01	3.013E-01	0.011
SB-125	7.335E+00		1.943E+01	7.594E+01	1.520E+00	0.097
SN-126DA	-7.429E-01		4.380E+00	1.688E+01	3.419E-01	-0.044
I-131	-9.125E+00		7.466E+00	2.581E+01	5.163E-01	-0.354
CS-134	-6.323E+00		4.241E+00	1.380E+01	2.818E-01	-0.458
CS-137DA	-2.969E+00		5.207E+00	1.913E+01	3.873E-01	-0.155
LA-138	-5.564E-02		2.458E+00	1.257E+01	2.677E-01	-0.004
CE-139	-2.916E+00		8.736E+00	3.157E+01	6.435E-01	-0.092
BA-140	-3.711E+00		1.388E+01	5.691E+01	1.144E+00	-0.065
BALA-140	-2.573E+00		5.901E+00	2.463E+01	5.296E-01	-0.104
LA-140	1.931E+00		5.431E+00	2.606E+01	5.604E-01	0.074
CE-141	1.930E+01		1.737E+01	6.790E+01	1.393E+00	0.284
CE-144	5.251E+01		6.357E+01	2.525E+02	5.209E+00	0.208
CEPR-144	1.067E+02		1.273E+02	5.058E+02	1.043E+01	0.211
PM-144	-1.036E-01		4.922E+00	1.907E+01	3.851E-01	-0.005
PM-146	5.602E+00		6.133E+00	2.686E+01	5.382E-01	0.209
EU-152	-1.650E+01		2.031E+01	7.032E+01	1.406E+00	-0.235
EU-154	2.753E+01		1.137E+01	5.680E+01	1.197E+00	0.485
EU-155	-2.267E+01		3.425E+01	1.180E+02	2.475E+00	-0.192
HF-181	-7.271E+00		4.996E+00	1.603E+01	3.216E-01	-0.454
BI-207	2.016E+00		4.595E+00	1.894E+01	3.815E-01	0.106
TL-208	3.415E+00		4.875E+00	2.094E+01	4.221E-01	0.163
BI-210M	5.054E+00		1.212E+01	4.719E+01	9.465E-01	0.107
BI-212	8.638E+01		6.339E+01	2.881E+02	8.801E+00	0.300
PB-212	-1.139E+01		1.452E+01	5.172E+01	1.040E+00	-0.220
BI-214	-5.070E+00		1.050E+01	4.307E+01	8.695E-01	-0.118
PB-214	-4.730E+01		2.506E+01	6.845E+01	1.369E+00	-0.691
RA-223	-1.600E+01		4.961E+01	1.806E+02	3.621E+00	-0.089
RA-224DA	-1.141E+01		1.454E+01	5.181E+01	1.042E+00	-0.220
RA-226DA	-5.165E+00		1.049E+01	4.301E+01	8.682E-01	-0.120
AC-227DA	2.493E+01		5.688E+01	2.216E+02	4.457E+00	0.113
AC-228	7.774E+00		8.063E+00	4.280E+01	8.808E-01	0.182
RA-228DA	7.779E+00		8.068E+00	4.283E+01	8.813E-01	0.182
TH-228DA	9.522E+00		1.359E+01	5.838E+01	1.177E+00	0.163
TH-232DA	-8.135E+01		4.978E+01	1.566E+02	3.133E+00	-0.519
TH-234DA	1.481E+01		4.773E+02	2.048E+03	4.239E+01	0.007
U-234DA	-1.325E+01		3.202E+01	1.158E+02	2.319E+00	-0.114
U-235HP	-6.608E+01		7.472E+01	2.604E+02	5.348E+00	-0.254
NP-237DA	-3.489E+01		1.667E+01	4.996E+01	9.997E-01	-0.698
U-238DA	-4.730E+01		2.506E+01	6.845E+01	1.369E+00	-0.691
U-238DHP	6.594E+01		1.949E+02	7.486E+02	1.648E+01	0.088
AM-241HP	-4.237E-01		1.943E+01	7.369E+01	1.634E+00	-0.006

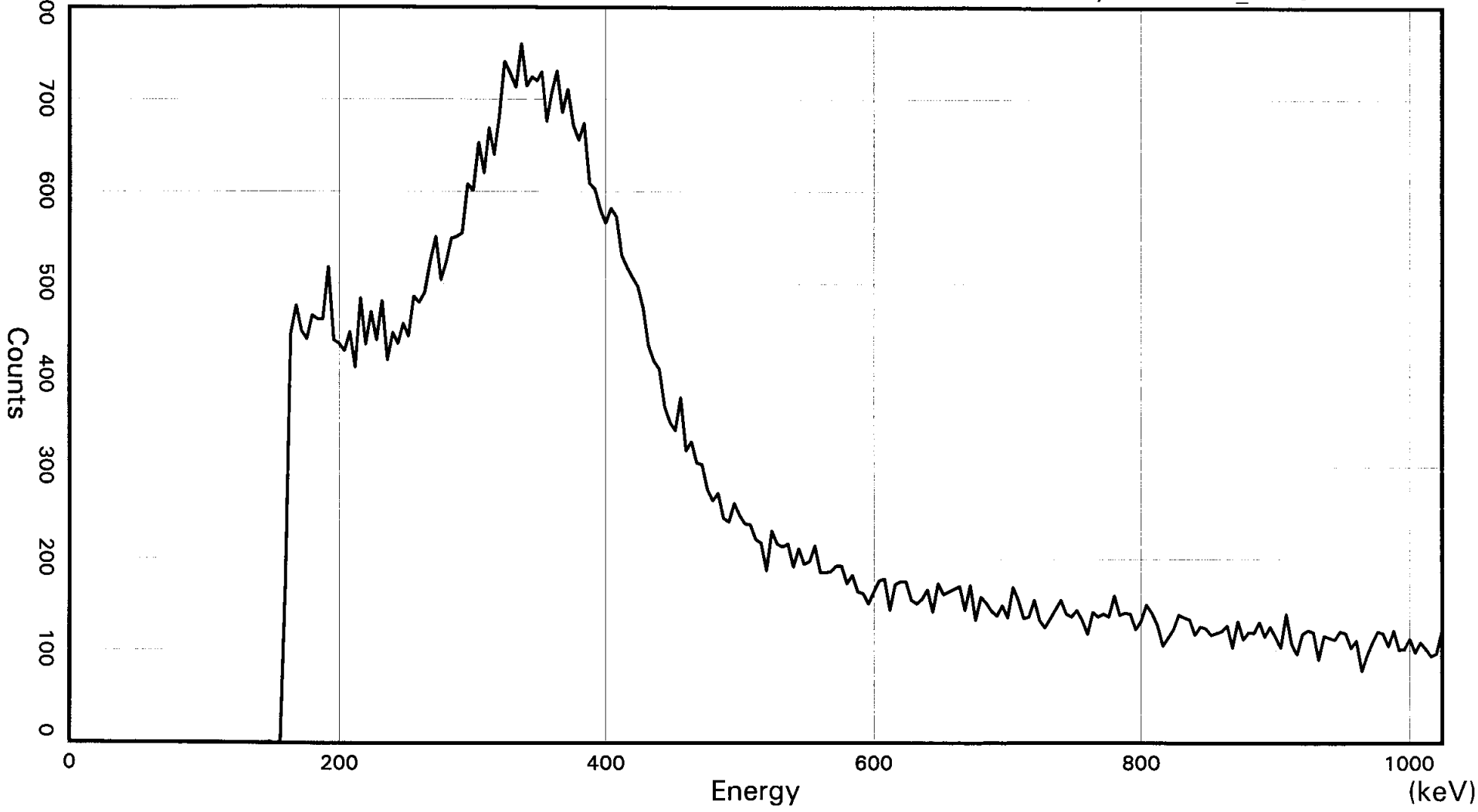
STL Richland WA.

BA133

Sample ID: H7DXP1AC

Detector ID: NAI1 1

Library: [NUC_LIBR]BA133.NLB



Acquisition Start:	28-JUN-2006 06:38:02.26	Start Channel:	80
Preset Live Time:	0 00:30:00	End Channel:	113
Elapsed Live Time:	0 00:30:00	Iterations:	5
Weighting:	DERIVED	Gain shift:	Iter

SAMPLE IDENTIFICATION: H7DXP1AC

CONFIGURATION ID: NAI1:H7DXP1AC_280660638
TITLE : BA133
SAMPLE ID : H7DXP1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:38:02
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 21-JUN-2006 12:00:00.00
CALIB DATE: 17-NOV-1993 10:39:59.60
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY:

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 0.0000E+00 keV
ENERGY SLOPE: 4.0000E+00 keV/C
ENERGY Q COEFF: 0.0000E+00 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: -.2302E+02 keV
FWHM SLOPE: 5.7163E+00 sqr keV
ITERATIONS: 5
GAUSSIAN SENSITIVITY: 35.00 %

ABUNDANCE LIMIT: 75.00 %
ENERGY TOLERANCE: 20.000 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]BA133.NLB

VMS NAI Report V1.2 Generated 28-JUN-2006 07:08:07

Configuration	: RDND06$DKA100:[NAI1.SAMPLE]H7DXP1AC_280660638.CNF;1		
Analyses by	: NAI V3.0		
Sample title	: BA133		
Sample date	: 21-JUN-2006 12:00:00	Acquisition date	: 28-JUN-2006 06:38:02
Sample ID	: H7DXP1AC	Sample quantity	: 1.0000 sampl
Elapsed live time	: 0 00:30:00.00	Elapsed real time	: 0 00:30:00.66 0.0%
Sample Multiplier	: 1.00	Rejection Coeff.	: 0.00
Gain shift type	: ITER	Threshold Shift	: No
Weighting type	: DERIVED	Calculated counts	: No
Iterations	: 5		

NAI Residuals Report

Ratio of Residuals Over Standard Deviation Per Channel

80:	4.5	7.0	5.2	4.2	5.2	1.3	2.9	2.3
88:	1.3	-0.8	0.5	0.9	-0.3	-0.2	-0.1	-1.9
96:	-0.7	-2.7	-2.8	-2.6	-4.4	-1.9	-1.2	-2.5
104:	-4.2	-4.0	-3.9	-3.8	-4.0	-3.6	-5.2	-6.6
112:	-5.3	-4.6						

List of Suspicious Channels

81 82 83

Iteration	Chi-Squared	Threshold Shift	Gain Shift
1	1.34E+01	0.00E+00	1.03E+00
2	3.52E+00	0.00E+00	1.06E+00
3	9.40E-01	0.00E+00	1.08E+00

Brief Report

Nuclide	Activity DPM/sampl	1-Sigma Error
BA-133	718.	9.14

Total Activity :	718.	

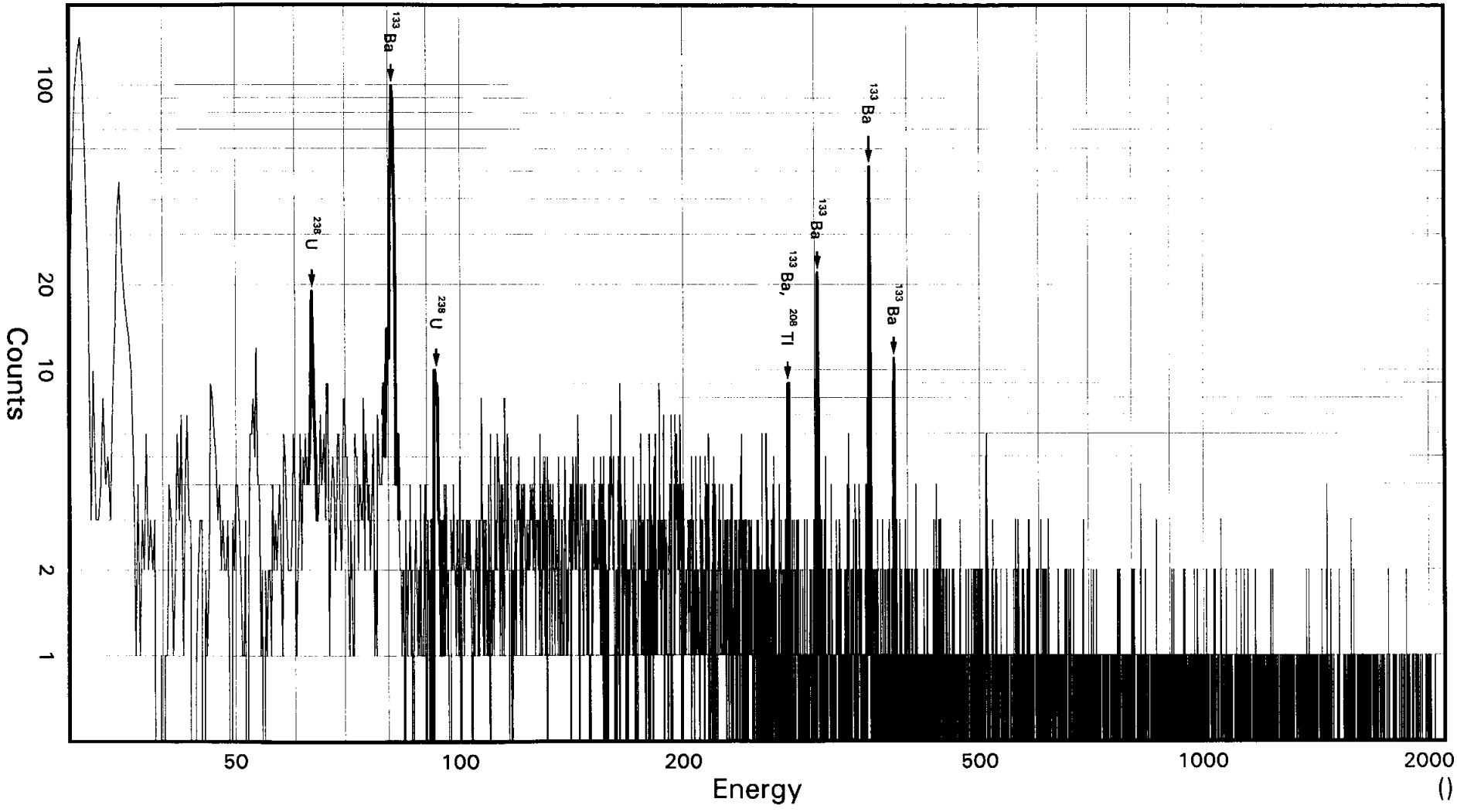
STL Richland WA.

BA133

Sample ID: H7DXQ1AC

Detector ID: GER5 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:38:09.43

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: -3.73693E-01

Slope: 2.49400E-01

Quadrature: 1.33221E-09

SAMPLE IDENTIFICATION: H7DXQ1AC

CONFIGURATION ID: GER5:H7DXQ1AC_280660638
TITLE : BA133
SAMPLE ID : H7DXQ1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:38:09
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:08:28.08
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: -.3737E+00 keV
ENERGY SLOPE: 2.4940E-01 keV/C
ENERGY Q COEFF: 1.3322E-09 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 7.7531E-01 keV
FWHM SLOPE: 2.5845E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 07:08:24

Configuration : RDND06$DKA100:[GER5.SAMPLE]H7DXQ1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:09
Sample ID : H7DXQ1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.22 0.0%
Start energy : 19.58 End energy : 2042.80
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	30.90	568	133	0.96	125.40	115	16	3.16E-01	6.1	
2	0	35.30	142	58	0.59	143.05	136	13	7.87E-02	13.9	
3	0	46.73*	5	20	0.68	188.87	185	11	2.79E-03	199.8	
4	0	63.34*	13	27	0.40	255.46	252	8	7.24E-03	83.8	
5	0	80.93	367	81	0.75	325.98	317	16	2.04E-01	7.5	
6	0	92.82*	12	25	1.17	373.65	366	14	6.47E-03	104.7	
7	0	258.39	14	5	0.81	1037.52	1032	9	7.50E-03	39.3	
8	0	276.16	46	3	1.39	1108.77	1100	15	2.55E-02	17.3	
9	0	303.05	95	9	0.73	1216.60	1207	19	5.27E-02	12.9	
10	0	332.99	17	4	2.05	1336.67	1329	15	9.54E-03	34.5	
11	0	355.93	243	19	1.08	1428.65	1418	19	1.35E-01	7.7	
12	0	383.70	44	12	1.17	1539.99	1531	17	2.44E-02	23.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 28-JUN-2006 07:08:24

Configuration	: RDND06$DKA100:[GER5.SAMPLE]H7DXQ1AC_280660638.CNF;1		
Analyses by	: PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4		
Sample title	: BA133		
Sample date	: 26-JUN-2006 12:00:00	Acquisition date	: 28-JUN-2006 06:38:09
Sample ID	: H7DXQ1AC	Sample quantity	: 1.0000 SAMPL
Sample type	:	Sample geometry	: BA133T15
Elapsed live time	: 0 00:30:00.00	Elapsed real time	: 0 00:30:00.22 0.0%
Energy tolerance	: 1.50	Half life ratio	: 8.00
Errors propagated	: Yes	Systematic Error	: 5.00 %
Efficiency type	: Empirical	Efficiencies at	: Peak Energy
Abundance limit	: 80.00		

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	367	33.00	1.924E+00	1.929E+03	1.929E+03	9.31
	276.40	46	6.90	2.077E+00	1.067E+03	1.067E+03	18.13
	302.84	95	17.80	2.080E+00	8.543E+02	8.546E+02	13.95
	356.00	243	62.05*	2.082E+00	6.271E+02	6.273E+02	9.42
	383.85	44	8.70	2.081E+00	8.100E+02	8.103E+02	24.46

Nuclide Type: NP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
U-238DHP	63.28	13	3.80*	1.870E+00	6.108E+02	6.108E+02	84.00
	92.59	12	5.41	1.951E+00	3.679E+02	3.679E+02	104.84

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DXQ1AC

Acquisition date : 28-JUN-2006 06:38:09

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	30.90	568	133	0.96	125.40	115	16	3.16E-01	6.1	1.68E+00	
0	35.30	142	58	0.59	143.05	136	13	7.87E-02	13.9	1.72E+00	
0	46.73	5	20	0.68	188.87	185	11	2.79E-03	****	1.80E+00	
0	258.39	14	5	0.81	1037.52	1032	9	7.50E-03	39.3	2.07E+00	
0	332.99	17	4	2.05	1336.67	1329	15	9.54E-03	34.5	2.08E+00	

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXQ1AC

Acquisition date : 28-JUN-2006 06:38:09

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	1.083E+03	18.13	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.1 Generated 28-JUN-2006 07:08:25

Configuration : RDND06$DKA100:[GER5.SAMPLE]H7DXQ1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXQ1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:38:09
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.22 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.273E+02	5.906E+01	4.185E+01	8.370E-01	14.989
U-238DHP	6.108E+02	5.131E+02	1.701E+03	3.788E+01	0.359

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	1.718E+01		5.281E+01	2.242E+02	4.498E+00	0.077
NA-22	-1.084E-01		4.211E+00	1.830E+01	3.879E-01	-0.006
NA-24	5.052E+01		2.518E+01	1.499E+02	3.200E+00	0.337
K-40	1.444E+02		7.671E+01	3.871E+02	8.316E+00	0.373
SC-46	7.844E+00		4.993E+00	2.492E+01	5.226E-01	0.315
CR-51	7.141E+01		9.078E+01	3.619E+02	7.241E+00	0.197
MN-54	4.642E+00		4.949E+00	2.305E+01	4.731E-01	0.201
CO-57	-2.790E+01		1.226E+02	4.315E+02	8.919E+00	-0.065
CO-58	-8.715E+00		4.466E+00	1.183E+01	2.424E-01	-0.737
FE-59	-2.938E+00		5.221E+00	2.243E+01	4.695E-01	-0.131
CO-60	1.648E+00		2.989E+00	1.583E+01	3.370E-01	0.104
ZN-65	-6.453E+00		8.069E+00	3.084E+01	6.463E-01	-0.209
SE-75	2.104E+01		1.606E+01	6.532E+01	1.310E+00	0.322
SR-85	-1.582E+01		1.050E+01	3.421E+01	6.875E-01	-0.462
Y-88	-5.284E-02		2.577E+00	1.320E+01	2.908E-01	-0.004
NB-94	3.008E+00		5.770E+00	2.468E+01	5.079E-01	0.122
NB-95	1.717E+00		4.484E+00	2.037E+01	4.162E-01	0.084
TC-95M	2.708E+01		1.734E+01	6.982E+01	1.412E+00	0.388
ZR-95	-2.452E-01		1.035E+01	4.211E+01	8.596E-01	-0.006
ZRNB-95	3.380E+00		8.826E+00	4.010E+01	8.190E-01	0.084
MO-99	-1.132E+01		2.225E+01	7.987E+01	1.648E+00	-0.142
RH-101	6.211E+00		1.943E+01	7.137E+01	1.445E+00	0.087
RH-102M	-4.980E+00		5.669E+00	2.052E+01	4.115E-01	-0.243
RU-103	-2.099E-01		7.031E+00	2.797E+01	5.617E-01	-0.008
RU-106DA	-1.548E+02		6.412E+01	1.783E+02	3.607E+00	-0.868
AG-108M	-1.105E+01		9.647E+00	3.305E+01	6.619E-01	-0.335

Sample ID : H7DXQ1AC
Acquisition date : 28-JUN-2006 06:38:09

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
AG-110M	-2.647E+00		6.974E+00	2.741E+01	5.647E-01	-0.097
SN-113DA	2.093E+01		1.062E+01	4.893E+01	9.790E-01	0.428
SB-124	-4.182E+00		6.534E+00	2.377E+01	4.802E-01	-0.176
SB-125	-3.081E+01		2.048E+01	6.707E+01	1.343E+00	-0.459
SN-126DA	-2.244E+00		5.600E+00	2.189E+01	4.441E-01	-0.103
I-131	1.105E+01		9.737E+00	4.246E+01	8.492E-01	0.260
CS-134	2.049E+00		5.810E+00	2.536E+01	5.191E-01	0.081
CS-137DA	6.083E+00		6.789E+00	3.025E+01	6.134E-01	0.201
LA-138	3.137E-01		6.179E+00	2.769E+01	5.939E-01	0.011
CE-139	2.730E+01		1.643E+01	6.518E+01	1.331E+00	0.419
BA-140	-1.562E+01		2.292E+01	8.521E+01	1.715E+00	-0.183
BALA-140	-7.920E+00		5.617E+00	1.083E+01	2.348E-01	-0.731
LA-140	-7.527E+00		5.338E+00	1.029E+01	2.231E-01	-0.731
CE-141	-2.017E+01		3.003E+01	1.061E+02	2.184E+00	-0.190
CE-144	2.250E+01		1.276E+02	4.581E+02	9.484E+00	0.049
CEPR-144	4.499E+01		2.552E+02	9.162E+02	1.897E+01	0.049
PM-144	7.245E+00		7.190E+00	3.083E+01	6.235E-01	0.235
PM-146	-7.306E+00		1.129E+01	4.107E+01	8.232E-01	-0.178
EU-152	6.061E+00		3.619E+01	1.386E+02	2.772E+00	0.044
EU-154	-3.048E-01		1.184E+01	5.146E+01	1.091E+00	-0.006
EU-155	4.450E+01		6.261E+01	2.352E+02	4.962E+00	0.189
HF-181	-1.016E+01		7.271E+00	2.398E+01	4.812E-01	-0.424
BI-207	6.153E-01		6.012E+00	2.480E+01	4.999E-01	0.025
TL-208	-6.040E+00		1.013E+01	3.735E+01	7.536E-01	-0.162
BI-210M	-1.869E+01		1.927E+01	6.605E+01	1.325E+00	-0.283
BI-212	-1.215E+02		6.507E+01	1.822E+02	5.572E+00	-0.667
PB-212	1.943E+01		2.714E+01	1.093E+02	2.198E+00	0.178
BI-214	1.903E+01		1.571E+01	6.803E+01	1.375E+00	0.280
PB-214	2.959E+01		2.620E+01	9.925E+01	1.985E+00	0.298
RA-223	2.815E+01		6.426E+01	2.501E+02	5.015E+00	0.113
RA-224DA	1.947E+01		2.719E+01	1.095E+02	2.202E+00	0.178
RA-226DA	1.903E+01		1.571E+01	6.803E+01	1.375E+00	0.280
AC-227DA	-1.402E+02		1.035E+02	3.437E+02	6.917E+00	-0.408
AC-228	2.592E+01		1.523E+01	8.050E+01	1.662E+00	0.322
RA-228DA	2.593E+01		1.524E+01	8.055E+01	1.663E+00	0.322
TH-228DA	-1.684E+01		2.824E+01	1.041E+02	2.101E+00	-0.162
TH-232DA	2.636E+01		7.771E+01	2.973E+02	5.947E+00	0.089
TH-234DA	-2.131E+02		6.613E+02	2.754E+03	5.723E+01	-0.077
U-234DA	2.627E+01		4.144E+01	1.659E+02	3.322E+00	0.158
U-235HP	1.174E+02		1.321E+02	5.050E+02	1.040E+01	0.232
NP-237DA	2.943E+01		2.285E+01	9.517E+01	1.905E+00	0.309
U-238DA	2.959E+01		2.620E+01	9.925E+01	1.985E+00	0.298
AM-241HP	-5.117E+00		4.426E+01	1.557E+02	3.493E+00	-0.033

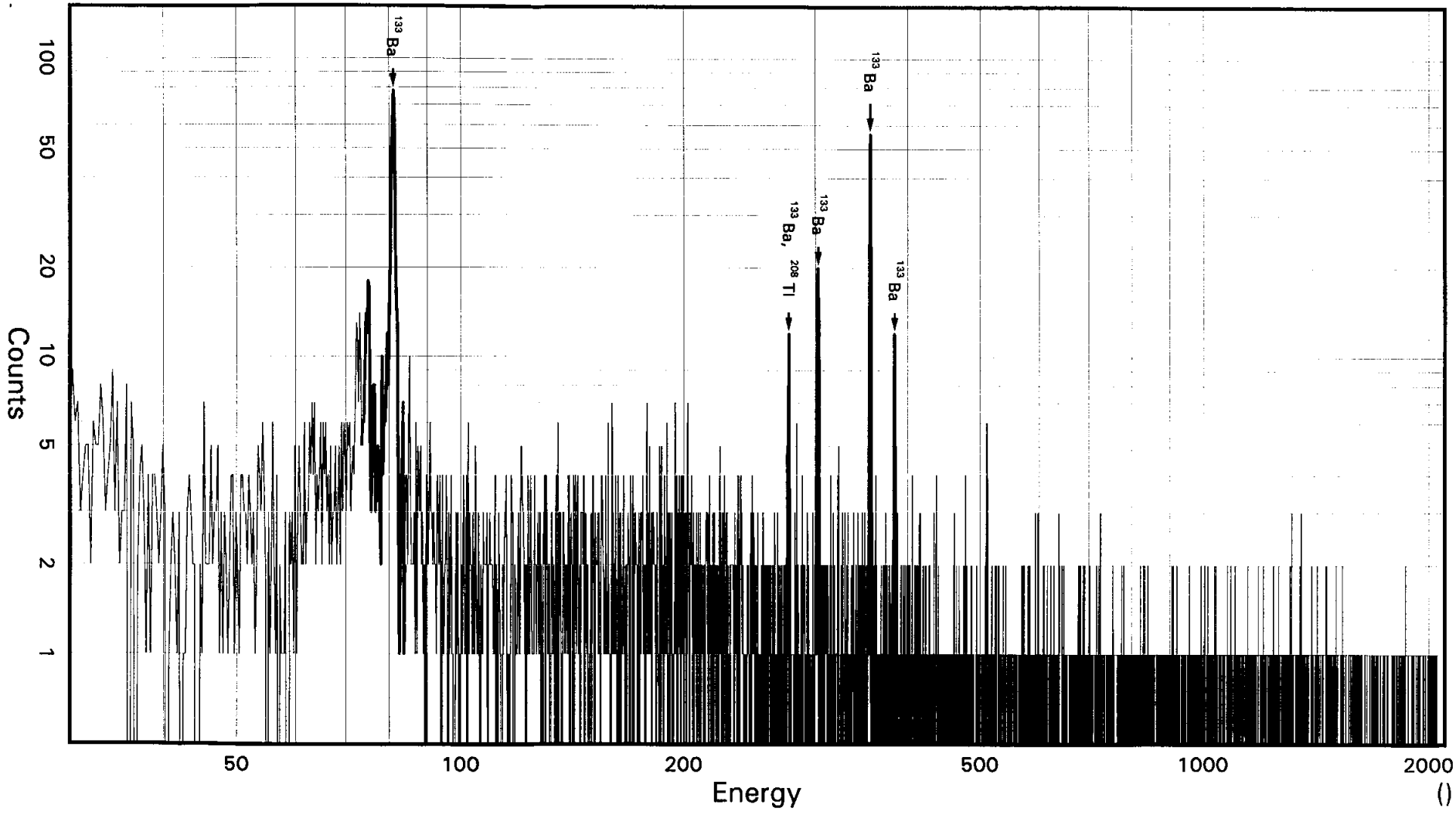
STL Richland WA.

BA133

Sample ID: H7DXV1AC

Detector ID: GER7 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:38:22.09

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 5.64187E-01

Slope: 2.49258E-01

Quadrature: 1.23721E-07

SAMPLE IDENTIFICATION: H7DXV1AC

CONFIGURATION ID: GER7:H7DXV1AC_280660638
TITLE : BA133
SAMPLE ID : H7DXV1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:38:22
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:09:11.06
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 5.6419E-01 keV
ENERGY SLOPE: 2.4926E-01 keV/C
ENERGY Q COEFF: 1.2372E-07 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 6.0738E-01 keV
FWHM SLOPE: 3.7080E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 07:08:39

Configuration	: $DISK1:[GER7.SAMPLE]H7DXV1AC_280660638.CNF;1		
Analyses by	: PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6		
Sample title	: BA133		
Sample date	: 26-JUN-2006 12:00:00	Acquisition date	: 28-JUN-2006 06:38:22
Sample ID	: H7DXV1AC	Sample quantity	: 1.0000 SAMPL
Sample type	:	Sample geometry	: BA133T15
Elapsed live time	: 0 00:30:00.00	Elapsed real time	: 0 00:30:00.21 0.0%
Start energy	: 20.51	End energy	: 2050.79
Sensitivity	: 5.00	Gaussian	: 10.00
Critical level	: No		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	1	75.08*	2	82	1.02	298.89	293	42	9.95E-04	923.6	1.99E+00
2	1	81.06	303	42	1.04	322.90	293	42	1.68E-01	7.6	
3	0	276.51	43	9	0.79	1106.45	1097	15	2.41E-02	20.6	
4	0	302.86	103	24	1.47	1212.04	1201	19	5.71E-02	15.1	
5	0	355.98	260	10	0.93	1424.89	1415	18	1.45E-01	6.8	
6	0	383.75	55	4	0.85	1536.14	1529	15	3.06E-02	15.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:08:39

Configuration : $DISK1:[GER7.SAMPLE]H7DXV1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:22
Sample ID : H7DXV1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.21 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	303	33.00	1.923E+00	1.592E+03	1.592E+03	9.35
	276.40	43	6.90	2.076E+00	1.010E+03	1.011E+03	21.32
	302.84	103	17.80	2.078E+00	9.265E+02	9.268E+02	15.99
	356.00	260	62.05*	2.080E+00	6.721E+02	6.724E+02	8.65
	383.85	55	8.70	2.080E+00	1.015E+03	1.015E+03	16.42

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DXV1AC

Acquisition date : 28-JUN-2006 06:38:22

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	75.08	2	82	1.02	298.89	293	42	9.95E-04	****	1.91E+00	

Flags: "T" = Tentatively associated

Rejected Report
Sample ID : H7DXV1AC

Acquisition date : 28-JUN-2006 06:38:22

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	1.025E+03	21.32	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:08:42

Configuration : $DISK1:[GER7.SAMPLE]H7DXV1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00
Sample ID : H7DXV1AC
Sample type :
Elapsed live time: 0 00:30:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 80.00

Acquisition date : 28-JUN-2006 06:38:22
Sample quantity : 1.0000 SAMPL
Sample geometry : BA133T15
Elapsed real time: 0 00:30:00.21 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 5.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.724E+02	5.816E+01	5.462E+01	1.092E+00	12.310

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	8.673E+01		6.791E+01	2.983E+02	5.985E+00	0.291
NA-22	-1.434E+00		5.017E+00	2.043E+01	4.331E-01	-0.070
NA-24	-2.454E+01		2.472E+01	9.124E+01	1.948E+00	-0.269
K-40	-1.620E+02		5.821E+01	2.686E+02	5.771E+00	-0.603
SC-46	-2.657E+00		4.375E+00	1.711E+01	3.587E-01	-0.155
CR-51	5.683E+01		8.009E+01	3.308E+02	6.618E+00	0.172
MN-54	1.016E+01		4.133E+00	2.351E+01	4.826E-01	0.432
CO-57	7.024E+01		1.054E+02	4.022E+02	8.314E+00	0.175
CO-58	-1.687E+00		4.450E+00	1.808E+01	3.705E-01	-0.093
FE-59	6.059E+00		8.654E+00	3.998E+01	8.370E-01	0.152
CO-60	-6.685E+00		4.139E+00	1.255E+01	2.672E-01	-0.533
ZN-65	3.260E+00		7.467E+00	3.577E+01	7.497E-01	0.091
SE-75	-5.162E+00		1.487E+01	5.410E+01	1.085E+00	-0.095
SR-85	-3.873E+01		1.131E+01	3.046E+01	6.121E-01	-1.271
Y-88	3.563E+00		3.614E+00	1.933E+01	4.257E-01	0.184
NB-94	3.219E+00		4.076E+00	1.979E+01	4.074E-01	0.163
NB-95	3.426E+00		3.388E+00	1.827E+01	3.732E-01	0.188
TC-95M	1.906E+01		1.935E+01	7.450E+01	1.507E+00	0.256
ZR-95	1.212E+01		7.389E+00	3.950E+01	8.062E-01	0.307
ZRNB-95	6.742E+00		6.667E+00	3.596E+01	7.344E-01	0.188
MO-99	-1.122E+00		2.003E+01	7.252E+01	1.496E+00	-0.015
RH-101	-7.178E+00		1.722E+01	6.153E+01	1.246E+00	-0.117
RH-102M	-7.318E+00		7.154E+00	2.547E+01	5.109E-01	-0.287
RU-103	-3.194E+00		6.310E+00	2.444E+01	4.907E-01	-0.131
RU-106DA	8.173E+01		5.556E+01	2.630E+02	5.319E+00	0.311
AG-108M	1.988E+00		9.548E+00	3.654E+01	7.319E-01	0.054
AG-110M	2.151E+00		5.171E+00	2.458E+01	5.064E-01	0.088

Sample ID : H7DXV1AC Acquisition date : 28-JUN-2006 06:38:22

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	1.117E+01		8.875E+00	4.061E+01	8.125E-01	0.275
SB-124	3.326E+00		4.159E+00	2.026E+01	4.092E-01	0.164
SB-125	1.003E+01		1.925E+01	8.217E+01	1.645E+00	0.122
SN-126DA	-2.277E+00		4.960E+00	1.919E+01	3.893E-01	-0.119
I-131	-2.041E+01		1.147E+01	3.641E+01	7.282E-01	-0.561
CS-134	-5.722E+00		5.080E+00	1.785E+01	3.653E-01	-0.321
CS-137DA	3.018E+00		3.683E+00	1.954E+01	3.963E-01	0.154
LA-138	-7.799E+00		4.523E+00	6.962E+00	1.493E-01	-1.120
CE-139	3.421E+00		1.292E+01	4.960E+01	1.013E+00	0.069
BA-140	-4.126E+01		2.631E+01	8.527E+01	1.716E+00	-0.484
BALA-140	8.150E+00		7.964E+00	4.312E+01	9.350E-01	0.189
LA-140	6.188E+00		7.162E+00	3.882E+01	8.417E-01	0.159
CE-141	2.655E+01		2.638E+01	1.009E+02	2.076E+00	0.263
CE-144	-1.757E+02		1.118E+02	3.607E+02	7.467E+00	-0.487
CEPR-144	-3.489E+02		2.238E+02	7.226E+02	1.496E+01	-0.483
PM-144	-2.168E+00		5.462E+00	2.117E+01	4.280E-01	-0.102
PM-146	-5.819E+00		8.812E+00	3.233E+01	6.480E-01	-0.180
EU-152	-2.453E+01		3.129E+01	1.119E+02	2.237E+00	-0.219
EU-154	6.745E+00		1.279E+01	5.917E+01	1.255E+00	0.114
EU-155	-7.548E+01		5.673E+01	1.898E+02	4.004E+00	-0.398
HF-181	-9.573E+00		8.368E+00	2.931E+01	5.882E-01	-0.327
BI-207	2.798E-02		6.605E+00	2.621E+01	5.283E-01	0.001
TL-208	-8.735E-01		7.619E+00	3.197E+01	6.450E-01	-0.027
BI-210M	8.933E+00		1.774E+01	6.908E+01	1.386E+00	0.129
BI-212	1.760E+02		8.935E+01	4.317E+02	1.320E+01	0.408
PB-212	-2.041E+01		2.414E+01	9.243E+01	1.859E+00	-0.221
BI-214	5.822E+00		1.645E+01	7.016E+01	1.418E+00	0.083
PB-214	-3.229E+01		2.740E+01	8.691E+01	1.738E+00	-0.372
RA-223	-1.948E+01		6.519E+01	2.378E+02	4.769E+00	-0.082
RA-224DA	-2.044E+01		2.418E+01	9.259E+01	1.862E+00	-0.221
RA-226DA	5.962E+00		1.646E+01	7.024E+01	1.420E+00	0.085
AC-227DA	-1.262E+02		1.029E+02	3.448E+02	6.938E+00	-0.366
AC-228	-1.879E+01		2.246E+01	8.959E+01	1.850E+00	-0.210
RA-228DA	-1.880E+01		2.247E+01	8.965E+01	1.851E+00	-0.210
TH-228DA	-2.436E+00		2.125E+01	8.914E+01	1.798E+00	-0.027
TH-232DA	4.851E+01		6.680E+01	2.707E+02	5.414E+00	0.179
TH-234DA	1.036E+03		5.181E+02	3.088E+03	6.417E+01	0.335
U-234DA	-1.392E+01		3.981E+01	1.461E+02	2.925E+00	-0.095
U-235HP	-7.941E+01		1.173E+02	4.042E+02	8.325E+00	-0.196
NP-237DA	0.000E+00		0.000E+00	9.276E+01	1.856E+00	0.000
U-238DA	-3.229E+01		2.740E+01	8.691E+01	1.738E+00	-0.372
U-238DHP	-2.619E+02		4.627E+02	1.603E+03	3.568E+01	-0.163
AM-241HP	1.879E+01		3.484E+01	1.305E+02	2.929E+00	0.144

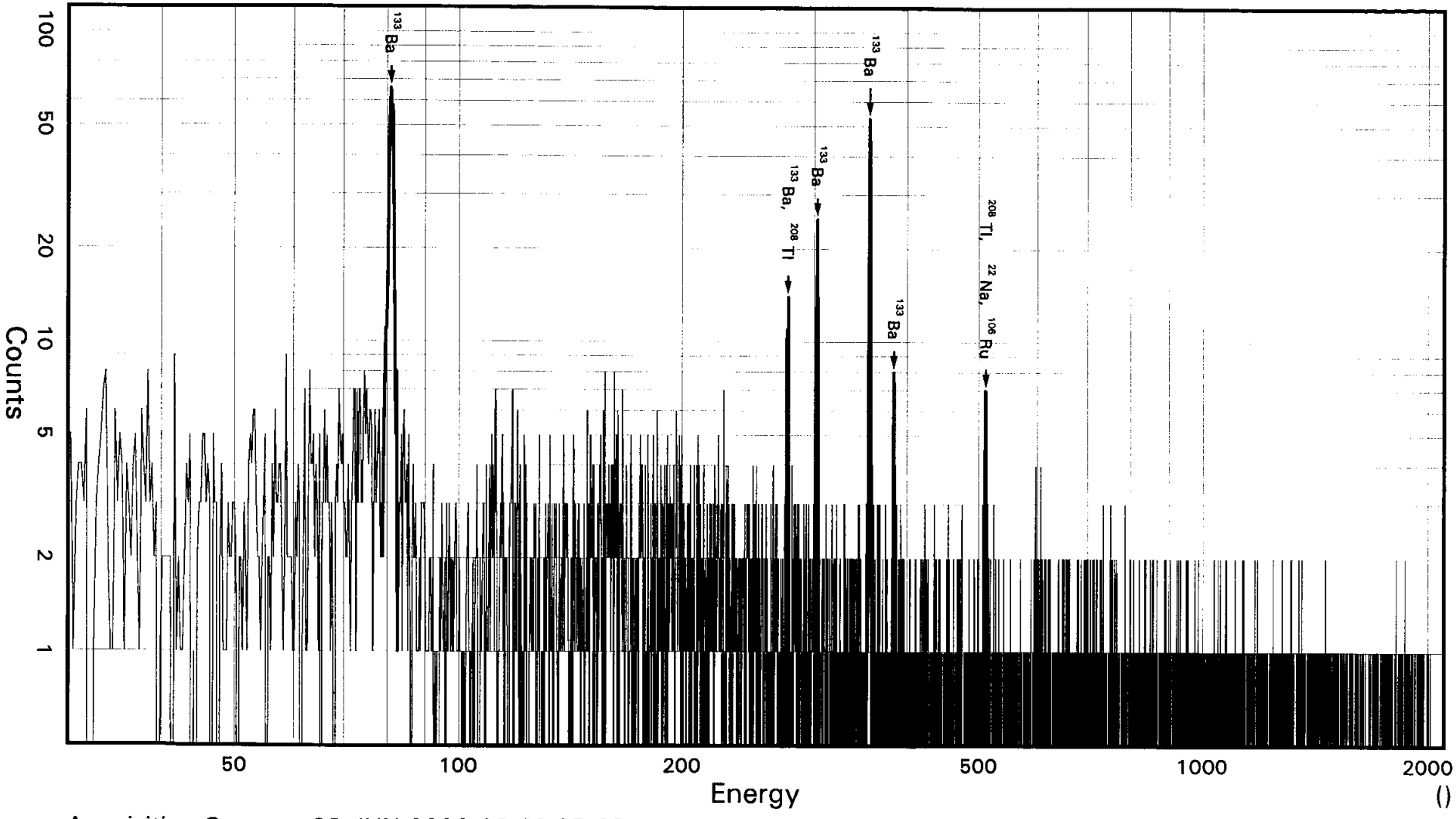
STL Richland WA.

BA133

Sample ID: H7DX01AC

Detector ID: GER10 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:38:35.68

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 1.56802E+01

Slope: 2.46972E-01

Quadrature: 3.56657E-09

SAMPLE IDENTIFICATION: H7DX01AC

CONFIGURATION ID: GER10:H7DX01AC_280660638
TITLE : BA133
SAMPLE ID : H7DX01AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:38:35
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:09:43.29
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 1.5680E+01 keV
ENERGY SLOPE: 2.4697E-01 keV/C
ENERGY Q COEFF: 3.5666E-09 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 8.5214E-01 keV
FWHM SLOPE: 3.0556E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 07:08:56

Configuration : $DISK1:[GER10.SAMPLE]H7DX01AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:35
Sample ID : H7DX01AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.22 0.0%
Start energy : 18.15 End energy : 2039.11
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	80.95	328	36	1.16	264.26	256	16	1.82E-01	6.9	
2	0	276.85	37	30	1.50	1057.49	1049	12	2.03E-02	34.3	
3	0	302.82	121	4	1.42	1162.63	1155	15	6.74E-02	9.7	
4	0	356.02	339	6	1.57	1378.03	1364	26	1.88E-01	5.8	
5	0	383.70	45	0	1.09	1490.11	1481	16	2.50E-02	14.9	
6	0	511.02*	16	5	1.97	2005.58	1995	26	9.15E-03	59.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:08:57

Configuration : $DISK1:[GER10.SAMPLE]H7DX01AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:35
Sample ID : H7DX01AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.22 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	328	33.00	2.399E+00	1.381E+03	1.381E+03	8.77
	276.40	37	6.90	2.578E+00	6.851E+02	6.853E+02	34.69
	302.84	121	17.80	2.582E+00	8.795E+02	8.797E+02	11.12
	356.00	339	62.05*	2.584E+00	7.049E+02	7.051E+02	7.92
	383.85	45	8.70	2.584E+00	6.674E+02	6.676E+02	15.85

Flag: "*" = Keyline

Unidentified Energy Lines
Sample ID : H7DX01AC

Acquisition date : 28-JUN-2006 06:38:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	511.02	16	5	1.97	2005.58	1995	26	9.15E-03	59.2	2.57E+00	T

Flags: "T" = Tentatively associated

Sample ID : H7DX01AC
Acquisition date : 28-JUN-2006 06:38:35

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
NA-22	2.60Y	0.00	511.00	179.68	1.189E+01	59.44	Abun.
			1274.54*	99.94	--- Not Found ---		
		% Abundances Found =		64.26			
RU-106DA	368.20D	0.00	511.85	20.60	1.040E+02	59.44	Abun.
			621.84*	9.80	--- Not Found ---		
		% Abundances Found =		67.76			
TL-208	1.41E+10Y	0.00	277.35	6.80	6.952E+02	34.69	Abun.
			510.84	21.60	9.882E+01	59.44	
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		22.71			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:08:59

Configuration : $DISK1:[GER10.SAMPLE]H7DX01AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:35
Sample ID : H7DX01AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.22 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	7.051E+02	5.583E+01	3.711E+01	7.423E-01	18.998

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	-9.252E+01		4.695E+01	1.363E+02	2.734E+00	-0.679
NA-22	3.708E-01		3.380E+00	1.509E+01	3.189E-01	0.025
NA-24	1.984E+01		2.444E+01	1.195E+02	2.542E+00	0.166
K-40	8.773E+01		5.065E+01	2.574E+02	5.508E+00	0.341
SC-46	-1.461E+00		4.213E+00	1.660E+01	3.472E-01	-0.088
CR-51	1.043E+01		7.139E+01	2.717E+02	5.436E+00	0.038
MN-54	3.405E+00		4.939E+00	2.139E+01	4.384E-01	0.159
CO-57	-6.549E+01		9.176E+01	3.162E+02	6.524E+00	-0.207
CO-58	5.420E-01		4.045E+00	1.711E+01	3.501E-01	0.032
FE-59	-6.357E-01		4.853E+00	2.192E+01	4.576E-01	-0.029
CO-60	1.369E+00		1.371E+00	1.007E+01	2.136E-01	0.136
ZN-65	-3.033E+00		7.205E+00	2.872E+01	6.005E-01	-0.106
SE-75	1.128E+01		1.355E+01	5.310E+01	1.065E+00	0.212
SR-85	2.254E+01		7.755E+00	3.299E+01	6.628E-01	0.683
Y-88	1.119E+00		3.770E+00	1.694E+01	3.712E-01	0.066
NB-94	-6.376E+00		3.430E+00	9.746E+00	2.003E-01	-0.654
NB-95	2.519E+00		4.795E+00	2.050E+01	4.181E-01	0.123
TC-95M	-5.524E+00		1.414E+01	5.089E+01	1.029E+00	-0.109
ZR-95	2.397E+01		1.043E+01	4.874E+01	9.937E-01	0.492
ZRNB-95	4.958E+00		9.437E+00	4.034E+01	8.229E-01	0.123
MO-99	-2.372E+01		1.790E+01	6.004E+01	1.237E+00	-0.395
RH-101	-1.414E+00		1.517E+01	5.782E+01	1.170E+00	-0.024
RH-102M	-2.673E-01		5.521E+00	2.162E+01	4.335E-01	-0.012
RU-103	-1.269E+01		6.567E+00	1.967E+01	3.949E-01	-0.645
RU-106DA	1.028E+02		5.898E+01	2.649E+02	5.353E+00	0.388
AG-108M	-8.589E-02		7.343E+00	2.797E+01	5.602E-01	-0.003
AG-110M	2.040E+00		5.443E+00	2.406E+01	4.949E-01	0.085

Sample ID : H7DX01AC Acquisition date : 28-JUN-2006 06:38:35

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	2.183E+00		1.176E+01	4.486E+01	8.975E-01	0.049
SB-124	-1.143E+01		6.973E+00	2.273E+01	4.588E-01	-0.503
SB-125	-2.654E+01		1.979E+01	6.615E+01	1.325E+00	-0.401
SN-126DA	-1.431E+00		5.037E+00	1.949E+01	3.950E-01	-0.073
I-131	4.460E+00		9.669E+00	3.839E+01	7.677E-01	0.116
CS-134	-1.314E+01		6.417E+00	1.856E+01	3.795E-01	-0.708
CS-137DA	1.575E+00		6.315E+00	2.556E+01	5.179E-01	0.062
LA-138	-5.568E+00		3.855E+00	1.132E+01	2.418E-01	-0.492
CE-139	-6.072E+00		1.345E+01	4.811E+01	9.814E-01	-0.126
BA-140	3.914E+00		1.747E+01	7.429E+01	1.494E+00	0.053
BALA-140	3.213E+00		3.217E+00	2.362E+01	5.099E-01	0.136
LA-140	3.054E+00		3.058E+00	2.245E+01	4.847E-01	0.136
CE-141	-1.650E+01		2.117E+01	7.231E+01	1.486E+00	-0.228
CE-144	7.992E+01		8.516E+01	3.292E+02	6.801E+00	0.243
CEPR-144	1.071E+02		1.740E+02	6.579E+02	1.359E+01	0.163
PM-144	-1.243E+00		5.666E+00	2.182E+01	4.409E-01	-0.057
PM-146	7.747E+00		8.487E+00	3.601E+01	7.216E-01	0.215
EU-152	1.427E+01		2.631E+01	1.047E+02	2.094E+00	0.136
EU-154	-3.586E+00		1.007E+01	4.132E+01	8.733E-01	-0.087
EU-155	-4.447E+01		4.259E+01	1.453E+02	3.055E+00	-0.306
HF-181	2.190E+00		5.525E+00	2.343E+01	4.700E-01	0.093
BI-207	1.335E+01		4.649E+00	2.411E+01	4.858E-01	0.554
TL-208	-6.434E+00		5.140E+00	1.773E+01	3.575E-01	-0.363
BI-210M	3.278E+01		1.639E+01	6.834E+01	1.371E+00	0.480
BI-212	-1.037E+02		8.343E+01	2.811E+02	8.590E+00	-0.369
PB-212	-2.288E+01		1.901E+01	6.405E+01	1.288E+00	-0.357
BI-214	-3.190E+01		1.611E+01	5.478E+01	1.106E+00	-0.582
PB-214	-6.691E+00		2.040E+01	7.095E+01	1.419E+00	-0.094
RA-223	-1.219E+01		5.386E+01	1.979E+02	3.969E+00	-0.062
RA-224DA	-2.292E+01		1.904E+01	6.416E+01	1.290E+00	-0.357
RA-226DA	-3.190E+01		1.611E+01	5.478E+01	1.106E+00	-0.582
AC-227DA	4.381E+00		7.467E+01	2.773E+02	5.579E+00	0.016
AC-228	-9.305E+00		9.465E+00	3.528E+01	7.271E-01	-0.264
RA-228DA	-9.311E+00		9.471E+00	3.530E+01	7.275E-01	-0.264
TH-228DA	-1.794E+01		1.433E+01	4.944E+01	9.970E-01	-0.363
TH-232DA	3.398E+01		5.642E+01	2.254E+02	4.508E+00	0.151
TH-234DA	4.089E+02		5.834E+02	2.696E+03	5.591E+01	0.152
U-234DA	-1.866E+01		3.899E+01	1.393E+02	2.790E+00	-0.134
U-235HP	1.621E+02		8.958E+01	3.602E+02	7.407E+00	0.450
NP-237DA	-7.171E+00		2.053E+01	7.406E+01	1.482E+00	-0.097
U-238DA	-6.691E+00		2.040E+01	7.095E+01	1.419E+00	-0.094
U-238DHP	3.472E+02		3.397E+02	1.290E+03	2.855E+01	0.269
AM-241HP	-2.210E+01		3.390E+01	1.196E+02	2.666E+00	-0.185

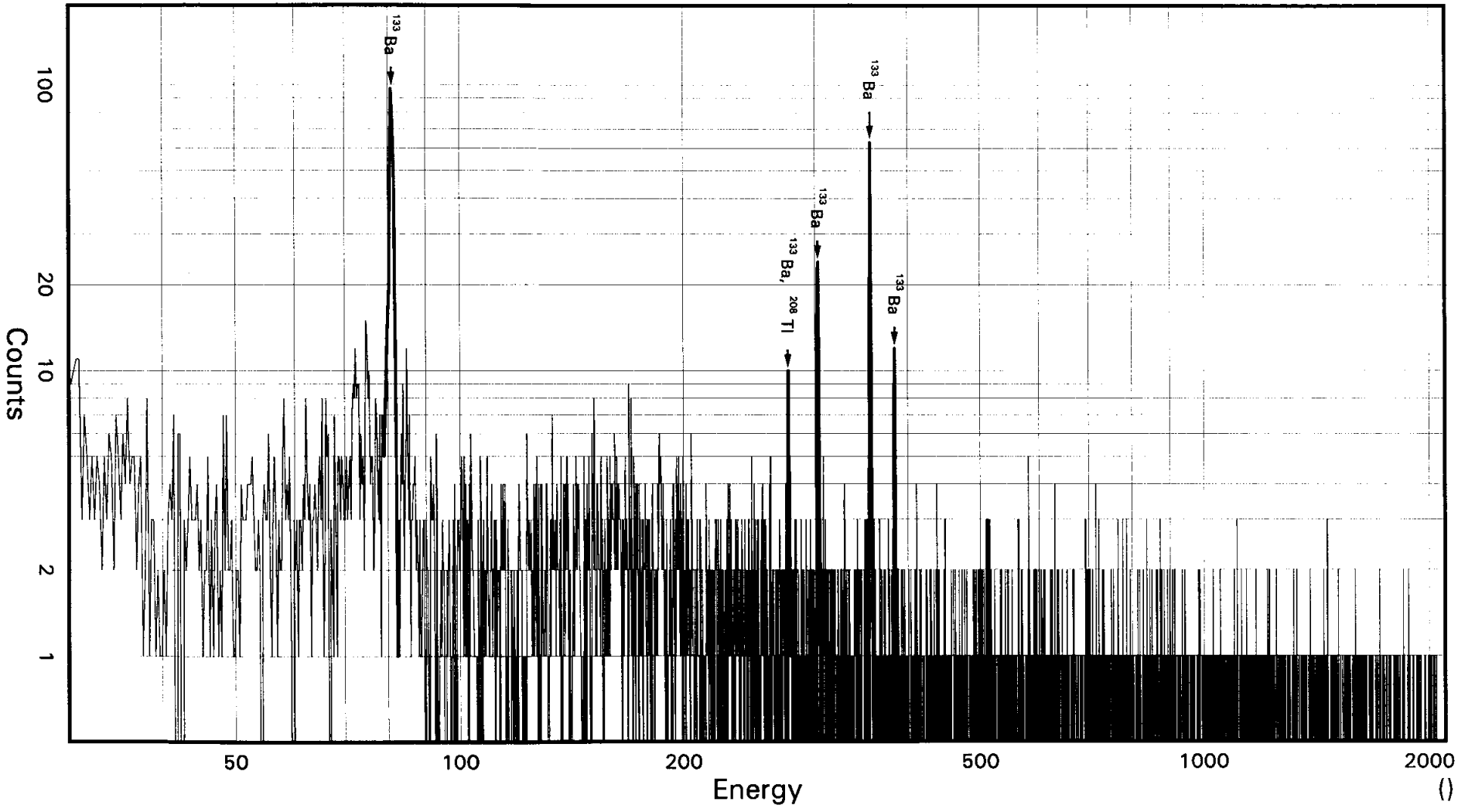
STL Richland WA.

BA133

Sample ID: H7JQF1AA

Detector ID: GER6 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:38:42.70

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 2.95630E-02

Slope: 2.49319E-01

Quadrature: 2.25669E-08

SAMPLE IDENTIFICATION: H7JQF1AA

CONFIGURATION ID: GER6:H7JQF1AA_280660638
TITLE : BA133
SAMPLE ID : H7JQF1AA

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:38:42
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 26-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:08:55.68
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 2.9563E-02 keV
ENERGY SLOPE: 2.4932E-01 keV/C
ENERGY Q COEFF: 2.2567E-08 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 2.4904E-01 keV
FWHM SLOPE: 5.8849E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 07:09:12

Configuration	: $DISK1:[GER6.SAMPLE]H7JQF1AA_280660638.CNF;1		
Analyses by	: PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6		
Sample title	: BA133		
Sample date	: 26-JUN-2006 12:00:00	Acquisition date	: 28-JUN-2006 06:38:42
Sample ID	: H7JQF1AA	Sample quantity	: 1.0000 SAMPL
Sample type	:	Sample geometry	: BA133T15
Elapsed live time	: 0 00:30:00.00	Elapsed real time	: 0 00:30:00.23 0.0%
Start energy	: 19.98	End energy	: 2043.97
Sensitivity	: 5.00	Gaussian	: 10.00
Critical level	: No		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	81.00	367	71	0.95	324.75	316	15	2.04E-01	7.2	
2	0	276.23	47	13	0.83	1107.70	1099	18	2.60E-02	23.5	
3	0	302.83	125	4	1.23	1214.37	1207	16	6.96E-02	9.6	
4	0	356.05	284	5	0.88	1427.79	1419	19	1.58E-01	6.2	
5	0	384.02	55	11	1.45	1539.95	1532	22	3.06E-02	20.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:09:13

Configuration : $DISK1:[GER6.SAMPLE]H7JQF1AA_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:42
Sample ID : H7JQF1AA Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	367	33.00	2.167E+00	1.712E+03	1.713E+03	8.99
	276.40	47	6.90	2.334E+00	9.673E+02	9.676E+02	24.13
	302.84	125	17.80	2.337E+00	1.005E+03	1.005E+03	11.01
	356.00	284	62.05*	2.339E+00	6.522E+02	6.524E+02	8.22
	383.85	55	8.70	2.338E+00	9.012E+02	9.015E+02	21.15

Flag: "*" = Keyline

None

Flags: "T" = Tentatively associated

Rejected Report

Sample ID : H7JQF1AA

Acquisition date : 28-JUN-2006 06:38:42

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (DPM/SAMPL)	1-Sigma %Error	Rejected by
TL-208	1.41E+10Y	0.00	277.35	6.80	9.815E+02	24.13	Abun.
			510.84	21.60	--- Not Found ---		
			583.14*	84.20	--- Not Found ---		
			860.37	12.46	--- Not Found ---		
		% Abundances Found =		5.44			

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:09:18

Configuration : $DISK1:[GER6.SAMPLE]H7JQF1AA_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 26-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:42
Sample ID : H7JQF1AA Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.524E+02	5.366E+01	5.452E+01	1.090E+00	11.965

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	6.718E+01		4.676E+01	2.210E+02	4.434E+00	0.304
NA-22	-4.623E+00		4.570E+00	1.626E+01	3.441E-01	-0.284
NA-24	4.408E+01		2.217E+01	1.323E+02	2.818E+00	0.333
K-40	7.155E+01		6.914E+01	3.549E+02	7.608E+00	0.202
SC-46	9.005E+00		4.840E+00	2.401E+01	5.027E-01	0.375
CR-51	3.023E+01		7.014E+01	2.831E+02	5.665E+00	0.107
MN-54	3.035E+00		4.120E+00	1.923E+01	3.945E-01	0.158
CO-57	-8.514E+01		9.907E+01	3.488E+02	7.203E+00	-0.244
CO-58	1.326E+01		5.365E+00	2.687E+01	5.503E-01	0.493
FE-59	-6.496E+00		1.017E+01	3.755E+01	7.851E-01	-0.173
CO-60	-3.305E+00		4.883E+00	1.819E+01	3.865E-01	-0.182
ZN-65	-2.429E+01		9.641E+00	2.172E+01	4.546E-01	-1.118
SE-75	9.293E-01		1.412E+01	5.281E+01	1.059E+00	0.018
SR-85	-1.870E+01		9.060E+00	2.863E+01	5.752E-01	-0.653
Y-88	3.101E-02		2.232E+00	1.172E+01	2.574E-01	0.003
NB-94	2.982E+00		6.208E+00	2.551E+01	5.247E-01	0.117
NB-95	9.302E+00		5.342E+00	2.542E+01	5.190E-01	0.366
TC-95M	1.237E+01		1.529E+01	5.978E+01	1.209E+00	0.207
ZR-95	1.049E+01		9.369E+00	4.250E+01	8.669E-01	0.247
ZRNB-95	1.795E+01		1.046E+01	4.976E+01	1.016E+00	0.361
MO-99	-1.595E+01		1.785E+01	6.253E+01	1.289E+00	-0.255
RH-101	3.496E+00		1.535E+01	5.560E+01	1.125E+00	0.063
RH-102M	-7.857E+00		5.538E+00	1.808E+01	3.627E-01	-0.435
RU-103	6.505E-01		7.342E+00	2.862E+01	5.745E-01	0.023
RU-106DA	5.625E-01		6.052E+01	2.375E+02	4.802E+00	0.002
AG-108M	-8.913E+00		7.428E+00	2.542E+01	5.090E-01	-0.351
AG-110M	2.001E+00		7.331E+00	3.047E+01	6.273E-01	0.066

Sample ID : H7JQF1AA Acquisition date : 28-JUN-2006 06:38:42

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SN-113DA	-1.244E+00		8.352E+00	3.332E+01	6.666E-01	-0.037
SB-124	2.744E+00		6.772E+00	2.721E+01	5.494E-01	0.101
SB-125	2.090E+01		1.948E+01	8.541E+01	1.710E+00	0.245
SN-126DA	8.730E+00		4.560E+00	2.289E+01	4.641E-01	0.381
I-131	-1.075E+01		9.626E+00	3.275E+01	6.550E-01	-0.328
CS-134	-4.025E+00		6.564E+00	2.410E+01	4.929E-01	-0.167
CS-137DA	-3.091E+00		4.698E+00	1.826E+01	3.701E-01	-0.169
LA-138	2.313E+00		5.103E+00	2.460E+01	5.264E-01	0.094
CE-139	-1.018E+01		1.408E+01	4.886E+01	9.972E-01	-0.208
BA-140	-2.322E+01		2.636E+01	9.481E+01	1.907E+00	-0.245
BALA-140	-1.723E+01		1.053E+01	3.301E+01	7.140E-01	-0.522
LA-140	-1.638E+01		1.001E+01	3.137E+01	6.787E-01	-0.522
CE-141	-3.522E+01		2.171E+01	7.160E+01	1.472E+00	-0.492
CE-144	6.794E+01		9.866E+01	3.813E+02	7.886E+00	0.178
CEPR-144	1.359E+02		1.973E+02	7.626E+02	1.577E+01	0.178
PM-144	-2.965E+00		5.978E+00	2.219E+01	4.485E-01	-0.134
PM-146	3.123E+00		6.760E+00	2.974E+01	5.961E-01	0.105
EU-152	2.663E+01		2.705E+01	1.115E+02	2.231E+00	0.239
EU-154	-1.300E+01		1.285E+01	4.572E+01	9.677E-01	-0.284
EU-155	-6.707E+01		4.758E+01	1.563E+02	3.292E+00	-0.429
HF-181	-4.159E+00		5.686E+00	2.101E+01	4.216E-01	-0.198
BI-207	1.030E+01		4.902E+00	2.448E+01	4.934E-01	0.421
TL-208	8.478E+00		7.468E+00	3.211E+01	6.477E-01	0.264
BI-210M	-1.474E+01		1.644E+01	5.666E+01	1.137E+00	-0.260
BI-212	-4.068E+00		8.797E+01	3.469E+02	1.060E+01	-0.012
PB-212	-2.706E+01		2.053E+01	7.089E+01	1.426E+00	-0.382
BI-214	3.680E+00		1.539E+01	6.246E+01	1.262E+00	0.059
PB-214	-1.567E+01		2.620E+01	7.702E+01	1.540E+00	-0.203
RA-223	-3.738E+01		6.210E+01	2.192E+02	4.396E+00	-0.171
RA-224DA	-2.711E+01		2.057E+01	7.102E+01	1.428E+00	-0.382
RA-226DA	5.706E-01		1.573E+01	6.250E+01	1.263E+00	0.009
AC-227DA	1.639E+01		8.073E+01	3.043E+02	6.123E+00	0.054
AC-228	2.462E+00		2.000E+01	8.667E+01	1.787E+00	0.028
RA-228DA	2.464E+00		2.002E+01	8.672E+01	1.789E+00	0.028
TH-228DA	2.364E+01		2.083E+01	8.954E+01	1.806E+00	0.264
TH-232DA	3.683E+01		6.430E+01	2.529E+02	5.058E+00	0.146
TH-234DA	-2.014E+02		6.742E+02	2.732E+03	5.671E+01	-0.074
U-234DA	-1.327E+01		4.289E+01	1.593E+02	3.190E+00	-0.083
U-235HP	3.481E+02		9.223E+01	4.139E+02	8.519E+00	0.841
NP-237DA	-1.103E+01		2.158E+01	7.886E+01	1.578E+00	-0.140
U-238DA	-1.567E+01		2.620E+01	7.702E+01	1.540E+00	-0.203
U-238DHP	-4.330E+02		3.387E+02	1.118E+03	2.482E+01	-0.387
AM-241HP	-4.048E+01		3.268E+01	1.078E+02	2.410E+00	-0.376

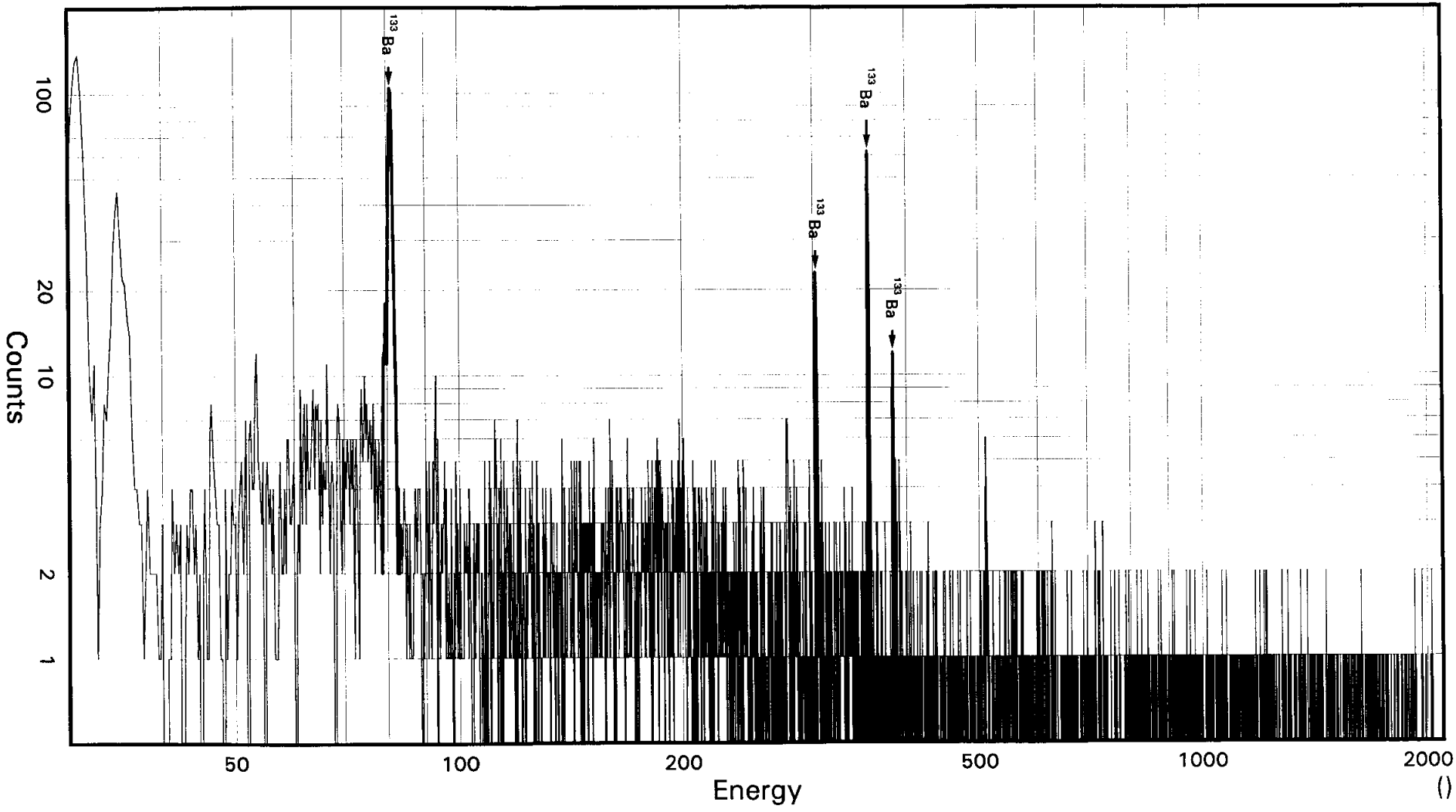
STL Richland WA.

BA133

Sample ID: H7JQF1AC

Detector ID: GER8 1

Batch ID: 6167188



Acquisition Start: 28-JUN-2006 06:38:50.03

Preset Live Time: 0 00:30:00.00

Elapsed Live Time: 0 00:30:00.00

Energy Coefficients:

Offset: 2.20038E-01

Slope: 2.49828E-01

Quadrature: 1.42949E-08

SAMPLE IDENTIFICATION: H7JQF1AC

CONFIGURATION ID: GER8:H7JQF1AC_280660638
TITLE : BA133
SAMPLE ID : H7JQF1AC

REPORT DATE: 28-JUN-06
ACQUIRE DATE: 28-JUN-06 06:38:50
ELAPSED LIVE TIME: 1800.0 Sec
PRESET LIVE TIME: 0 00:30:00

SAMPLE DATE: 9-JUN-2006 12:00:00.00
CALIB DATE: 28-JUN-2006 05:09:27.45
ELAPSED LIVE TIME: 0 00:30:00
ELAPSED REAL TIME: 0 00:30:00

SAMPLE QUANTITY: 1.0000E+00
SAMPLE GEOMETRY: BA133T15

UNITS: SAMPL
SAMPLE TYPE:

ENERGY OFFSET: 2.2004E-01 keV
ENERGY SLOPE: 2.4983E-01 keV/C
ENERGY Q COEFF: 1.4295E-08 keV/C^^2
PEAK SENSITIVITY: 5.000

FWHM OFFSET: 9.0735E-01 keV
FWHM SLOPE: 2.2582E-02 sqr keV
ITERATIONS: 10
GAUSSIAN SENSITIVITY: 10.00 %

ABUNDANCE LIMIT: 80.00 %
ENERGY TOLERANCE: 1.500 keV
VARIABLE PEAK WIDTH: 3.00

HALF-LIFE RATIO: 8.00
ACTIVITY MULTIPLIER: 2.2200E+06
LIBRARY: [NUC_LIBR]QRL.NLB

VMS Peak Search Report V1.9 Generated 28-JUN-2006 07:09:33

Configuration : $DISK1:[GER8.SAMPLE]H7JQF1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6
Sample title : BA133
Sample date : 9-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:50
Sample ID : H7JQF1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Start energy : 20.21 End energy : 2047.77
Sensitivity : 5.00 Gaussian : 10.00
Critical level : No

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	30.78	679	103	1.18	122.32	114	18	3.77E-01	5.2	
2	0	34.97	232	46	1.01	139.10	131	18	1.29E-01	9.4	
3	0	80.91	479	53	0.96	322.97	313	19	2.66E-01	5.8	
4	0	302.79	88	22	1.04	1211.03	1203	15	4.88E-02	15.9	
5	0	356.00	297	4	1.05	1423.99	1416	18	1.65E-01	6.0	
6	0	383.70	49	3	1.08	1534.83	1528	13	2.72E-02	16.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:09:33

Configuration : $DISK1:[GER8.SAMPLE]H7JQF1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3
Sample title : BA133
Sample date : 9-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:50
Sample ID : H7JQF1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00

Nuclide Line Activity Report

Nuclide Type: FP

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected DPM/SAMPL	Decay Corr DPM/SAMPL	1-Sigma %Error
BA-133	81.00	479	33.00	2.202E+00	2.199E+03	2.207E+03	7.98
	276.40	------	6.90	2.371E+00	------ Line Not Found		------
	302.84	88	17.80	2.374E+00	6.924E+02	6.948E+02	16.77
	356.00	297	62.05*	2.376E+00	6.716E+02	6.739E+02	8.09
	383.85	49	8.70	2.375E+00	7.891E+02	7.918E+02	17.04

Flag: "*" = Keyline

Sample ID : H7JQF1AC Acquisition date : 28-JUN-2006 06:38:50

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	30.78	679	103	1.18	122.32	114	18	3.77E-01	5.2	1.93E+00	
0	34.97	232	46	1.01	139.10	131	18	1.29E-01	9.4	1.97E+00	

Flags: "T" = Tentatively associated

Flag: "*" = Keyline

VMS Nuclide Identification Report V3.0 Generated 28-JUN-2006 07:09:35

Configuration : $DISK1:[GER8.SAMPLE]H7JQF1AC_280660638.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.3,WTMEAN/KEY V1.8
Analyses by : MINACT V2.8
Sample title : BA133
Sample date : 9-JUN-2006 12:00:00 Acquisition date : 28-JUN-2006 06:38:50
Sample ID : H7JQF1AC Sample quantity : 1.0000 SAMPL
Sample type : Sample geometry : BA133T15
Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:30:00.23 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 5.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 80.00 WTM error limit : 3.00

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (DPM/SAMPL)	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BA-133	6.739E+02	5.450E+01	3.951E+01	7.901E-01	17.058

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
BE-7	-1.393E+01		6.002E+01	2.345E+02	4.704E+00	-0.059
NA-22	4.431E+00		4.024E+00	1.973E+01	4.175E-01	0.225
K-40	7.544E+00		3.221E+01	1.846E+02	3.956E+00	0.041
SC-46	2.345E-03		2.424E+00	1.261E+01	2.640E-01	0.000
CR-51	5.075E+01		1.243E+02	4.867E+02	9.739E+00	0.104
MN-54	-3.244E+00		3.779E+00	1.392E+01	2.855E-01	-0.233
CO-57	-4.490E+01		1.066E+02	3.787E+02	7.820E+00	-0.119
CO-58	3.295E+00		4.980E+00	2.275E+01	4.659E-01	0.145
FE-59	-6.889E+00		6.929E+00	2.555E+01	5.340E-01	-0.270
CO-60	1.501E+00		1.503E+00	1.103E+01	2.344E-01	0.136
ZN-65	-3.036E+00		5.278E+00	2.243E+01	4.694E-01	-0.135
SE-75	-3.236E+01		1.591E+01	5.029E+01	1.009E+00	-0.643
SR-85	-1.906E+01		1.111E+01	3.650E+01	7.335E-01	-0.522
Y-88	-1.792E+00		1.795E+00	4.733E+00	1.039E-01	-0.379
NB-94	6.027E+00		2.967E+00	1.761E+01	3.621E-01	0.342
NB-95	-1.848E-01		5.949E+00	2.496E+01	5.096E-01	-0.007
TC-95M	-2.807E+01		1.924E+01	6.233E+01	1.260E+00	-0.450
ZR-95	-1.940E+01		7.990E+00	8.572E+00	1.748E-01	-2.264
ZRNB-95	-3.121E-01		1.005E+01	4.216E+01	8.605E-01	-0.007
MO-99	1.167E+01		1.437E+03	5.208E+03	1.073E+02	0.002
RH-101	1.261E+01		1.826E+01	6.684E+01	1.353E+00	0.189
RH-102M	-9.258E+00		5.473E+00	1.668E+01	3.346E-01	-0.555
RU-103	6.351E+00		5.939E+00	2.886E+01	5.795E-01	0.220
RU-106DA	-1.870E+01		4.364E+01	1.739E+02	3.515E+00	-0.108
AG-108M	-7.142E+00		7.806E+00	2.711E+01	5.428E-01	-0.263
AG-110M	3.967E+00		5.230E+00	2.515E+01	5.177E-01	0.158
SN-113DA	2.824E+01		1.337E+01	5.791E+01	1.159E+00	0.488

Sample ID : H7JQF1AC Acquisition date : 28-JUN-2006 06:38:50

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (DPM/SAMPL)	K.L. Ided	Act error	MDA (DPM/SAMPL)	MDA error	Act/MDA
SB-124	-6.697E+00		7.518E+00	2.696E+01	5.445E-01	-0.248
SB-125	3.049E+01		2.227E+01	9.601E+01	1.922E+00	0.318
SN-126DA	3.707E+00		5.039E+00	2.206E+01	4.472E-01	0.168
I-131	3.456E+01		4.106E+01	1.699E+02	3.399E+00	0.203
CS-134	3.264E+00		4.894E+00	2.240E+01	4.581E-01	0.146
CS-137DA	5.090E+00		6.466E+00	2.786E+01	5.646E-01	0.183
LA-138	4.585E+00		4.466E+00	2.421E+01	5.179E-01	0.189
CE-139	-1.525E+00		1.640E+01	5.855E+01	1.195E+00	-0.026
BA-140	-4.333E+01		4.008E+01	1.450E+02	2.917E+00	-0.299
BALA-140	-5.294E+00		1.604E+01	7.170E+01	1.551E+00	-0.074
CE-141	-6.347E+00		3.608E+01	1.290E+02	2.653E+00	-0.049
CE-144	-1.997E+00		1.014E+02	3.708E+02	7.668E+00	-0.005
CEPR-144	-2.868E+00		2.029E+02	7.422E+02	1.535E+01	-0.004
PM-144	4.509E+00		3.909E+00	1.943E+01	3.927E-01	0.232
PM-146	-7.343E+00		8.641E+00	3.063E+01	6.139E-01	-0.240
EU-152	-1.634E+01		2.942E+01	1.062E+02	2.124E+00	-0.154
EU-154	1.235E+01		1.122E+01	5.500E+01	1.164E+00	0.225
EU-155	-1.757E+01		4.969E+01	1.796E+02	3.781E+00	-0.098
HF-181	-1.135E+01		8.837E+00	2.922E+01	5.862E-01	-0.388
BI-207	4.911E+00		6.245E+00	2.636E+01	5.313E-01	0.186
TL-208	5.197E+00		4.998E+00	2.368E+01	4.777E-01	0.219
BI-210M	-1.410E+01		1.651E+01	5.846E+01	1.173E+00	-0.241
BI-212	3.300E+01		6.748E+01	2.968E+02	9.070E+00	0.111
PB-212	-1.729E+01		2.376E+01	8.639E+01	1.737E+00	-0.200
BI-214	-2.435E+01		1.268E+01	4.314E+01	8.714E-01	-0.565
PB-214	-3.670E+01		2.717E+01	7.812E+01	1.562E+00	-0.470
RA-223	1.797E+01		6.179E+01	2.380E+02	4.773E+00	0.076
RA-224DA	-1.762E+01		2.421E+01	8.801E+01	1.770E+00	-0.200
RA-226DA	-2.435E+01		1.268E+01	4.314E+01	8.714E-01	-0.565
AC-227DA	-2.617E+01		8.230E+01	3.020E+02	6.076E+00	-0.087
AC-228	1.687E+01		1.852E+01	8.280E+01	1.708E+00	0.204
RA-228DA	1.697E+01		1.864E+01	8.332E+01	1.718E+00	0.204
TH-228DA	1.474E+01		1.417E+01	6.716E+01	1.355E+00	0.219
TH-232DA	3.312E+01		7.714E+01	2.924E+02	5.850E+00	0.113
TH-234DA	-6.201E+02		3.893E+02	1.013E+03	2.102E+01	-0.612
U-234DA	-2.093E+01		4.476E+01	1.623E+02	3.250E+00	-0.129
U-235HP	5.316E+01		1.107E+02	4.109E+02	8.457E+00	0.129
NP-237DA	-1.155E+01		2.206E+01	8.003E+01	1.602E+00	-0.144
U-238DA	-3.670E+01		2.717E+01	7.812E+01	1.562E+00	-0.470
U-238DHP	3.015E+02		4.786E+02	1.809E+03	4.013E+01	0.167
AM-241HP	-1.611E+01		4.318E+01	1.481E+02	3.308E+00	-0.109

Vial Identifier	Constituent	Prep Activity/Concentration			Std Wt Used		Prep,Decayed To Date		Prep by	Std Decayed Activity/Concentration		
	Parent Standard:	BA13306A000		Ref:	10/4/2004		1.1069E+04	±		DPM/G		
RASC4129	BA-133	**7.5321E+02**	**± 1.402E+00**	DPM	0.076	g	6/9/2006	6/9/2006	Armstron	9.9107E+03	± 0.000E+00	DPM/G
		7.5321E+002	± 7.532E+002	(1)			7.5321E+002 , 7.5321E+002					

* - Isotope is an Impurity

Vial Identifier	Constituent	Prep Activity/Concentration			Std Wt Used		Prep,Decayed To Date		Prep by	Std Decayed Activity/Concentration		
	Parent Standard:	BA13306A000		Ref:	10/4/2004		1.1069E+04	±		DPM/G		
RATA22876	BA-133	**7.4894E+02**	**± 1.397E+00**	DPM	0.0758	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22877	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22878	BA-133	**7.5092E+02**	**± 1.397E+00**	DPM	0.076	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22879	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22880	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22881	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22882	BA-133	**7.4894E+02**	**± 1.397E+00**	DPM	0.0758	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22883	BA-133	**7.4894E+02**	**± 1.397E+00**	DPM	0.0758	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22884	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22885	BA-133	**7.5190E+02**	**± 1.397E+00**	DPM	0.0761	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22886	BA-133	**7.4894E+02**	**± 1.397E+00**	DPM	0.0758	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22887	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
RATA22888	BA-133	**7.4993E+02**	**± 1.397E+00**	DPM	0.0759	g	6/26/2006	6/26/2006	Armstron	9.8805E+03	± 0.000E+00	DPM/G
		7.4985E+002 ± 8.520E-001 (13)			0.114%		7.4894E+002 , 7.5190E+002					

* - Isotope is an Impurity

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6167188 pCi/sampl

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LongA

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:

```
H7JQF1AA-BLK:
  Ba-133      RDL:            pCi/sam   LCL:20      UCL:115     RPD:20      Ra-226      RDL:1.00E+00    pCi/sam   LCL:      UCL:      RPD:

H7JQF1AC-LCS:
  Ba-133      RDL:            pCi/sam   LCL:20      UCL:115     RPD:20      Ra-226      RDL:1           pCi/sam   LCL:70    UCL:130   RPD:20

H7DWT1AC-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
H7JQF1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
H7JQF1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

6/27/2006 9:58:20 PM

Standard Material Fractions (Vials)

Vial Prep: 6/26/05 to 6/28/06,SMFractionIdentifier Between RATA22876 and RATA22888, Order by

Vial Identifier	Constituent	Prep Activity/Concentration			Std Wt Used		Prep,Decayed To Date		Prep by	Std Decayed Activity/Concentration		
	Parent Standard:	BA-30-6092		Ref:			2.9100E+01	± 1.920E-01	mg/g			
RATA22876	BA	**3.0186E+01**	± **1.992E-01**	mg	1.0373	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22877	BA	**3.0209E+01**	± **1.994E-01**	mg	1.0381	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22878	BA	**3.0247E+01**	± **1.996E-01**	mg	1.0394	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22879	BA	**3.0235E+01**	± **1.995E-01**	mg	1.039	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22880	BA	**3.0226E+01**	± **1.995E-01**	mg	1.0387	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22881	BA	**3.0258E+01**	± **1.997E-01**	mg	1.0398	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22882	BA	**2.9956E+01**	± **1.977E-01**	mg	1.0294	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22883	BA	**3.0189E+01**	± **1.992E-01**	mg	1.0374	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22884	BA	**3.0288E+01**	± **1.999E-01**	mg	1.0408	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22885	BA	**3.0194E+01**	± **1.993E-01**	mg	1.0376	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22886	BA	**3.0229E+01**	± **1.995E-01**	mg	1.0388	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22887	BA	**3.0154E+01**	± **1.990E-01**	mg	1.0362	g	6/26/2006	6/26/2006	Armstron		±	mg/g
RATA22888	BA	**3.0235E+01**	± **1.995E-01**	mg	1.039	g	6/26/2006	6/26/2006	Armstron		±	mg/g

3.0201E+001 ± 8.141E-002 (13) 0.270% 2.9956E+001 , 3.0288E+001

* - Isotope is an Impurity

6/27/2006 9:58:48 PM

Standard Material Fractions (Vials)

Vial Prep: 6/26/05 to 6/28/06,SMFractionIdentifier Like: RASC4129%, Order by SMIdentifier,ConstituentCode,SMFractionIdentifier

Vial Identifier	Constituent	Prep Activity/Concentration		Std Wt Used		Prep,Decayed To Date		Prep by	Std Decayed Activity/Concentration		
	Parent Standard:	BA-30-6092	Ref:			2.9100E+01	± 1.920E-01	mg/g			
RASC4129	BA	**3.0232E+01**	**± 1.995E-01** mg	1.0389	g	6/9/2006	6/9/2006	Armstron		±	mg/g
		3.0232E+001	± 3.023E+001 (1)			3.0232E+001 , 3.0232E+001					

* - Isotope is an Impurity

Vial Identifier	Constituent	Prep Activity/Concentration			Std Wt Used		Prep,Decayed To Date		Prep by	Std Decayed Activity/Concentration		
	Parent Standard:	Ra22606A100		Ref:	11/1/2001		2.1060E+01	± 3.234E-01		DPM/G		
RASC4129	RA-226	**3.1149E+00**	**± 4.792E-02**	DPM	0.1482	g	6/9/2006	6/9/2006	Armstron	2.1018E+01	± 3.228E-01	DPM/G
		3.1149E+000	± 3.115E+000	(1)			3.1149E+000 , 3.1149E+000					

* - Isotope is an Impurity

Vial Identifier	Constituent	Prep Activity/Concentration		Std Wt Used		Prep,Decayed To Date		Prep by	Std Decayed Activity/Concentration	
	Parent Standard:	RA22806A000	Ref:	12/15/2003		4.4881E+02	±		DPM/G	
RASC4129	RA-228	**1.1284E+01**	**± 4.707E-02** DPM	0.0339	g	6/9/2006	6/9/2006	Armstron	3.3285E+02	± 0.000E+00 DPM/G
		1.1284E+001	± 1.128E+001 (1)			1.1284E+001 , 1.1284E+001				

* - Isotope is an Impurity

6/16/2006 4:54:15 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

AnalyDueDate: 07/11/2006

Batch: 6167188 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6167192, BXTF

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

1 H7DWT-1-AC
J6F140270-1-SAMP

no sample sent mt 6-26-06

05/24/2006 07:40 AmtRec: FILTER #Containers: 1 Scr: Alpha: Beta:

2 H7DXC-1-AC
J6F140270-2-SAMP

05/24/2006 08:10 AmtRec: FILTER #Containers: 1 Scr: Alpha: Beta:

3 H7DXD-1-AC
J6F140270-3-SAMP

05/24/2006 10:30 AmtRec: FILTER #Containers: 1 Scr: Alpha: Beta:

4 H7DXF-1-AC
J6F140270-4-SAMP

05/24/2006 11:20 AmtRec: FILTER #Containers: 1 Scr: Alpha: Beta:

STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/25/2006 8:47:51 AM

Lot No., Due Date: J6F270218,J6F140270; 07/25/2006,07/12/2006

Client, Site: 536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6179354; RRA2267 Ra-226 by ASC-7

SDG, Matrix: 31999,31902; FILTER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Review Pam Anderson Date 7-25-06

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6179354

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: Sherryl A Adam Date: 7-25-06

7/14/2006 9:34:23 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120403183

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Pipet #:

Sep1 DT/Tm Tech: 7/17/06 AL 1512

AnalyDueDate: 07/11/2006

Sep2 DT/Tm Tech:

Batch: 6179354 FILTER pCi/sampl PM, Quote: SA , 63174

SEQ Batch, Test: 6179357, BXTF All Tests: 6167169 7YSR, 6167182 9NS1, 6167184 BAS7, 6167185 BDS8, 6167188 BXTE, 6167192 BXTF, 6179343 7YSR, 6179344 9NS1, 6179346 BAS7, 6179351 BDS8, 6179354 BXTE, 6179357 BXTF

Prep Tech: HansenM,AntonsonL

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 H7DWT-1-AC J6F140270-1-SAMP	0.833g	501.65g	152.92g,in 7.5759 7.946 0.9534	0.2539g	RATA23244 07/12/06		G13 IHB	2013 7-18-6 M 13:40 7/21/06 1343 R	7/17/06 AP	
05/24/2006 07:40			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
2 H796F-1-AC J6F270218-1-SAMP	0.833g	501.59g	152.13g,in 7.5862 7.426 1.0175	0.2526g	RATA23245 07/12/06		G6 2RC	2013 7-18-6 M 13:40 7/21/06 1344 R	7/17/06 AP	
06/07/2006 10:00			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
3 H796L-1-AC J6F270218-2-SAMP	0.833g	501.03g	150.93g,in 7.5661 7.970 0.9493	0.2509g	RATA23246 07/12/06		G8 3RA	2013 7-18-6 M 13:40 7/21/06 1342 R	7/17/06 AP	
06/07/2006 10:25			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
4 H796N-1-AC J6F270218-3-SAMP	0.833g	500.85g	153.24g,in 7.5464 7.935 0.9510	0.2549g	RATA23247 07/12/06		G7 4UA	2013 7-18-6 M 13:40 7/21/06 1342 R	7/17/06 AP	
06/07/2006 10:35			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 9:34:25 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179354 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6179357, BXTF

Sep2 DT/Tm Tech:

Prep Tech: HansenM,AntonsonL

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:
5 H796P-1-AC J6F270218-4-SAMP	0.833g	501.24g	151.48g,in 7.5365 7.16 1.0526	0.2517g	RATA23248 07/12/06		9" 7RH	2017 7-18-6 M 13:40 7/21/06 1343 R	7/17/06 OKP	
06/07/2006 10:50			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
6 H796Q-1-AC J6F270218-5-SAMP	0.833g	517.56g	150.67g,in 7.5464 7.562 0.9979	0.2425g	RATA23249 07/12/06		G13 8RD	2053 7-18-6 M 13:40 7/21/06 1341 R	7/17/06 OKP	
06/07/2006 11:00			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
7 H796R-1-AC J6F270218-6-SAMP	0.833g	502.44g	153.56g,in 7.5365 7.702 0.9785	0.2546g	RATA23250 07/12/06		G6 9RC	2053 7-18-6 M 13:40 7/21/06 1344 R	7/17/06 OKP	
06/07/2006 11:20			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
8 H796T-1-AC J6F270218-7-SAMP	0.833g	500.22g	151.86g,in 7.5562 8.205 0.9209	0.2529g	RATA23251 07/12/06		G8 DSA	2053 7-18-6 M 13:40 7/21/06 1343 R	7/17/06 OKP	
06/07/2006 10:10			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 9:34:25 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179354 FILTER pCi/sampl PM, Quote: SA , 63174

Sep2 DT/Tm Tech:

SEQ Batch, Test: 6179357, BXTF

Prep Tech: HansenM,AntonsonL

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:
9 H796W-1-AC J6F270218-8-SAMP	0.833g	501.87g	151.54g,in 7.5365 7.521 1.0021	0.2515g	RATA23252 07/12/06		G7 EHB	2053 7-18-6 M 14:07 7/21/06 1411 R	7/17/06 DD	
06/07/2006 09:55			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
10H797D-1-AC J6F270218-9-SAMP	0.833g	500.74g	154.70g,in 7.5562 7.27 1.0394	0.2573g	RATA23253 07/12/06		9 FSA	2053 7-18-6 M 14:07 7/21/06 1412 R	7/17/06 DD	
06/07/2006 10:20			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
11H797E-1-AC J6F270218-10-SAMP	0.833g	503.68g	152.19g,in 7.5562 7.36 1.0267	0.2517g	RATA23254 07/12/06		99 GSA	2135 7-18-6 M 1407 7/21/06 1410 R	7/17/06 DD	
06/07/2006 10:30			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
12H797F-1-AC J6F270218-11-SAMP	0.833g	513.46g	150.13g,in 7.5464 7.473 1.0098	0.2436g	RATA23255 07/12/06		G13 JSB	2135 7-18-6 M 14:07 7/21/06 1411 R	7/17/06 DD	
06/07/2006 10:45			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 9:34:26 AM

Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

536403, Brown and Caldwell , Brown & Caldwell

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179354 FILTER pCi/sampl PM, Quote: SA , 63174
SEQ Batch, Test: 6179357, BXTF

Sep2 DT/Tm Tech:

Prep Tech: HansenM,AntonsonL

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:
13H797H-1-AC J6F270218-12-SAMP	0.833g	501.88g	150.22g,in 7.5267 7.22 1.0425	0.2493g	RATA23256 07/12/06		G4	2209	7/17/06 OP 7-18-06 M 14:07 LMC 7/21/06 1411 R	
06/07/2006 11:05			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
14H797J-1-AC J6F270218-13-SAMP	0.833g	521.25g	154.34g,in 7.5768 7.038 1.0680	0.2466g	RATA23257 07/12/06		G13	2210	7/17/06 OP 7-18-06 M 14:07 MRA 7/21/06 1410 R	
06/07/2006 11:10			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
15H797K-1-AC J6F270218-14-SAMP	0.833g	506.13g	153.17g,in 7.5464 7.23 1.0438	0.2521g	RATA23258 07/12/06		9"	0579	7/18 [illegible] 7-18-06 M 14:07 NMA 7/21/06 1426 R	
06/07/2006 10:05			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:
16H797M-1-AC J6F270218-15-SAMP	0.833g	500.73g	150.39g,in 7.5362 7.21 1.0480	0.2502g	RATA23259 07/12/06		9"	0551	7/18 [illegible] 7-18-06 M 14:07 QMC 7/21/06 1426 R	
06/07/2006 11:15			AmtRec: FILTER	#Containers: 1			Scr:	Alpha:		Beta:

7/14/2006 9:34:26 AM

Sample Preparation/Analysis

BX Ra-226/228 PrpRC5016, SepRC5005
TE Ba-133 by NaI & Ra-226 by Alpha Scint 7 day ingrow
01 STANDARD TEST SET

Balance Id:1120373922,1120373922,1120

Pipet #: _____

AnalyDueDate: 07/11/2006

Sep1 DT/Tm Tech:

Batch: 6179354 pCi/sampl

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,AntonsonL

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:
17H8DN7-1-AA-B			1.00sa,in	1.00sa	RATA23260					
J6F280000-354-BLK				7.4675 =	07/12/06		9"	0624	7/18/06	
				6.99 -				2-18-06 M	14:25	
				1.0683			KME	7-21-06	1428	R
06/07/2006 10:00		AmtRec:		#Containers: 1			Scr:	Alpha:		Beta:
18H8DN7-1-AC-C			1.00sa,in	1.00sa	RASC4140					
J6F280000-354-LCS				7.4669 =	06/13/06		9"	0658	7/18/06	
				7.13 -				7-18-06 M	14:25	
				1.0473			PMA	7-21-06	1428	R
06/07/2006 10:00		AmtRec:		#Containers: 1			Scr:	Alpha:		Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown & Caldwell , SA , 63174

H7DWT1AC-SAMP Constituent List:

Ba-133	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	Ra-226	RDL:1.00E+00	pCi/sam	LCL:	UCL:	RPD:

H8DN71AA-BLK:

Ba-133	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	Ra-226	RDL:1.00E+00	pCi/sam	LCL:	UCL:	RPD:

H8DN71AC-LCS:

Ba-133	RDL:	pCi/sam	LCL:20	UCL:115	RPD:20	Ra-226	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20

H7DWT1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
H8DN71AA-BLK:

7/25/2006 8:59:32 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/25/2005, 7/30/2006, Batch: '6179354', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
6179354						
AC		**CalcC**	**HansenM**	7/14/2006 8:47:17		
SC			wagarr	IsBatched	6/28/2006 1:36:13 PM	ICOC_RADCALC v4.8.24
SC			HansenM	InPrep2	7/14/2006 8:47:17 AM	RICH-RC-5016 REVISION 5
SC			HansenM	Prep2C	7/14/2006 8:47:47 AM	RICH-RC-5016 REVISION 5
SC			AntonsonL	InPrep	7/14/2006 9:12:14 AM	RICH-RC-5005 Revision 5
SC			LongA	Sep1C	7/17/2006 5:26:18 PM	RICH-RC-5005 REVISION 5
SC			DAWKINSO	InCnt1	7/17/2006 10:09:36 PM	RICH-RD-0007 REVISION 5
SC			BlackCL	Cnt1C	7/18/2006 7:12:54 AM	RICH-RD-0007 REVISION 5
SC			TamosaitisM	InSep2	7/18/2006 2:15:45 PM	RICH-RC-5005 REVISION 4
SC			StringerR	CalcC	7/21/2006 9:40:15 PM	RICH-RC-5005 REVISION 5
AC			**HansenM**	7/14/2006 8:47:47		
AC			**AntonsonL**	7/14/2006 9:12:14		
AC			**LongA**	7/17/2006 5:26:18 PM		
AC			**DAWKINSO**	7/17/2006 10:09:36		
AC			**BlackCL**	7/18/2006 7:12:54		
AC			**TamosaitisM**	7/18/2006 2:15:45 PM		
AC			**StringerR**	7/21/2006 9:40:15 PM		

AC: Accepting Entry; SC: Status Change

7/25/2006 8:59:31 AM

Rpt DB Transfer log (Batch Results)

SEVERN TRENT STL

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Mda	Sample Date / Units	Expected	Yield	Volumes
31999	**9H796F10**			**J6F2702181**	000487	FILTER	6/26/2006 9:00:00		6/7/2006 10:00:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.2157E+00**	1.623E+00	1.71E+00	4.523E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.5369E+01**	1.72E+00	2.03E+00	5.537E+00	PCI/SA	1.0	1.0E+0	3.365E-2
RA-226	BXTE		0	7/21/2006 4:44:00 PM	**9.8826E-02**	2.063E-01	2.065E-01	7.875E-01	PCI/SA	0.983	1.0E+0	2.526E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.8822E-01**	1.16E-01	1.172E-01	4.052E-01	PCI/SA	1.079	1.0E+0	3.387E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**6.2836E-01**	1.534E-01	1.629E-01	2.154E-01	PCI/SA	1.079	1.0E+0	3.387E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**-3.5906E-02**	2.539E-02	2.558E-02	2.643E-01	PCI/SA	1.079	1.0E+0	3.387E-2
U-234	7YSR		0	7/18/2006 6:21:43 PM	**2.7995E-01**	1.743E-01	1.758E-01	4.788E-01	PCI/SA	0.975	1.0E+0	3.258E-2
U-235	7YSR		0	7/18/2006 6:21:43 PM	**9.9979E-02**	9.998E-02	1.003E-01	2.709E-01	PCI/SA	0.975	1.0E+0	3.258E-2
U-238	7YSR		0	7/18/2006 6:21:43 PM	**-1.9991E-02**	1.999E-02	2.006E-02	4.788E-01	PCI/SA	0.975	1.0E+0	3.258E-2
31999	**9H796L10**			**J6F2702182**	000488	FILTER	6/26/2006 9:00:00		6/7/2006 10:25:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**5.4966E+00**	1.672E+00	1.766E+00	4.546E+00	PCI/SA	1.0	1.0E+0	2.088E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.7538E+01**	1.725E+00	2.106E+00	5.209E+00	PCI/SA	1.0	1.0E+0	3.479E-2
RA-226	BXTE		0	7/21/2006 4:42:00 PM	**2.7938E-01**	1.9E-01	1.923E-01	6.492E-01	PCI/SA	1.053	1.0E+0	2.509E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**5.5304E-02**	1.237E-01	1.238E-01	6.634E-01	PCI/SA	0.396	1.0E+0	3.517E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**3.165E-01**	1.827E-01	1.857E-01	2.859E-01	PCI/SA	0.396	1.0E+0	3.517E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**0.0E+00**	0.0E+00	1.292E-01	2.859E-01	PCI/SA	0.396	1.0E+0	3.517E-2
U-234	7YSR		0	7/18/2006 6:21:54 PM	**2.8598E-01**	1.651E-01	1.667E-01	2.583E-01	PCI/SA	0.926	1.0E+0	3.23E-2
U-235	7YSR		0	7/18/2006 6:21:54 PM	**2.6691E-01**	1.662E-01	1.676E-01	4.566E-01	PCI/SA	0.926	1.0E+0	3.23E-2
U-238	7YSR		0	7/18/2006 6:21:54 PM	**-3.8129E-02**	2.696E-02	2.713E-02	5.387E-01	PCI/SA	0.926	1.0E+0	3.23E-2
31999	**9H796N10**			**J6F2702183**	000489	FILTER	6/26/2006 9:00:00		6/7/2006 10:35:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**6.4647E+00**	1.658E+00	1.785E+00	3.857E+00	PCI/SA	1.0	1.0E+0	2.107E-2
BETA	BDS8		0	7/18/2006 1:34:31 PM	**1.57E+01**	1.626E+00	1.941E+00	4.99E+00	PCI/SA	1.0	1.0E+0	3.648E-2
RA-226	BXTE		0	7/21/2006 4:42:00 PM	**1.8126E-01**	2.109E-01	2.119E-01	7.714E-01	PCI/SA	1.052	1.0E+0	2.549E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.7654E-01**	8.827E-02	8.968E-02	1.196E-01	PCI/SA	1.023	1.0E+0	3.634E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.5259E-01**	1.031E-01	1.056E-01	1.141E-01	PCI/SA	1.023	1.0E+0	3.634E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**0.0E+00**	0.0E+00	5.156E-02	1.141E-01	PCI/SA	1.023	1.0E+0	3.634E-2
U-234	7YSR		0	7/18/2006 6:22:08 PM	**2.0632E-01**	1.459E-01	1.468E-01	2.796E-01	PCI/SA	0.951	1.0E+0	3.249E-2
U-235	7YSR		0	7/18/2006 6:22:08 PM	**0.0E+00**	0.0E+00	1.263E-01	2.796E-01	PCI/SA	0.951	1.0E+0	3.249E-2
U-238	7YSR		0	7/18/2006 6:22:08 PM	**8.2533E-02**	1.052E-01	1.054E-01	4.941E-01	PCI/SA	0.951	1.0E+0	3.249E-2
31999	**9H796P10**			**J6F2702184**	000490	FILTER	6/26/2006 9:00:00		6/7/2006 10:50:00 AM			
ALPHA	BAS7		0	7/18/2006 1:26:23 PM	**3.1E+00**	1.521E+00	1.554E+00	5.409E+00	PCI/SA	1.0	1.0E+0	2.116E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.905E+01**	1.708E+00	2.143E+00	5.03E+00	PCI/SA	1.0	1.0E+0	3.489E-2
RA-226	BXTE		0	7/21/2006 4:43:01 PM	**4.7177E-01**	2.98E-01	3.016E-01	1.016E+00	PCI/SA	0.95	1.0E+0	2.517E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.3167E-01**	7.755E-02	7.84E-02	2.256E-01	PCI/SA	1.107	1.0E+0	3.56E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.8707E-01**	1.015E-01	1.045E-01	9.724E-02	PCI/SA	1.107	1.0E+0	3.56E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**1.7942E-02**	4.012E-02	4.015E-02	2.152E-01	PCI/SA	1.107	1.0E+0	3.56E-2
U-234	7YSR		0	7/18/2006 6:22:38 PM	**-3.0904E-02**	1.545E-02	1.565E-02	5.153E-01	PCI/SA	1.056	1.0E+0	3.234E-2
U-235	7YSR		0	7/18/2006 6:22:38 PM	**8.1011E-02**	9.708E-02	9.729E-02	4.409E-01	PCI/SA	1.056	1.0E+0	3.234E-2
U-238	7YSR		0	7/18/2006 6:22:38 PM	**-4.6356E-02**	1.892E-02	1.928E-02	5.724E-01	PCI/SA	1.056	1.0E+0	3.234E-2
31999	**9H796Q10**			**J6F2702185**	000491	FILTER	6/26/2006 9:00:00		6/7/2006 11:00:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**5.8528E+00**	1.861E+00	1.958E+00	5.57E+00	PCI/SA	1.0	1.0E+0	2.042E-2
BETA	BDS8		0	7/18/2006 1:34:35 PM	**1.5815E+01**	1.678E+00	1.993E+00	5.248E+00	PCI/SA	1.0	1.0E+0	3.123E-2
RA-226	BXTE		0	7/21/2006 4:41:00 PM	**9.1334E-01**	3.044E-01	3.184E-01	8.549E-01	PCI/SA	1.002	1.0E+0	2.425E-1
TH-228	9NS1		0	7/19/2006 12:16:34	**1.7989E-01**	1.039E-01	1.051E-01	3.36E-01	PCI/SA	1.017	1.0E+0	3.115E-2
TH-230	9NS1		0	7/19/2006 12:16:34	**2.0972E-01**	9.533E-02	9.71E-02	2.287E-01	PCI/SA	1.017	1.0E+0	3.115E-2
TH-232	9NS1		0	7/19/2006 12:16:34	**3.0505E-01**	1.175E-01	1.206E-01	2.806E-01	PCI/SA	1.017	1.0E+0	3.115E-2
U-234	7YSR		0	7/18/2006 6:22:53 PM	**7.0218E-01**	2.752E-01	2.809E-01	5.183E-01	PCI/SA	0.981	1.0E+0	3.04E-2
U-235	7YSR		0	7/18/2006 6:22:53 PM	**7.8919E-02**	1.049E-01	1.051E-01	5.183E-01	PCI/SA	0.981	1.0E+0	3.04E-2
U-238	7YSR		0	7/18/2006 6:22:53 PM	**4.861E-01**	2.329E-01	2.361E-01	5.549E-01	PCI/SA	0.981	1.0E+0	3.04E-2
31999	**9H796R10**			**J6F2702186**	000492	FILTER	6/26/2006 9:00:00		6/7/2006 11:20:00 AM			
ALPHA	BAS7		0	7/18/2006 4:13:36 PM	**4.1775E+00**	1.513E+00	1.574E+00	4.568E+00	PCI/SA	1.0	1.0E+0	2.069E-2

6179354, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / Mda	Units	Expected	Yield	Volumes	
BETA	BDS8	0		7/18/2006 1:34:35 PM	**1.7615E+01**	1.668E+00	2.065E+00	5.009E+00	PCI/SA		1.0	1.0E+0	3.434E-2
RA-226	BXTE	0		7/21/2006 4:44:01 PM	**2.2045E-01**	2.549E-01	2.559E-01	9.301E-01	PCI/SA		1.022	1.0E+0	2.546E-1
TH-228	9NS1	0		7/19/2006 12:16:34	**1.9618E-01**	9.989E-02	1.014E-01	2.615E-01	PCI/SA		0.997	1.0E+0	3.321E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**4.9901E-01**	1.441E-01	1.508E-01	1.127E-01	PCI/SA		0.997	1.0E+0	3.321E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**1.2475E-01**	7.203E-02	7.289E-02	1.127E-01	PCI/SA		0.997	1.0E+0	3.321E-2
U-234	7YSR	0		7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA		1.009	1.0E+0	3.244E-2
U-235	7YSR	0		7/18/2006 6:23:10 PM	**-8.2994E-03**	8.299E-03	8.326E-03	4.172E-01	PCI/SA		1.009	1.0E+0	3.244E-2
U-238	7YSR	0		7/18/2006 6:23:10 PM	**-3.3198E-02**	1.66E-02	1.681E-02	5.536E-01	PCI/SA		1.009	1.0E+0	3.244E-2
31999	**9H796T10**			**J6F2702187**	000493	FILTER	6/26/2006 9:00:00	6/7/2006 10:10:00 AM					
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**-7.4933E-02**	8.593E-01	8.593E-01	4.586E+00	PCI/SA		1.0	1.0E+0	2.117E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.0747E+00**	1.22E+00	1.222E+00	5.046E+00	PCI/SA		1.0	1.0E+0	3.395E-2
RA-226	BXTE	0		7/21/2006 4:43:01 PM	**4.3349E-01**	2.053E-01	2.098E-01	6.313E-01	PCI/SA		1.086	1.0E+0	2.529E-1
TH-228	9NS1	0		7/19/2006 12:16:34	**1.9076E-02**	4.265E-02	4.269E-02	2.288E-01	PCI/SA		0.936	1.0E+0	3.453E-2
TH-230	9NS1	0		7/19/2006 12:16:34	**2.7293E-01**	1.045E-01	1.073E-01	2.183E-01	PCI/SA		0.936	1.0E+0	3.453E-2
TH-232	9NS1	0		7/19/2006 12:16:34	**-3.639E-02**	2.573E-02	2.593E-02	2.678E-01	PCI/SA		0.936	1.0E+0	3.453E-2
U-234	7YSR	0		7/18/2006 6:23:32 PM	**-2.801E-02**	1.617E-02	1.633E-02	5.817E-01	PCI/SA		0.885	1.0E+0	3.256E-2
U-235	7YSR	0		7/18/2006 6:23:32 PM	**-1.8673E-02**	1.32E-02	1.329E-02	5.33E-01	PCI/SA		0.885	1.0E+0	3.256E-2
U-238	7YSR	0		7/18/2006 6:23:32 PM	**1.166E-01**	1.166E-01	1.17E-01	3.16E-01	PCI/SA		0.885	1.0E+0	3.256E-2
31999	**9H796W10**			**J6F2702188**	P-0660	FILTER	6/26/2006 9:00:00	6/7/2006 9:55:00 AM					
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**3.8436E+00**	1.391E+00	1.445E+00	4.008E+00	PCI/SA		1.0	1.0E+0	2.088E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.3482E+01**	1.585E+00	1.923E+00	5.061E+00	PCI/SA		1.0	1.0E+0	3.329E-2
RA-226	BXTE	0		7/21/2006 5:11:01 PM	**-3.0368E-01**	2.048E-01	2.07E-01	8.759E-01	PCI/SA		0.998	1.0E+0	2.515E-1
TH-228	9NS1	0		7/19/2006 12:17:22	**-5.5508E-02**	5.549E-02	5.57E-02	3.722E-01	PCI/SA		0.916	1.0E+0	3.475E-2
TH-230	9NS1	0		7/19/2006 12:17:22	**2.6634E+00**	3.08E-01	3.872E-01	2.116E-01	PCI/SA		0.916	1.0E+0	3.475E-2
TH-232	9NS1	0		7/19/2006 12:17:22	**3.5277E-02**	3.528E-02	3.541E-02	9.56E-02	PCI/SA		0.916	1.0E+0	3.475E-2
U-234	7YSR	0		7/18/2006 6:24:30 PM	**1.5766E-01**	1.422E-01	1.427E-01	5.571E-01	PCI/SA		1.006	1.0E+0	3.241E-2
U-235	7YSR	0		7/18/2006 6:24:30 PM	**-3.9462E-02**	2.79E-02	2.808E-02	5.571E-01	PCI/SA		1.006	1.0E+0	3.241E-2
U-238	7YSR	0		7/18/2006 6:24:30 PM	**-5.9194E-02**	3.418E-02	3.45E-02	6.223E-01	PCI/SA		1.006	1.0E+0	3.241E-2
31999	**9H797D10**			**J6F2702189**	P-0661	FILTER	6/26/2006 9:00:00	6/7/2006 10:20:00 AM					
ALPHA	BAS7	0		7/18/2006 4:13:36 PM	**2.4154E+00**	1.461E+00	1.482E+00	5.531E+00	PCI/SA		1.0	1.0E+0	2.086E-2
BETA	BDS8	0		7/18/2006 1:34:32 PM	**1.2452E+01**	1.549E+00	1.861E+00	5.002E+00	PCI/SA		1.0	1.0E+0	3.541E-2
RA-226	BXTE	0		7/21/2006 5:12:00 PM	**3.5851E-01**	2.991E-01	3.013E-01	1.056E+00	PCI/SA		0.962	1.0E+0	2.573E-1
TH-228	9NS1	0		7/19/2006 12:17:33	**1.1088E-01**	9.667E-02	9.717E-02	3.728E-01	PCI/SA		1.071	1.0E+0	3.341E-2
TH-230	9NS1	0		7/19/2006 12:17:33	**8.4616E-02**	5.983E-02	6.03E-02	1.147E-01	PCI/SA		1.071	1.0E+0	3.341E-2
TH-232	9NS1	0		7/19/2006 12:17:33	**0.0E+00**	0.0E+00	5.182E-02	1.147E-01	PCI/SA		1.071	1.0E+0	3.341E-2
U-234	7YSR	0		7/18/2006 6:24:37 PM	**0.0E+00**	0.0E+00	1.219E-01	2.697E-01	PCI/SA		1.029	1.0E+0	3.248E-2
U-235	7YSR	0		7/18/2006 6:24:37 PM	**-5.9728E-02**	3.448E-02	3.481E-02	6.282E-01	PCI/SA		1.029	1.0E+0	3.248E-2
U-238	7YSR	0		7/18/2006 6:24:37 PM	**3.9782E-02**	1.053E-01	1.054E-01	6.282E-01	PCI/SA		1.029	1.0E+0	3.248E-2
31999	**9H797E10**			**J6F27021810**	P-0662	FILTER	6/26/2006 9:00:00	6/7/2006 10:30:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**6.44E+00**	1.887E+00	2.002E+00	5.424E+00	PCI/SA		1.0	1.0E+0	2.072E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.046E+01**	1.699E+00	1.853E+00	6.064E+00	PCI/SA		1.0	1.0E+0	3.603E-2
RA-226	BXTE	0		7/21/2006 5:10:00 PM	**6.216E-02**	1.618E-01	1.62E-01	6.4E-01	PCI/SA		0.974	1.0E+0	2.517E-1
TH-228	9NS1	0		7/19/2006 12:17:45	**8.9776E-02**	8.399E-02	8.438E-02	3.305E-01	PCI/SA		0.991	1.0E+0	3.433E-2
TH-230	9NS1	0		7/19/2006 12:17:45	**1.7129E-01**	8.565E-02	8.702E-02	1.16E-01	PCI/SA		0.991	1.0E+0	3.433E-2
TH-232	9NS1	0		7/19/2006 12:17:45	**0.0E+00**	0.0E+00	5.245E-02	1.16E-01	PCI/SA		0.991	1.0E+0	3.433E-2
U-234	7YSR	0		7/18/2006 6:24:49 PM	**-1.4874E-01**	5.622E-02	5.748E-02	8.722E-01	PCI/SA		0.906	1.0E+0	3.215E-2
U-235	7YSR	0		7/18/2006 6:24:49 PM	**-6.3746E-02**	3.68E-02	3.716E-02	6.704E-01	PCI/SA		0.906	1.0E+0	3.215E-2
U-238	7YSR	0		7/18/2006 6:24:49 PM	**-2.1298E-02**	1.183E-01	1.183E-01	8.288E-01	PCI/SA		0.906	1.0E+0	3.215E-2
31999	**9H797F10**			**J6F27021811**	P-0663	FILTER	6/26/2006 9:00:00	6/7/2006 10:45:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**3.9003E+00**	1.502E+00	1.556E+00	4.671E+00	PCI/SA		1.0	1.0E+0	2.03E-2
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.6067E+01**	1.616E+00	2.113E+00	4.856E+00	PCI/SA		1.0	1.0E+0	3.165E-2
RA-226	BXTE	0		7/21/2006 5:11:03 PM	**2.4592E-01**	1.489E-01	1.512E-01	4.86E-01	PCI/SA		0.99	1.0E+0	2.436E-1
TH-228	9NS1	0		7/19/2006 12:17:53	**-1.7632E-05**	8.33E-02	8.33E-02	4.466E-01	PCI/SA		0.992	1.0E+0	3.219E-2
TH-230	9NS1	0		7/19/2006 12:17:53	**1.1467E-01**	8.27E-02	8.334E-02	2.751E-01	PCI/SA		0.992	1.0E+0	3.219E-2

6179354, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / MDA	Units	Expected	Yield	Volumes	
TH-232	9NS1	0		7/19/2006 12:17:53	**0.0E+00**	0.0E+00	5.618E-02	1.243E-01	PCI/SA	0.992	1.0E+0	3.219E-2	
U-234	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	3.092E-2	
U-235	7YSR	0		7/18/2006 6:25:00 PM	**-1.9478E-02**	1.948E-02	1.954E-02	4.665E-01	PCI/SA	1.011	1.0E+0	3.092E-2	
U-238	7YSR	0		7/18/2006 6:25:00 PM	**7.7955E-02**	1.458E-01	1.459E-01	7.601E-01	PCI/SA	1.011	1.0E+0	3.092E-2	
31999	**9H797H10**			**J6F27021812**	P-0664	FILTER	6/26/2006 9:00:00	6/7/2006 11:05:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**3.7E+00**	1.475E+00	1.524E+00	4.621E+00	PCI/SA	1.0	1.0E+0	2.075E-2	
BETA	BDS8	0		7/18/2006 1:34:19 PM	**1.3205E+01**	1.591E+00	1.827E+00	5.143E+00	PCI/SA	1.0	1.0E+0	3.304E-2	
RA-226	BXTE	0		7/21/2006 5:11:01 PM	**1.0716E-01**	1.676E-01	1.68E-01	6.35E-01	PCI/SA	0.959	1.0E+0	2.493E-1	
TH-228	9NS1	0		7/19/2006 10:14:05	**1.9535E-06**	8.279E-02	8.279E-02	4.201E-01	PCI/SA	1.047	1.0E+0	3.332E-2	
TH-230	9NS1	0		7/19/2006 10:14:05	**1.3025E-01**	7.672E-02	7.757E-02	2.232E-01	PCI/SA	1.047	1.0E+0	3.332E-2	
TH-232	9NS1	0		7/19/2006 10:14:05	**3.7213E-02**	3.721E-02	3.736E-02	1.008E-01	PCI/SA	1.047	1.0E+0	3.332E-2	
U-234	7YSR	0		7/18/2006 6:25:11 PM	**5.5292E-02**	1.392E-01	1.392E-01	7.569E-01	PCI/SA	1.009	1.0E+0	3.232E-2	
U-235	7YSR	0		7/18/2006 6:25:11 PM	**-1.8434E-02**	1.843E-02	1.849E-02	4.414E-01	PCI/SA	1.009	1.0E+0	3.232E-2	
U-238	7YSR	0		7/18/2006 6:25:11 PM	**7.3726E-02**	1.379E-01	1.381E-01	7.192E-01	PCI/SA	1.009	1.0E+0	3.232E-2	
31999	**9H797J10**			**J6F27021813**	P-0665	FILTER	6/26/2006 9:00:00	6/7/2006 11:10:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**5.0222E+00**	1.555E+00	1.638E+00	4.09E+00	PCI/SA	1.0	1.0E+0	2.002E-2	
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2848E+01**	1.59E+00	1.818E+00	5.167E+00	PCI/SA	1.0	1.0E+0	3.455E-2	
RA-226	BXTE	0		7/21/2006 5:10:00 PM	**2.4633E-01**	2.038E-01	2.055E-01	7.196E-01	PCI/SA	0.936	1.0E+0	2.466E-1	
TH-228	9NS1	0		7/19/2006 10:14:05	**-7.7987E-02**	6.166E-02	6.204E-02	4.197E-01	PCI/SA	1.004	1.0E+0	3.099E-2	
TH-230	9NS1	0		7/19/2006 10:14:05	**5.0194E-01**	1.404E-01	1.472E-01	2.23E-01	PCI/SA	1.004	1.0E+0	3.099E-2	
TH-232	9NS1	0		7/19/2006 10:14:05	**6.2033E-07**	4.554E-02	4.554E-02	2.737E-01	PCI/SA	1.004	1.0E+0	3.099E-2	
U-234	7YSR	0		7/18/2006 6:25:24 PM	**0.0E+00**	0.0E+00	1.219E-01	2.698E-01	PCI/SA	1.091	1.0E+0	3.015E-2	
U-235	7YSR	0		7/18/2006 6:25:24 PM	**-1.9916E-02**	1.992E-02	1.998E-02	4.769E-01	PCI/SA	1.091	1.0E+0	3.015E-2	
U-238	7YSR	0		7/18/2006 6:25:24 PM	**1.5928E-01**	1.436E-01	1.441E-01	5.626E-01	PCI/SA	1.091	1.0E+0	3.015E-2	
31999	**9H797K10**			**J6F27021814**	P-0666	FILTER	6/26/2006 9:00:00	6/7/2006 10:05:00 AM					
ALPHA	BAS7	0		7/18/2006 7:02:47 PM	**-6.0243E-01**	9.947E-01	9.967E-01	5.518E+00	PCI/SA	1.0	1.0E+0	2.066E-2	
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.2862E+01**	1.583E+00	1.813E+00	5.122E+00	PCI/SA	1.0	1.0E+0	3.229E-2	
RA-226	BXTE	0		7/21/2006 5:26:00 PM	**3.8954E-01**	1.827E-01	1.869E-01	5.73E-01	PCI/SA	0.958	1.0E+0	2.521E-1	
TH-228	9NS1	0		7/19/2006 10:14:05	**2.4133E-01**	1.097E-01	1.118E-01	2.632E-01	PCI/SA	1.024	1.0E+0	3.496E-2	
TH-230	9NS1	0		7/19/2006 10:14:05	**3.7652E-01**	1.255E-01	1.3E-01	1.134E-01	PCI/SA	1.024	1.0E+0	3.496E-2	
TH-232	9NS1	0		7/19/2006 10:14:05	**0.0E+00**	0.0E+00	5.124E-02	1.134E-01	PCI/SA	1.024	1.0E+0	3.496E-2	
U-234	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA	0.914	1.0E+0	3.187E-2	
U-235	7YSR	0		7/18/2006 6:25:43 PM	**1.0956E-01**	1.096E-01	1.099E-01	2.969E-01	PCI/SA	0.914	1.0E+0	3.187E-2	
U-238	7YSR	0		7/18/2006 6:25:43 PM	**-2.1922E-02**	2.192E-02	2.199E-02	5.248E-01	PCI/SA	0.914	1.0E+0	3.187E-2	
31999	**9H797M10**			**J6F27021815**	P-0667	FILTER	6/26/2006 9:00:00	6/7/2006 11:15:00 AM					
ALPHA	BAS7	0		7/19/2006 8:30:44 AM	**-2.1818E+00**	8.681E-01	8.973E-01	6.058E+00	PCI/SA	1.0	1.0E+0	2.084E-2	
BETA	BDS8	0		7/18/2006 1:34:38 PM	**1.6716E+00**	1.229E+00	1.238E+00	5.002E+00	PCI/SA	1.0	1.0E+0	3.539E-2	
RA-226	BXTE	0		7/21/2006 5:26:00 PM	**1.2237E-02**	6.758E-02	6.759E-02	3.199E-01	PCI/SA	0.954	1.0E+0	2.502E-1	
TH-228	9NS1	0		7/19/2006 10:14:05	**1.3121E-01**	7.575E-02	7.667E-02	1.185E-01	PCI/SA	1.011	1.0E+0	3.715E-2	
TH-230	9NS1	0		7/19/2006 10:14:05	**2.0851E-01**	9.325E-02	9.511E-02	1.13E-01	PCI/SA	1.011	1.0E+0	3.715E-2	
TH-232	9NS1	0		7/19/2006 10:14:05	**4.1702E-02**	4.17E-02	4.187E-02	1.13E-01	PCI/SA	1.011	1.0E+0	3.715E-2	
U-234	7YSR	0		7/18/2006 6:25:53 PM	**0.0E+00**	0.0E+00	1.38E-01	3.054E-01	PCI/SA	0.816	1.0E+0	3.267E-2	
U-235	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA	0.816	1.0E+0	3.267E-2	
U-238	7YSR	0		7/18/2006 6:25:53 PM	**-2.2549E-02**	2.255E-02	2.262E-02	5.399E-01	PCI/SA	0.816	1.0E+0	3.267E-2	
31902	**9H7DWT10**			**J6F1402701**	000473	FILTER	6/14/2006 10:00:00	5/24/2006 7:40:00 AM					
ALPHA	BAS7	0		7/18/2006 1:26:23 PM	**3.4147E+00**	1.54E+00	1.581E+00	5.324E+00	PCI/SA	1.0	1.0E+0	2.096E-2	
BETA	BDS8	0		7/18/2006 1:34:31 PM	**1.2465E+01**	1.665E+00	1.896E+00	5.665E+00	PCI/SA	1.0	1.0E+0	3.326E-2	
RA-226	BXTE	0		7/21/2006 4:43:00 PM	**5.0869E-01**	2.598E-01	2.651E-01	8.594E-01	PCI/SA	1.049	1.0E+0	2.539E-1	
TH-228	9NS1	0		7/19/2006 12:16:34	**-3.9324E-02**	7.357E-02	7.365E-02	4.233E-01	PCI/SA	1.057	1.0E+0	3.382E-2	
TH-230	9NS1	0		7/19/2006 12:16:34	**2.0344E-01**	9.247E-02	9.419E-02	2.219E-01	PCI/SA	1.057	1.0E+0	3.382E-2	
TH-232	9NS1	0		7/19/2006 12:16:34	**0.0E+00**	0.0E+00	4.53E-02	1.002E-01	PCI/SA	1.057	1.0E+0	3.382E-2	
U-234	7YSR	0		7/18/2006 6:21:38 PM	**8.4174E-02**	1.073E-01	1.075E-01	5.042E-01	PCI/SA	0.936	1.0E+0	3.232E-2	
U-235	7YSR	0		7/18/2006 6:21:38 PM	**0.0E+00**	0.0E+00	1.289E-01	2.852E-01	PCI/SA	0.936	1.0E+0	3.232E-2	
U-238	7YSR	0		7/18/2006 6:21:38 PM	**-4.2133E-02**	2.979E-02	2.999E-02	5.948E-01	PCI/SA	0.936	1.0E+0	3.232E-2	

6179354, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

SDG or Batch / Isotope	Rpt Db Id / Method	RTst	Qc	LotSample / Analysis Date	Client Id / Result	Matrix / Cnt Uncert	Received Date / Tot Uncert	Sample Date / MDA	Units	Expected	Yield	Volumes	
31999	**H8DN71AB**			**J6F280000354**	INTRA-LAB BLANK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
RA-226	BXTE	0	B	7/21/2006 5:28:00 PM	**-3.2534E-02**	6.443E-02	6.451E-02	2.647E-01	PCI/SA		0.936	1.0E+0	1.0E+0
31999	**H8DN71CS**			**J6F280000354**	INTRA-LAB CHECK	FILTER	6/26/2006 9:00:00	6/7/2006 10:00:00 AM					
RA-226	BXTE	0	S	7/21/2006 5:28:00 PM	**1.3385E+00**	1.174E-01	1.797E-01	1.451E-01	PCI/SA	1.3804E+00	0.955	1.0E+0	1.0E+0

6179354, **Samples Inserted | Updated | NotUpdated => 2 | 0 | 16,
**Results Inserted | ReTestInserted | Updated | NotInserted => 18 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

Batch Nbr: 6179354

Alpha Beta, Ra-226 by ASC-7 , Results Summary Report

7/24/2006 5:07:42 PM

Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYld
Ra-226 by ASC-7				Richland Standard Ra-226/Ra-228 Deem Wo Blk Subt.										
Calc	TE	FILTER	H7DWT1AC	RA-226	5.09E-01	(2.65E-01)		PCI/SA	R	3.81E-01	8.59E-01		105%	
Calc	TE	FILTER	H796F1AC	RA-226	9.88E-02	(2.07E-01)	U4	PCI/SA	R	3.37E-01	7.87E-01		98%	
Calc	TE	FILTER	H796L1AC	RA-226	2.79E-01	(1.92E-01)	U4	PCI/SA	R	2.65E-01	6.49E-01		105%	
Calc	TE	FILTER	H796N1AC	RA-226	1.81E-01	(2.12E-01)	U4	PCI/SA	R	3.31E-01	7.71E-01		105%	
Calc	TE	FILTER	H796P1AC	RA-226	4.72E-01	(3.02E-01)	U4	PCI/SA	R	4.53E-01	1.02E+00	ok	95%	
Calc	TE	FILTER	H796Q1AC	RA-226	9.13E-01	(3.18E-01)		PCI/SA	R	3.53E-01	8.55E-01		100%	
Calc	TE	FILTER	H796R1AC	RA-226	2.20E-01	(2.56E-01)	U4	PCI/SA	R	4.01E-01	9.30E-01		102%	
Calc	TE	FILTER	H796T1AC	RA-226	4.33E-01	(2.10E-01)		PCI/SA	R	2.51E-01	6.31E-01		109%	
Calc	TE	FILTER	H796W1AC	RA-226	-3.04E-01	(2.07E-01)	U4	PCI/SA	R	3.92E-01	8.76E-01		100%	
Calc	TE	FILTER	H797D1AC	RA-226	3.59E-01	(3.01E-01)	U4	PCI/SA	R	4.54E-01	1.06E+00	ok	96%	
Calc	TE	FILTER	H797E1AC	RA-226	6.22E-02	(1.62E-01)	U4	PCI/SA	R	2.64E-01	6.40E-01		97%	
Calc	TE	FILTER	H797F1AC	RA-226	2.46E-01	(1.51E-01)	U4	PCI/SA	R	1.84E-01	4.86E-01		99%	
Calc	TE	FILTER	H797H1AC	RA-226	1.07E-01	(1.68E-01)	U4	PCI/SA	R	2.66E-01	6.35E-01		96%	
Calc	TE	FILTER	H797J1AC	RA-226	2.46E-01	(2.06E-01)	U4	PCI/SA	R	3.06E-01	7.20E-01		94%	
Calc	TE	FILTER	H797K1AC	RA-226	3.90E-01	(1.87E-01)		PCI/SA	R	2.36E-01	5.73E-01		96%	
Calc	TE	FILTER	H797M1AC	RA-226	1.22E-02	(6.76E-02)	U4	PCI/SA	R	1.10E-01	3.20E-01		95%	
Calc	TE	FILTER	H8DN71AA	RA-226	-3.25E-02	(6.45E-02)	U4	PCI/SA	R	1.16E-01	2.65E-01	B	94%	
Calc	TE	FILTER	H8DN71AC	RA-226	1.34E+00	(1.80E-01)		PCI/SA	R	5.98E-02	1.45E-01	S	95%	97%

P Anderson
7.24.06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc. MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18
RADCALC v4.8.24
STL Richland

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TE	FILTER	*STLE	Ra226WoBS	H7DWT1AC	PCI/SA		05/24/06 07:40	07/21/06 16:43	07/18/06 13:40	RATA23244	1	1.00 Sa	
CID:000473LOT:J6F1402701 v4 8.24							FILTER				07/21/06 13:43	RATA23244 Alq	105%	0.253927 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:43	RA-226	35	25	ASC1HB	ASC		N	2.4125E+00	1.0000E+00	N	105%	N		2.4416E+00	4.5045E-01	1.0001E+00	
			50	60			Y		(7.648E-02)	(0.000E+00)		8%			(0.000E+00)	3.938143		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	**0.508692**		2.83333E-01	0.28674	0.28674	1.00 Sa	105%		0.859423		
				(0.265075)		(1.4472E-01)	(0.148526)	(0.148526)	(0.027062)			0.381283		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TE	FILTER	*STLE	Ra226WoBS	H796F1AC	PCI/SA		06/07/06 10:00	07/21/06 16:44	07/18/06 13:40	RATA23245	1	1.00 Sa	
CID:000487LOT:J6F2702181 v4.8.24							FILTER				07/21/06 13:44	RATA23245 Alq	98%	0.252645 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:44	RA-226	14	14	ASC2RC	ASC		N	2.0913E+00	1.0000E+00	N	98%	N		2.4411E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(6.818E-02)	(0.000E+00)		8%			(0.000E+00)	3.95812		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	**0.098826**	**U4**	4.66667E-02	0.055426	0.055426	1.00 Sa	98%		0.787477		
				(0.20654)		(9.7411E-02)	(0.115794)	(0.115794)	(0.027062)			0.336549		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TE	FILTER	*STLE	Ra226WoBS	H796L1AC	PCI/SA		06/07/06 10:25	07/21/06 16:42	07/18/06 13:40	RATA23246	1	1.00 Sa	
CID:000488LOT:J6F2702182 v4.8.24							FILTER				07/21/06 13:42	RATA23246 Alq	105%	0.250932 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:42	RA-226	13	8	ASC3RA	ASC		N	1.9876E+00	1.0000E+00	N	105%	N		2.4420E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(7.811E-02)	(0.000E+00)		8%			(0.000E+00)	3.985136		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	**0.27938**	**U4**	1.26667E-01	0.155627	0.155627	1.00 Sa	105%		0.649172		
				(0.192302)		(8.6152E-02)	(0.106754)	(0.106754)	(0.027062)			0.264971		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TE	FILTER	*STLE	Ra226WoBS	H796N1AC	PCI/SA		06/07/06 10:35	07/21/06 16:42	07/18/06 13:40	RATA23247	1	1.00 Sa	
CID:000489LOT:J6F2702183 v4.8.24							FILTER				07/21/06 13:42	RATA23247 Alq	105%	0.254865 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:42	RA-226	17	15	ASC4UA	ASC		N	2.1431E+00	1.0000E+00	N	105%	N		2.4420E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(1.080E-01)	(0.000E+00)		8%			(0.000E+00)	3.923652		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.24

STL Richland

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.181261	U4	9.00000E-02	0.102553	0.102553	1.00 Sa	105%		0.771378		
				(0.211858)		(1.0472E-01)	(0.119721)	(0.119721)	(0.027062)			0.331306		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TE	FILTER	*STLE	Ra226WoBS	H796P1AC	PCI/SA		06/07/06 10:50	07/21/06 16:43	07/18/06 13:40	RATA23248	1	1.00 Sa	
CID:000490LOT:J6F2702184 v4.8.24							FILTER				07/21/06 13:43	RATA23248 Alq	95%	0.251741 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:43	RA-226	34	27	ASC7RH	ASC		N	2.2420E+00	1.0000E+00	N	95%	N		2.4416E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(3.946E-02)	(0.000E+00)		8%			(0.000E+00)	3.972331		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.471774	U4	2.30000E-01	0.263646	0.263646	1.00 Sa	95%		1.016033		
				(0.301644)		(1.4526E-01)	(0.167902)	(0.167902)	(0.027062)			0.452698		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TE	FILTER	*STLE	Ra226WoBS	H796Q1AC	PCI/SA		06/07/06 11:00	07/21/06 16:41	07/18/06 13:40	RATA23249	1	1.00 Sa	
CID:000491LOT:J6F2702185 v4.8.24							FILTER				07/21/06 13:41	RATA23249 Alq	100%	0.2425 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:41	RA-226	24	9	ASC8RD	ASC		N	1.6393E+00	1.0000E+00	N	100%	N		2.4424E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(4.623E-02)	(0.000E+00)		8%			(0.000E+00)	4.123718		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.913338		3.30000E-01	0.491671	0.491671	1.00 Sa	100%		0.854915		
				(0.318412)		(1.1000E-01)	(0.169114)	(0.169114)	(0.027062)			0.352662		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	TE	FILTER	*STLE	Ra226WoBS	H796R1AC	PCI/SA		06/07/06 11:20	07/21/06 16:44	07/18/06 13:40	RATA23250	1	1.00 Sa	
CID:000492LOT:J6F2702186 v4.8.24							FILTER				07/21/06 13:44	RATA23250 Alq	102%	0.254589 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 16:44	RA-226	18	16	ASC9RC	ASC		N	1.8288E+00	1.0000E+00	N	102%	N		2.4411E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(5.139E-02)	(0.000E+00)		8%			(0.000E+00)	3.927906		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.220445	U4	9.33333E-02	0.124587	0.124587	1.00 Sa	102%		0.930092		
				(0.255864)		(1.0791E-01)	(0.14443)	(0.14443)	(0.027062)			0.401277		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	TE	FILTER	*STLE	Ra226WoBS	H796T1AC	PCI/SA		06/07/06 10:10	07/21/06 16:43	07/18/06 13:40	RATA23251	1	1.00 Sa	
CID:000493LOT:J6F2702187 v4.8.24							FILTER				07/21/06 13:43	RATA23251 Alq	109%	0.252887 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.24

STL Richland

1	07/21/06 16:43	RA-226	14	6	ASCDSA	ASC	N	1.8059E+00	1.0000E+00	N	109%	N	2.4416E+00	4.5045E-01	1.0000E+00		
			50	60			Y	(3.449E-02)	(0.000E+00)		9%		(0.000E+00)	3.954328			

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.433488		1.80000E-01	0.243353	0.243353	1.00 Sa	109%		0.631337		
				(0.209818)		(8.5245E-02)	(0.116973)	(0.116973)	(0.027062)			0.250553		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
9	Calc	TE	FILTER	*STLE	Ra226WoBS	H796W1AC	PCI/SA		06/07/06 09:55	07/21/06 17:11	07/18/06 14:07	RATA23252	1	1.00 Sa	
CID:P-0660LOT:J6F2702188 v4.8.24							FILTER				07/21/06 14:11	RATA23252 Alq	100%	0.251525 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:11	RA-226	16	30	ASCEHB	ASC		N	2.5969E+00	1.0000E+00	N	100%	N		2.4411E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(2.438E-02)	(0.000E+00)		8%			(0.000E+00)	3.975749		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	-0.303677	U4	-1.80000E-01	-0.169561	-0.169561	1.00 Sa	100%		0.875939		
				(0.206958)		(1.2138E-01)	(0.115154)	(0.115154)	(0.027062)			0.392482		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
10	Calc	TE	FILTER	*STLE	Ra226WoBS	H797D1AC	PCI/SA		06/07/06 10:20	07/21/06 17:12	07/18/06 14:07	RATA23253	1	1.00 Sa	
CID:P-0661LOT:J6F2702189 v4.8.24							FILTER				07/21/06 14:12	RATA23253 Alq	96%	0.257349 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:12	RA-226	19	15	ASCFSA	ASC		N	1.6102E+00	1.0000E+00	N	96%	N		2.4407E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(2.979E-02)	(0.000E+00)		8%			(0.000E+00)	3.885769		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.358507	U4	1.30000E-01	0.204811	0.204811	1.00 Sa	96%		1.05623		
				(0.30128)		(1.0847E-01)	(0.171723)	(0.171723)	(0.027062)			0.45365		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
11	Calc	TE	FILTER	*STLE	Ra226WoBS	H797E1AC	PCI/SA		06/07/06 10:30	07/21/06 17:10	07/18/06 14:07	RATA23254	1	1.00 Sa	
CID:P-0662LOT:J6F27021810 v4.8.24							FILTER				07/21/06 14:10	RATA23254 Alq	97%	0.251696 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:10	RA-226	9	9	ASCGSA	ASC		N	2.1653E+00	1.0000E+00	N	97%	N		2.4416E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(7.622E-02)	(0.000E+00)		8%			(0.000E+00)	3.973046		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.06216	U4	3.00000E-02	0.034731	0.034731	1.00 Sa	97%		0.640026		
				(0.161959)		(7.8102E-02)	(0.090471)	(0.090471)	(0.027062)			0.264018		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
12	Calc	TE	FILTER	*STLE	Ra226WoBS	H797F1AC	PCI/SA		06/07/06 10:45	07/21/06 17:11	07/18/06 14:07	RATA23255	1	1.00 Sa	
CID:P-0663LOT:J6F27021811 v4.8.24							FILTER				07/21/06 14:11	RATA23255 Alq	99%	0.24356 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:11	RA-226	9	4	ASCJSB	ASC		N	2.1011E+00	1.0000E+00	N	99%	N		2.4411E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(7.837E-02)	(0.000E+00)		8%			(0.000E+00)	4.105765		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	**0.245918**	U4	1.13333E-01	0.132962	0.132962	1.00 Sa	99%		0.486037		
				(0.151156)		(6.8638E-02)	(0.081376)	(0.081376)	(0.027062)			0.184324		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
13	Calc	TE	FILTER	*STLE	Ra226WoBS	H797H1AC	PCI/SA		06/07/06 11:05	07/21/06 17:11	07/18/06 14:07	RATA23256	1	1.00 Sa	
CID:P-0664LOT:J6F27021812 v4.8.24							FILTER				07/21/06 14:11	RATA23256 Alq	96%	0.249329 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:11	RA-226	12	11	ASCLMC	ASC		N	2.4313E+00	1.0000E+00	N	96%	N		2.4411E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(1.218E-01)	(0.000E+00)		8%			(0.000E+00)	4.010764		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	**0.107164**	U4	5.66667E-02	0.059313	0.059313	1.00 Sa	96%		0.634986		
				(0.168029)		(8.8632E-02)	(0.09294)	(0.09294)	(0.027062)			0.266402		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
14	Calc	TE	FILTER	*STLE	Ra226WoBS	H797J1AC	PCI/SA		06/07/06 11:10	07/21/06 17:10	07/18/06 14:07	RATA23257	1	1.00 Sa	
CID:P-0665LOT:J6F27021813 v4.8.24							FILTER				07/21/06 14:10	RATA23257 Alq	94%	0.246648 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:10	RA-226	17	13	ASCMRA	ASC		N	2.3844E+00	1.0000E+00	N	94%	N		2.4416E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(1.044E-01)	(0.000E+00)		7%			(0.000E+00)	4.054362		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	**0.246335**	U4	1.23333E-01	0.134876	0.134876	1.00 Sa	94%		0.719632		
				(0.205508)		(1.0203E-01)	(0.11226)	(0.11226)	(0.027062)			0.30587		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
15	Calc	TE	FILTER	*STLE	Ra226WoBS	H797K1AC	PCI/SA		06/07/06 10:05	07/21/06 17:26	07/18/06 14:07	RATA23258	1	1.00 Sa	
CID:P-0666LOT:J6F27021814 v4.8.24							FILTER				07/21/06 14:26	RATA23258 Alq	96%	0.252091 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:26	RA-226	18	9	ASCNMA	ASC		N	2.4482E+00	1.0000E+00	N	96%	N		2.4348E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(6.292E-02)	(0.000E+00)		8%			(0.000E+00)	3.966828		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:15

RADCALC v4.8.24

STL Richland

Alpha Beta, Ra-226 by ASC-7 , Calculated Results

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.389544		2.10000E-01	0.217994	0.217994	1.00 Sa	96%		0.572984		
				(0.186919)		(9.8489E-02)	(0.103866)	(0.103866)	(0.027062)			0.236363		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
16	Calc	TE	FILTER	*STLE	Ra226WoBS	H797M1AC	PCI/SA		06/07/06 11:15	07/21/06 17:26	07/18/06 14:07	RATA23259	1	1.00 Sa	
CID:P-0667LOT:J6F27021815 v4.8.24							FILTER				07/21/06 14:26	RATA23259 Alq	95%	0.250184 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:26	RA-226	2	2	ASCQMC	ASC		N	2.5030E+00	1.0000E+00	N	95%	N		2.4348E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(1.307E-01)	(0.000E+00)		8%			(0.000E+00)	3.997051		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/24/06	RA-226	R	0.012237	U4	6.66667E-03	0.006796	0.006796	1.00 Sa	95%		0.319868		
				(0.067595)		(3.6818E-02)	(0.037539)	(0.037539)	(0.027062)			0.110256		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
17	Calc	TE	FILTER	*STLE	Ra226WoBS	H8DN71AA	PCI/SA	B	06/07/06 10:00	07/21/06 17:28	07/18/06 14:25	RATA23260	1	1.00 Sa	
CID:INTRA-LAB BLANKLOT:J6F280000354 v4.8.24							FILTER				07/21/06 14:28	RATA23260 Alq	94%	1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:28	RA-226	14	20	ASCKME	ASC		N	1.9262E+00	1.0000E+00	N	94%	N		2.4416E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(2.562E-02)	(0.000E+00)		7%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/21/06	RA-226	R	-0.032534	U4	-5.33333E-02	-0.072222	-0.072222	1.00 Sa	94%		0.264665		
				(0.064506)		(1.0562E-01)	(0.143146)	(0.143146)	(0.017321)			0.11587		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
18	Calc	TE	FILTER	*STLE	Ra226WoBS	H8DN71AC	PCI/SA	S	06/07/06 10:00	07/21/06 17:28	07/18/06 14:25	RASC4140	1	1.00 Sa	
CID:INTRA-LAB CHECKLOT:J6F280000354 v4.8.24							FILTER				07/21/06 14:28	RASC4140 Alq	95%	1.00 Sa	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	07/21/06 17:28	RA-226	150	9	ASCPMA	ASC		N	2.4525E+00	1.0000E+00	N	95%	N		2.4416E+00	4.5045E-01	1.0000E+00	
			50	60			Y		(8.241E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		

Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	07/21/06	RA-226	R	1.338545		2.85000E+00	2.971427	2.971427	1.00 Sa	95%	97%	0.145075		
				(0.179703)		(2.5000E-01)	(0.366627)	(0.366627)	(0.017321)			0.059845		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:18

RADCALC v4.8.24

STL Richland

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time