ENVIRONMENTAL STANDARDS
Setting the Standards for Innovative Environmental Solutions

February 13, 2009

Ms. Penny Bassett
Brown and Caldwell
3264 Goni Road, Suite 153
Carson City, NV 89706

Dear Ms. Bassett:

Enclosed is the quality assurance review of the analytical data for the analyses of the soil samples that were collected on October 8, 9, 15, and 16, 2008, in association with the ARCO Yerington Mine Site. The samples were analyzed for radium-226, radium-228, total thorium, and total uranium.

Based on this quality assurance review, one total thorium result was qualified as estimated due to out-of-criteria matrix spike/matrix spike duplicate precision. Two radium-228 results were qualified as estimated due to field duplicate imprecision. In addition, a few radium-226 and radium-228 results were qualified as estimated because the positive results were reported between the method detection limit and the reporting limit.

If you have any questions or comments, please do not hesitate to call.

Sincerely,

Konstadina Vlahogiani, M.S.
Senior Quality Assurance Chemist/
Project Manager

Concurred by:

Rock J. Vitale, CEAC, CPC
Technical Director of Chemistry/
Principal

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ENVIRONMENTAL STANDARDS
Setting the Standards for Innovative Environmental Solutions

QUALITY ASSURANCE REVIEW

OF THE SOIL SAMPLES COLLECTED AT THE

ARCO YERINGTON MINE SITE

ON OCTOBER 8, 9, 15, AND 16, 2008

February 13, 2009

Prepared for:

ATLANTIC RICHFIELD COMPANY
28100 Torch Parkway
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Prepared by:

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1.0 Introduction

This quality assurance (QA) review is based upon a rigorous examination of all data generated from the analyses of the soil samples that were collected by Brown and Caldwell on October 8, 9, 15, and 16, 2008, in association with the ARCO Yerington Mine Site. The samples included in this QA review are specified on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Inorganic Data Review" (US EPA, 2/94). This document is not entirely applicable to the type of analyses and analytical protocols performed on the samples evaluated in this QA review, but it has been used with professional judgment to aid the data reviewer in the interpretation of the QC analysis results and in the overall evaluation of the sample data deliverables. It should also be noted that results affected by blank contamination will be designated with a "UJ" qualifier (not the "U" qualifier typically used when following the National Functional Guidelines) in order to be consistent with historical project validation protocols and the current project database.

The reported analytical results are presented as a summary of the data in Section 2. Data were examined to determine the usability of the analytical results and the compliance relative to the requirements specified in the published analytical methods, the Quality Assurance Project Plan (QAPjP) for the Atlantic Richfield Company Yerington Mine Site, Revision 1 (May 2007), and the Technical Requirements For Environmental Laboratory Analytical Services BP Global Contract Lab Network (GCLN) (5/22/02, Revision 08). Qualifier codes have been placed next to results to enable the data user to quickly assess the qualitative and/or quantitative reliability of any result. This critical QA review identifies data quality issues for specific samples and specific evaluation criteria. The data qualifications allow the data's end-user to best understand the usability of the analytical results. Data not qualified in this report should be considered valid based on the QC criteria that have been reviewed. Details of this QA review are presented in Section 1 of this report. This report was prepared to provide a critical review of the laboratory analyses and reported analytical results. Rigorous QA reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories.

TABLE 1

SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Field Sample Identification	Laboratory Sample Identification	Lot Number	Matrix	Date Sample Collected	Parameters Examined
OU4-FEP-48A-SC	J8J180141-01	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-48A-SC DUP (Laboratory Duplicate)	J8J180141-01DUP	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-48B-SC	J8J180141-02	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-48B-SC MS (Matrix Spike)	J8J180141-02MS	J8J180141	Soil	10/9/08	Th, U
OU4-FEP-48B-SC MSD (Matrix Spike Duplicate)	J8J180141-02MSD	J8J180141	Soil	10/9/08	Th, U
OU4-FEP-48C-SC	J8J180141-03	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-48D-SC	J8J180141-04	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-49A-SC	J8J180141-05	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-49B-SC	J8J180141-06	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-49C-SC	J8J180141-07	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-50A-SC	J8J180141-08	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-50B-SC	J8J180141-09	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-50C-SC	J8J180141-10	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-51A-SC	J8J180141-11	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-51B-SC	J8J180141-12	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-51B-SC DUP (Laboratory Duplicate)	J8J180141-12DUP	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra
OU4-FEP-52A-SC	J8J180141-13	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-52B-SC	J8J180141-14	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-FEP-52C-SC	J8J180141-15	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-11A-SC	J8J180141-16	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-11B-SC	J8J180141-17	J8J180141	Soil	10/9/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-07A-SC	J8J180141-18	J8J180141	Soil	10/8/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-07B-SC	J8J180141-19	J8J180141	Soil	10/8/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-08A-SC	J8J180141-20	J8J180141	Soil	10/8/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-08B-SC	J8J180141-21	J8J180141	Soil	10/8/08	^{226}Ra, ^{228}Ra, Th, U

TABLE 1 (Cont.)

Field Sample Identification	Laboratory Sample Identification	Lot Number	Matrix	Date Sample Collected	Parameters Examined
OU4-UEP-38A-SC	J8J240197-01	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-38A-SC DUP (Laboratory Duplicate)	J8J240197-01DUP	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-38B-SC	J8J240197-02	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-38B-SC MS (Matrix Spike)	J8J240197-02MS	40397	Soil	10/16/08	Th, U
OU4-UEP-38B-SC MSD (Matrix Spike Duplicate)	J8J240197-02MSD	40397	Soil	10/16/08	Th, U
OU4-UEP-38A-SC-FD (Field Duplicate of OU4-UEP-38A-SC)	J8J240197-03	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-38B-SC-FD (Field Duplicate of OU4-UEP-38B-SC)	J8J240197-04	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-39A-SC	J8J240197-05	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-39B-SC	J8J240197-06	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-43A-SC	J8J240197-07	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-43B-SC	J8J240197-08	40397	Soil	10/16/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-36A-SC	J8J240197-09	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-36B-SC	J8J240197-10	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-37A-SC	J8J240197-11	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-37B-SC	J8J240197-12	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-40A-SC	J8J240197-13	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-40B-SC	J8J240197-14	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-26A-SC	J8J240197-15	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-26B-SC	J8J240197-16	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-19A-SC	J8J240197-17	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U
OU4-UEP-19B-SC	J8J240197-18	40397	Soil	10/15/08	^{226}Ra, ^{228}Ra, Th, U

NOTES:

^{226}Ra - Radium-226 by TestAmerica SOP RL-GAM-001.
^{228}Ra - Radium-228 by TestAmerica SOP RL-GAM-001.
Th - Total Thorium by TestAmerica SOP RL-MT-004.
U - Total Uranium by TestAmerica SOP RL-MT-004.

2.0 Findings

Complete support documentation for this radiological analysis QA review is presented in Section 8.0 of this report.

A. Total Uranium and Total Thorium Analyses

Forty-five samples (including quality control [QC] samples) were analyzed for total uranium and total thorium by TestAmerica SOP RL-MT-004. The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	√			
LCS Recoveries	√			
MS/MSD Recoveries	√			
MS/MSD Precision			√	
Laboratory Duplicate Precision	√			
Field Duplicate Precision	√			
Calibrations	√			
Internal Standard Recoveries	√			
Sample Preparation	√			
Quantitation of Results	√			
Evaluation of Raw Data	√			

MS/MSD Recoveries and Precision: A high relative percent difference (RPD > 35%) was observed between the results for total thorium in the associated MS/MSD analyses in Lot Number J8J180141 for analytical batch 8311385. The reported positive result for total thorium in Lot Number J8J180141 sample OU4-UEP-08B-SC should be considered estimated and has been flagged "J" on the data tables.

B. Radium-226 and Radium-228 Analyses

Forty-two samples (including QC samples) were analyzed for radium-226 and radium-228 by TestAmerica SOP RL-GAM-001. The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	√			

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
LCS Recoveries	√			
Laboratory Duplicate Precision	√			
Field Duplicate Precision			√	
Efficiency Checks	√			
Background Checks	√			
Full Width at the Half Maximum	√			
Centroid Checks	√			
Quantitation of Results			√	
Evaluation of Raw Data	√			

Field Duplicate Precision: A high replicate error ratio (RER > 2) was observed for the radium-226 results reported in Lot Number J8J240197 sample OU4-UEP-38B-SC and its field duplicate, sample OU4-UEP-38B-SC-FD. The positive results for radium-226 in the field duplicate samples should be considered estimated and have been flagged "J" on the data tables.

Quantitation of Results: All positive results reported at concentrations greater than the method detection limit (MDL) but less than the reporting limit (RL) were qualified as estimated and have been flagged "J" on the data tables.

3.0 Qualifier Summary Tables

A. Total Uranium and Total Thorium Analyses

Analyte	Lot Number	Sample	Validation Qualifier	Reason for Qualification
total thorium	J8J180141	OU4-UEP-08B-SC	J	5 – MS/MSD precision outside of limits

B. Radium-226 and Radium-228 Analyses

Analyte	Lot Number	Samples	Validation Qualifier	Reason for Qualification
radium-226	J8J240197	OU4-UEP-38B-SC and OU4-UEP-38B-SC-FD	J	8 – Field duplicate precision outside of limits

All positive results reported between the MDL and RL have been flagged "J." (Valid Reason Code: T)

4.0 Overall Assessment

Based on this quality assurance review, one total thorium result was qualified as estimated due to out-of-criteria MS/MSD precision. Two radium-228 results were qualified as estimated due to field duplicate imprecision. In addition, a few radium-226 and radium-228 results were qualified as estimated because the positive results were reported between the MDL and the RL.

5.0 Inorganic and Radiological Data Qualifiers and Valid Reason Codes

Inorganic and Radiological Data Qualifiers

U Analyte not detected at the detection limit concentration.

J Reported value is an estimated concentration.

UJ Analyte not detected at an estimated detection limit concentration.

R These data were rejected and were not used for any purposes.

UR The analyte was not detected. The detection limit is unreliable and may be representative of a false negative. These data were rejected and are not usable for any purpose.

Valid Reason Codes

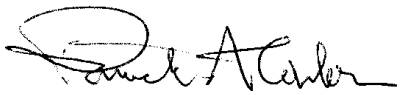
1	Holding time violation
2	Method blank contamination
3	Surrogate recovery
4	Matrix spike/matrix spike duplicate recovery
5	Matrix spike/matrix spike duplicate precision outside limits
6	Laboratory control sample recovery
7	Field blank contamination
8	Field duplicate precision outside limits
9	Other deficiencies (including cooler temperature)
A	Absence of supporting QC
S	ICV, CCV or column performance check problem
Y	Initial and continuing calibration blank problem
M	Interference check samples problem
O	Post-digestion spike outside of 85-115%
F	MSA correlation coefficient <0.995, or MSA not done
G	Serial dilution problem
K	DFTPP or BFB tuning problem
Q	Initial calibration problem
X	Internal standard recovery problem
V	Second source standard calibration verification problem
L	Low bias
Z	Retention time problem
N	Counting time error (radionuclide chemistry)
W	Detector instability (radionuclide chemistry)
C	Co-elution of compounds
E	Value exceeds linear calibration range
I	Interferences present during analysis
T	Trace level compound, poor quantitation
P	1C/2C precision outside of limits
B	LCS/LCSD precision outside limits
D	Lab Dup/Rep precision outside limits
H	High bias

6.0 Signatures

Report prepared by:

Konstadina Vlahogiani, M.S.
Senior Quality Assurance Chemist/
Project Manager

Report reviewed and approved by:



Patrick A. Conlon
Senior Quality Assurance Chemist

Report reviewed and approved by:

Rock J. Vitale, CEAC, CPC
Technical Director of Chemistry/
Principal

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Date: 2/13/09

7.0 ANALYTICAL RESULTS

				Lab Sample	9K054210					9K054510				
				Field Sample	OU4-FEP-48D-SC					OU4-FEP-49A-SC				
				Collect Date	2008-10-09 11:15:00					2008-10-09 11:45:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	8.6		0	0	0	1		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.12		0.0943	1	0.18	4.33		0.081	1	0.56
	RA-228	RADIUM-228		PCI/G	3.17		0.19	1	0.51	1.46		0.169	1	0.28
SW6020	TH	THORIUM		MG/KG	43.3		0.00164	0.2	0	10		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	89.4		0.00105	0.1	0	4.63		0.00105	0.1	0

				Lab Sample	9K054910					9K054F10				
				Field Sample	OU4-FEP-49B-SC					OU4-FEP-48A-SC				
				Collect Date	2008-10-09 11:45:00					2008-10-09 11:15:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	19.7		0	0	0	0.7		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	4.79		0.177	1	0.64	3		0.0856	1	0.41
	RA-228	RADIUM-228		PCI/G	24.7		0.287	1	3.5	1.19		0.154	1	0.23
SW6020	TH	THORIUM		MG/KG	191		0.00328	0.2	0	10.1		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	102		0.0021	0.1	0	6.28		0.00105	0.1	0

				Lab Sample	9K054G10					9K054H10				
				Field Sample	OU4-FEP-48B-SC					OU4-FEP-48C-SC				
				Collect Date	2008-10-09 11:15:00					2008-10-09 11:15:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	15.6		0	0	0	38.2		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	4.59		0.241	1	0.68	5.84		0.279	1	0.8
	RA-228	RADIUM-228		PCI/G	22.9		0.345	1	2.9	29		0.433	1	3.9
SW6020	TH	THORIUM		MG/KG	191		0.00164	0.2	0	226		0.00328	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	50.7		0.00105	0.1	0	276		0.0021	0.1	0

				Lab Sample	9K055010					9K055110				
				Field Sample	OU4-FEP-50C-SC					OU4-FEP-51A-SC				
				Collect Date	2008-10-09 12:00:00					2008-10-09 12:20:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	4.3		0	0	0	1		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.06		0.0817	1	0.19	3.77		0.0739	1	0.48
	RA-228	RADIUM-228		PCI/G	2.4		0.15	1	0.41	1.25		0.143	1	0.26
SW6020	TH	THORIUM		MG/KG	27.2		0.00164	0.2	0	9.57		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	53.2		0.00105	0.1	0	4.42		0.00105	0.1	0

				Lab Sample	9K055410					9K055710				
				Field Sample	OU4-FEP-51B-SC					OU4-FEP-52A-SC				
				Collect Date	2008-10-09 12:20:00					2008-10-09 12:35:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	5.2		0	0	0	1.5		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.14		0.0805	1	0.18	3.75		0.0761	1	0.49
	RA-228	RADIUM-228		PCI/G	4.32		0.146	1	0.66	1.19		0.17	1	0.26
SW6020	TH	THORIUM		MG/KG	55.8		0.00164	0.2	0	8.66		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	18.2		0.00105	0.1	0	3.2		0.00105	0.1	0

				Lab Sample	9K055910					9K055A10				
				Field Sample	OU4-FEP-52B-SC					OU4-FEP-49C-SC				
				Collect Date	2008-10-09 12:35:00					2008-10-09 11:45:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	46.9		0	0	0	7.2		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	14		0.513	1	1.9	1.11		0.0848	1	0.19
	RA-228	RADIUM-228		PCI/G	94.6		0.693	1	12	1.82		0.179	1	0.32
SW6020	TH	THORIUM		MG/KG	748		0.00328	0.2	0	16.5		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	404		0.0021	0.1	0	36.5		0.00105	0.1	0

				Lab Sample	9K055F10					9K055H10				
				Field Sample	OU4-FEP-50A-SC					OU4-FEP-50B-SC				
				Collect Date	2008-10-09 12:00:00					2008-10-09 12:00:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	1		0	0	0	40.6		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	3.81		0.0794	1	0.49	9.88		0.417	1	1.3
	RA-228	RADIUM-228		PCI/G	1.48		0.157	1	0.29	78.8		0.551	1	11
SW6020	TH	THORIUM		MG/KG	12.7		0.00164	0.2	0	630		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	4.79		0.00105	0.1	0	337		0.00105	0.1	0

				Lab Sample	9K056310					9K056A10				
				Field Sample	OU4-UEP-07B-SC					OU4-FEP-52C-SC				
				Collect Date	2008-10-08 09:30:00					2008-10-09 12:35:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	13.6		0	0	0	4.1		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.73		0.0743	1	0.25	0.822	J / T	0.0716	1	0.15
	RA-228	RADIUM-228		PCI/G	1.89		0.146	1	0.35	1.39		0.145	1	0.27
SW6020	TH	THORIUM		MG/KG	10.4		0.00164	0.2	0	13.4		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	4.26		0.00105	0.1	0	35.9		0.00105	0.1	0

				Lab Sample	9K056D10					9K056G10				
				Field Sample	OU4-UEP-11A-SC					OU4-UEP-11B-SC				
				Collect Date	2008-10-09 08:00:00					2008-10-09 09:00:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	7.4		0	0	0	7.2		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.05		0.0752	1	0.17	1.28		0.0886	1	0.2
	RA-228	RADIUM-228		PCI/G	1.28		0.153	1	0.25	1.33		0.164	1	0.27
SW6020	TH	THORIUM		MG/KG	7.86		0.00164	0.2	0	8.25		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	3.48		0.00105	0.1	0	1.54		0.00105	0.1	0

				Lab Sample	9K056K10					9K057C10				
				Field Sample	OU4-UEP-07A-SC					OU4-UEP-08A-SC				
				Collect Date	2008-10-08 09:00:00					2008-10-08 14:00:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	10.6		0	0	0	3		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.31		0.0871	1	0.2	1.06		0.0481	1	0.15
	RA-228	RADIUM-228		PCI/G	2.68		0.158	1	0.44	1.04		0.0976	1	0.21
SW6020	TH	THORIUM		MG/KG	30.7		0.00164	0.2	0	16.7		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	14.4		0.00105	0.1	0	2.85		0.00105	0.1	0

Lab Sample	9K057K10
Field Sample	OU4-UEP-08B-SC
Collect Date	2008-10-08 14:30:00
Type	N
Parent	

Method	CAS Number	Chemical Name	Total or Dissolved	Units	Result	Qual / Reason	MDL	RDL	Uncert
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	5.6		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.04		0.0679	1	0.17
	RA-228	RADIUM-228		PCI/G	1.28		0.138	1	0.26
SW6020	TH	THORIUM		MG/KG	6.64	J / 5	0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	2.07		0.00105	0.1	0

Arco - Yerington
SDG: J8J240197

				Lab Sample	9K1JJ310					9K1JJ710				
				Field Sample	OU4-UEP-38B-SC-FD					OU4-UEP-39A-SC				
				Collect Date	2008-10-16 08:12:00					2008-10-16 08:50:00				
				Type	FD					N				
				Parent	OU4-UEP-38B-SC									
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	21.6		0	0	0	18.2		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.23	J / 8	0.149	1	0.25	1		0.13	1	0.19
	RA-228	RADIUM-228		PCI/G	1.95		0.274	1	0.43	5.88		0.213	1	0.85
SW6020	TH	THORIUM		MG/KG	19		0.00164	0.2	0	55.8		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	6.6		0.00105	0.1	0	4.28		0.00105	0.1	0

				Lab Sample	9K1JJM10					9K1JJT10				
				Field Sample	OU4-UEP-38A-SC					OU4-UEP-38B-SC				
				Collect Date	2008-10-16 08:12:00					2008-10-16 08:12:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	19.8		0	0	0	20.6		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.59		0.125	1	0.27	1.69	J / 8	0.0927	1	0.25
	RA-228	RADIUM-228		PCI/G	5.09		0.209	1	0.73	2.18		0.161	1	0.38
SW6020	TH	THORIUM		MG/KG	48.2		0.00164	0.2	0	17.7		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	5.57		0.00105	0.1	0	7.08		0.00105	0.1	0

				Lab Sample	9K1JJV10					9K1JK110				
				Field Sample	OU4-UEP-38A-SC-FD					OU4-LEP-19B-SC				
				Collect Date	2008-10-16 08:12:00					2008-10-15 16:05:00				
				Type	FD					N				
				Parent	OU4-UEP-38A-SC									
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	20.5		0	0	0	19		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.61		0.0868	1	0.24	1.18		0.125	1	0.25
	RA-228	RADIUM-228		PCI/G	5.29		0.156	1	0.79	1.31		0.225	1	0.35
SW6020	TH	THORIUM		MG/KG	45		0.00164	0.2	0	11.7		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	5.01		0.00105	0.1	0	17.9		0.00105	0.1	0

				Lab Sample	9K1JKC10					9K1JKD10				
				Field Sample	OU4-UEP-39B-SC					OU4-UEP-43A-SC				
				Collect Date	2008-10-16 08:50:00					2008-10-16 09:10:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	20.6		0	0	0	18.5		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.7		0.0947	1	0.24	1.6		0.152	1	0.27
	RA-228	RADIUM-228		PCI/G	2.27		0.164	1	0.37	7.65		0.279	1	1.1
SW6020	TH	THORIUM		MG/KG	15.7		0.00164	0.2	0	55.3		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	4.32		0.00105	0.1	0	6.71		0.00105	0.1	0

				Lab Sample	9K1JKE10					9K1JKF10				
				Field Sample	OU4-UEP-43B-SC					OU4-UEP-36A-SC				
				Collect Date	2008-10-16 09:10:00					2008-10-15 13:20:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	12.9		0	0	0	22.3		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.14		0.0662	1	0.17	2.01		0.193	1	0.33
	RA-228	RADIUM-228		PCI/G	1.63		0.14	1	0.32	12.1		0.272	1	1.6
SW6020	TH	THORIUM		MG/KG	23.5		0.00164	0.2	0	88.5		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	11.6		0.00105	0.1	0	16.6		0.00105	0.1	0

				Lab Sample	9K1JKG10					9K1JKH10				
				Field Sample	OU4-UEP-36B-SC					OU4-UEP-37A-SC				
				Collect Date	2008-10-15 13:20:00					2008-10-15 14:05:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	21.1		0	0	0	7.9		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.55		0.0946	1	0.25	1.88		0.206	1	0.37
	RA-228	RADIUM-228		PCI/G	2.71		0.174	1	0.46	7.01		0.397	1	1.2
SW6020	TH	THORIUM		MG/KG	17.8		0.00164	0.2	0	64.8		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	6.36		0.00105	0.1	0	9.7		0.00105	0.1	0

				Lab Sample	9K1JKJ10					9K1JKL10				
				Field Sample	OU4-UEP-37B-SC					OU4-UEP-40A-SC				
				Collect Date	2008-10-15 04:05:00					2008-10-16 14:30:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	25.7		0	0	0	20.4		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.47		0.154	1	0.29	1.27		0.111	1	0.22
	RA-228	RADIUM-228		PCI/G	3.68		0.341	1	0.69	5.72		0.198	1	0.8
SW6020	TH	THORIUM		MG/KG	31.8		0.00164	0.2	0	42.6		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	11.3		0.00105	0.1	0	4.96		0.00105	0.1	0

				Lab Sample	9K1JKN10					9K1JKT10				
				Field Sample	OU4-UEP-40B-SC					OU4-LEP-26A-SC				
				Collect Date	2008-10-16 14:30:00					2008-10-15 15:15:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	25.2		0	0	0	7.3		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.63		0.0678	1	0.22	0.705	U	0.705	1	0.17
	RA-228	RADIUM-228		PCI/G	2.79		0.129	1	0.46	3.92		0.203	1	0.57
SW6020	TH	THORIUM		MG/KG	20.8		0.00164	0.2	0	34.3		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	10.1		0.00105	0.1	0	4.43		0.00106	0.1	0

				Lab Sample	9K1JKW10					9K1JKX10				
				Field Sample	OU4-LEP-26B-SC					OU4-LEP-19A-SC				
				Collect Date	2008-10-15 15:15:00					2008-10-15 16:05:00				
				Type	N					N				
				Parent										
Method	**CAS Number**	**Chemical Name**	**Total or Dissolved**	**Units**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**	**Result**	**Qual / Reason**	**MDL**	**RDL**	**Uncert**
E160.3	MOIST	MOISTURE, PERCENT		PERCENT	15.1		0	0	0	19.3		0	0	0
E901.1	RA-226	RADIUM-226		PCI/G	1.27		0.0816	1	0.19	0.916	J / T	0.123	1	0.21
	RA-228	RADIUM-228		PCI/G	1.43		0.141	1	0.27	1.35		0.228	1	0.38
SW6020	TH	THORIUM		MG/KG	11.8		0.00164	0.2	0	8.01		0.00164	0.2	0
	UTOT	URANIUM, TOTAL		MG/KG	4.63		0.00105	0.1	0	26.4		0.00105	0.1	0

8.0 SUPPORTING DOCUMENTATION

INORGANIC ANALYSIS SUPPORT DOCUMENTATION

ESI project name: ARCO Yerington
Sample Collection Dates: 10/9, 15, 16/08
Job Number: 20085047 200953C4
Laboratory: TA - Richland

Reviewed by: Pat Conlin
Approved by:
Completion Date:

Applicable Sample No's ( ) Refer to Table 1 in the Quality Assurance Review

Deliverable: CLP (X)
Tier I ( )
Tier II ( )

Sample No. Lab Control No.
See Sample Summary table

The following table indicates criteria that were examined, the identified problems, and support documentation attachments

	Criteria Examined in Detail Check (√) if Yes or Footnote Letter for Comments Below					Problems Identified Check (√) if Yes or Footnote Letter for Comments Below					Support Documentation Attachments Check (√) if Yes or Footnote Letter for Comments Below				
	Ra 226	Ra 228	Uranium	Thorium											
Holding Times	✓	✓	✓	✓											
Blank Analysis Results	✓	✓	✓	✓											
Matrix Spike (Predigestion) Results	✓	✓	✓	✓											
Duplicate Analysis: (✓ Field ( ) Lab	✓	✓	✓	✓											
Quantitation of Results	✓	✓	✓	✓											
Detection Limit/Sensitivity	✓	✓	✓	✓											
Initial Calibrations	✓	✓	✓	✓											
Continuing Calibrations	✓	✓	✓	✓											
Laboratory Control Standard (LCS)	✓	✓	✓	✓											
ICP Linear Range Analysis															
ICP Interference Checks															
ICP Serial Dilutions															
ICP Post-Digestion Spike															
GFAA Post Digestion Spikes															
GFAA Duplicate Injections															
ICP Multiple Exposures															
GFAA Standard Additions															
CRDL Standards			✓	✓											
Condition on Receipt	✓	✓	✓	✓											
Others:															

Comments:

Limited ( )

Analytical Data Package Prepared For

Brown and Caldwell

OU4 Phase 1 136259

Radiochemical Analysis By

TestAmerica

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

Level 4

Assigned Laboratory Code: TALR

Data Package Contains 53 *Pages*

Report No.: 40386

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
38605		OU4-FEP-48A-SC	J8J180141-1	K054F1AA	9K054F10	8296312
		OU4-FEP-48A-SC	J8J180141-1	K054F1AC	9K054F10	8311377
		OU4-FEP-48A-SC	J8J180141-1	K054F1AD	9K054F10	8311377
		OU4-FEP-48A-SC	J8J180141-1	K054F1AM	9K054F10	8340488
		OU4-FEP-48B-SC	J8J180141-2	K054G1AA	9K054G10	8296312
		OU4-FEP-48B-SC	J8J180141-2	K054G1AC	9K054G10	8311377
		OU4-FEP-48B-SC	J8J180141-2	K054G1AD	9K054G10	8311377
		OU4-FEP-48B-SC	J8J180141-2	K054G1AG	9K054G10	8340488
		OU4-FEP-48C-SC	J8J180141-3	K054H1AA	9K054H10	8296312
		OU4-FEP-48C-SC	J8J180141-3	K054H1AC	9K054H10	8311377
		OU4-FEP-48C-SC	J8J180141-3	K054H1AD	9K054H10	8311377
		OU4-FEP-48C-SC	J8J180141-3	K054H1AG	9K054H10	8340488
		OU4-FEP-48D-SC	J8J180141-4	K05421AA	9K054210	8296312
		OU4-FEP-48D-SC	J8J180141-4	K05421AC	9K054210	8311377
		OU4-FEP-48D-SC	J8J180141-4	K05421AD	9K054210	8311377
		OU4-FEP-48D-SC	J8J180141-4	K05421AG	9K054210	8340488
		OU4-FEP-49A-SC	J8J180141-5	K05451AA	9K054510	8296312
		OU4-FEP-49A-SC	J8J180141-5	K05451AC	9K054510	8311377
		OU4-FEP-49A-SC	J8J180141-5	K05451AD	9K054510	8311377
		OU4-FEP-49A-SC	J8J180141-5	K05451AG	9K054510	8340488
		OU4-FEP-49B-SC	J8J180141-6	K05491AA	9K054910	8296312
		OU4-FEP-49B-SC	J8J180141-6	K05491AC	9K054910	8311377
		OU4-FEP-49B-SC	J8J180141-6	K05491AD	9K054910	8311377
		OU4-FEP-49B-SC	J8J180141-6	K05491AG	9K054910	8340488
		OU4-FEP-49C-SC	J8J180141-7	K055A1AA	9K055A10	8296312
		OU4-FEP-49C-SC	J8J180141-7	K055A1AC	9K055A10	8311377

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
38605		OU4-FEP-49C-SC	J8J180141-7	K055A1AD	9K055A10	8311377
		OU4-FEP-49C-SC	J8J180141-7	K055A1AG	9K055A10	8340488
		OU4-FEP-50A-SC	J8J180141-8	K055F1AA	9K055F10	8296312
		OU4-FEP-50A-SC	J8J180141-8	K055F1AC	9K055F10	8311377
		OU4-FEP-50A-SC	J8J180141-8	K055F1AD	9K055F10	8311377
		OU4-FEP-50A-SC	J8J180141-8	K055F1AG	9K055F10	8340488
		OU4-FEP-50B-SC	J8J180141-9	K055H1AA	9K055H10	8296312
		OU4-FEP-50B-SC	J8J180141-9	K055H1AC	9K055H10	8311377
		OU4-FEP-50B-SC	J8J180141-9	K055H1AD	9K055H10	8311377
		OU4-FEP-50B-SC	J8J180141-9	K055H1AG	9K055H10	8340488
		OU4-FEP-50C-SC	J8J180141-10	K05501AA	9K055010	8296312
		OU4-FEP-50C-SC	J8J180141-10	K05501AD	9K055010	8311377
		OU4-FEP-50C-SC	J8J180141-10	K05501AG	9K055010	8340488
		OU4-FEP-50C-SC	J8J180141-10	K05501AC	9K055010	9311377
		OU4-FEP-51A-SC	J8J180141-11	K05511AA	9K055110	8296312
		OU4-FEP-51A-SC	J8J180141-11	K05511AC	9K055110	8311377
		OU4-FEP-51A-SC	J8J180141-11	K05511AD	9K055110	8311377
		OU4-FEP-51A-SC	J8J180141-11	K05511AG	9K055110	8340488
		OU4-FEP-51B-SC	J8J180141-12	K05541AA	9K055410	8296315
		OU4-FEP-51B-SC	J8J180141-12	K05541AC	9K055410	8311377
		OU4-FEP-51B-SC	J8J180141-12	K05541AD	9K055410	8311377
		OU4-FEP-51B-SC	J8J180141-12	K05541AH	9K055410	8340489
		OU4-FEP-52A-SC	J8J180141-13	K05571AA	9K055710	8296315
		OU4-FEP-52A-SC	J8J180141-13	K05571AC	9K055710	8311377
		OU4-FEP-52A-SC	J8J180141-13	K05571AD	9K055710	8311377
		OU4-FEP-52A-SC	J8J180141-13	K05571AG	9K055710	8340489
		OU4-FEP-52B-SC	J8J180141-14	K05591AA	9K055910	8296315
		OU4-FEP-52B-SC	J8J180141-14	K05591AC	9K055910	8311377
		OU4-FEP-52B-SC	J8J180141-14	K05591AD	9K055910	8311377
		OU4-FEP-52B-SC	J8J180141-14	K05591AG	9K055910	8340489
		OU4-FEP-52C-SC	J8J180141-15	K056A1AA	9K056A10	8296315
		OU4-FEP-52C-SC	J8J180141-15	K056A1AC	9K056A10	8311377
		OU4-FEP-52C-SC	J8J180141-15	K056A1AD	9K056A10	8311377
		OU4-FEP-52C-SC	J8J180141-15	K056A1AG	9K056A10	8340489
		OU4-UEP-07A-SC	J8J180141-18	K056K1AA	9K056K10	8296315
		OU4-UEP-07A-SC	J8J180141-18	K056K1AC	9K056K10	8311377
	Level 4	OU4-UEP-07A-SC	J8J180141-18	K056K1AD	9K056K10	8311377
		OU4-UEP-07A-SC	J8J180141-18	K056K1AG	9K056K10	8340489

Report No.: 40386

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
38605		OU4-UEP-07B-SC	J8J180141-19	K05631AA	9K056310	8296315
		OU4-UEP-07B-SC	J8J180141-19	K05631AC	9K056310	8311377
		OU4-UEP-07B-SC	J8J180141-19	K05631AD	9K056310	8311377
		OU4-UEP-07B-SC	J8J180141-19	K05631AG	9K056310	8340489
		OU4-UEP-08A-SC	J8J180141-20	K057C1AA	9K057C10	8296315
		OU4-UEP-08A-SC	J8J180141-20	K057C1AC	9K057C10	8311377
		OU4-UEP-08A-SC	J8J180141-20	K057C1AD	9K057C10	8311377
		OU4-UEP-08A-SC	J8J180141-20	K057C1AG	9K057C10	8340489
		OU4-UEP-08B-SC	J8J180141-21	K057K1AA	9K057K10	8296315
		OU4-UEP-08B-SC	J8J180141-21	K057K1AC	9K057K10	8311385
		OU4-UEP-08B-SC	J8J180141-21	K057K1AD	9K057K10	8311385
		OU4-UEP-08B-SC	J8J180141-21	K057K1AG	9K057K10	8340489
		OU4-UEP-11A-SC	J8J180141-16	K056D1AA	9K056D10	8296315
		OU4-UEP-11A-SC	J8J180141-16	K056D1AC	9K056D10	8311377
		OU4-UEP-11A-SC	J8J180141-16	K056D1AD	9K056D10	8311377
		OU4-UEP-11A-SC	J8J180141-16	K056D1AG	9K056D10	8340489
		OU4-UEP-11B-SC	J8J180141-17	K056G1AA	9K056G10	8296315
		OU4-UEP-11B-SC	J8J180141-17	K056G1AC	9K056G10	8311377
		OU4-UEP-11B-SC	J8J180141-17	K056G1AD	9K056G10	8311377
		OU4-UEP-11B-SC	J8J180141-17	K056G1AG	9K056G10	8340489

Konstadina Vlahogiani

From: Jordan, Erika [Erika.Jordan@testamericainc.com]
Sent: Thursday, February 12, 2009 1:44 PM
To: Konstadina Vlahogiani
Cc: Bassett, Penny
Subject: RE: Yerington J8J180170

You're right! I completely forgot that these batches had more than one lot in them. I'll send out the corrected page.

Thank you for letting me know!
Erika

From: Konstadina Vlahogiani [mailto:kvlahogiani@envstd.com]
Sent: Thursday, February 12, 2009 10:42 AM
To: Jordan, Erika
Cc: Bassett, Penny
Subject: RE: Yerington J8J180170

Just to let you know that the same LCS (with recovery 0%) is in Lot J8J180141. I don't need anything further but maybe Penny needs a corrected LCS page for Lot J8J180141 for her records.

Dina

From: Jordan, Erika [mailto:Erika.Jordan@testamericainc.com]
Sent: Tuesday, February 10, 2009 6:39 PM
To: Konstadina Vlahogiani
Cc: Bassett, Penny
Subject: RE: Yerington J8J180170

Dina,

Here is the corrected page with the LCS recovery.

Please let me know if there is anything further needed.

Thank you
Erika

From: Konstadina Vlahogiani [mailto:kvlahogiani@envstd.com]
Sent: Tuesday, February 10, 2009 11:44 AM
To: Jordan, Erika
Subject: Yerington J8J180170

The LCS recovery for Uranium is reported as 0%. Could you please check the numbers?

Thanks

Dina

CONFIDENTIALITY NOTICE: This e-mail communication, including any attachments, may contain privileged or confidential information for specific individuals and is protected by law. If you are not the intended recipient(s), you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited and you should delete this message and its attachments from your computer without retaining any copies. If you have received this communication in error, please reply to the sender immediately. We appreciate your cooperation.
Please consider the environment before printing this e-mail.

Konstadina Vlahogiani

From: Jordan, Erika [Erika.Jordan@testamericainc.com]
Sent: Tuesday, February 10, 2009 6:39 PM
To: Konstadina Vlahogiani
Cc: Bassett, Penny
Subject: RE: Yerington J8J180170
Attachments: J8J180170_AMENDED PAGE.pdf

Dina,

Here is the corrected page with the LCS recovery.

Please let me know if there is anything further needed.

Thank you
Erika

From: Konstadina Vlahogiani [mailto:kvlahogiani@envstd.com]
Sent: Tuesday, February 10, 2009 11:44 AM
To: Jordan, Erika
Subject: Yerington J8J180170

The LCS recovery for Uranium is reported as 0%. Could you please check the numbers?

Thanks

Dina

TestAmerica Laboratories, Inc.

FORM II

LCS RESULTS

Date: 10-Feb-09

Lab Name: TestAmerica **SDG:** 38607

Matrix: SOIL **Report No. :** 40389

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	Primary Detector
Batch: 8311385	6020			**Work Order:**	K06EG1AD		**Report DB ID:**	K06EG1AC					
TH	0.000195	=	0.0000	0.0000		mg/kg	95%	0.000202		96%	12/4/08		ICP/MS1
							Rec Limits:			0.0		G	
Batch: 8311385	6020			**Work Order:**	K06EG1AE		**Report DB ID:**	K06EG1AC					
UTOT	0.000206	=	0.0000	0.0000		mg/kg	95%	0.000198		104%	12/4/08		ICP/MS1
							Rec Limits:			0.0		G	
Batch: 8296300	EPA 901.1			**Work Order:**	K1C4D1AC		**Report DB ID:**	K1C4D1CS					
RA-226	1.14	=	0.19	0.19	0.0774	pCi/g		1.15	0.052	100%	12/4/08 05:30 a	200.01	GER11$1
							Rec Limits:	70	130	0.0		g	
RA-228	2.26	=	0.38	0.38	0.137	pCi/g		1.87	0.096	121%	12/4/08 05:30 a	200.01	GER11$1
							Rec Limits:	70	130	0.2		g	

No. of Results: 4 **Comments:**

AMENDED DATA

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

December 16, 2008

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

Attention: Penny Bassett

Date Received at Lab	:	October 14, 2008
Project Name	:	OU4 Phase 1
Project Number	:	136259
Sample Type	:	Twenty-one (21) Soil Samples
SDG Number	:	38605

CASE NARRATIVE

I. Introduction

On October 14, 2008, twenty-one soil samples were received at TestAmerica's Richland laboratory for radiochemical analysis. Upon receipt, the samples were assigned TestAmerica identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Number J8J180141.

II. Sample Receipt

The samples were received in good condition. Total Thorium and Uranium were initially omitted from the original chain-of-custody. The client requested by email to add the analysis on October 20, 2008.

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:

ICP-MS
Total Thorium and Total Uranium by method RL-MT-004
Gamma Spectrometry
Gamma by method RL-GAM-001 (RICH-RC-5017)

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

ICP-MS

Total Uranium:

The samples were processed in two analytical batches; 8311377 and 8311385. The interference check was not performed because the isotopes reported are not within the range of the A and B solutions. The QC sections in the raw data are not applicable due to the software error identified. Thus, the results were hand calculated. Due to the elevated activity of the samples the LLCCV is not applicable.

Batch 8311377: The recovery yields of the matrix spike and matrix spike duplicate were outside limits due to the elevated sample activity that overwhelmed the spiked levels. Except as noted, the LCS, batch blank, matrix spike, matrix spike duplicate, sample and sample duplicate results are within analytical requirements.

Batch 8311385: The recovery yields of the matrix spike and matrix spike duplicate were outside limits due to the elevated sample activity that overwhelmed the spiked levels. Except as noted, the LCS, batch blank, matrix spike, matrix spike duplicate, sample and sample duplicate results are within analytical requirements.

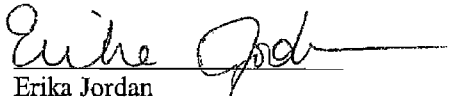
Gamma

Gamma:

The samples were processed in two analytical batches; 8296312 and 8296315. The LCS, batch blank, samples and sample duplicate results are within analytical acceptance limits.

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:



Erika Jordan
Customer Service Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica 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/? n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
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 TestAmerica "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 TestAmerica 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

Date: 16-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40386 **SDG No:** 38605

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8311377	HKQV								
OU4-FEP-48A-SC									
	K054F1AC	THORIUM	10.1 +- 0.00000	=	mg/kg	93%			
	K054F1AD	TOTAL-URANIUM	6.28 +- 0.00000	=	mg/kg	93%		0.8	
OU4-FEP-48A-SC DUP									
	K054F1AH	THORIUM	10.0 +- 0.00000	=	mg/kg	94%			
	K054F1AJ	TOTAL-URANIUM	6.35 +- 0.00000	=	mg/kg	94%		0.8	
OU4-FEP-48B-SC									
	K054G1AC	THORIUM	191.0 +- 0.00000	=	mg/kg	96%			
	K054G1AD	TOTAL-URANIUM	50.7 +- 0.00000	=	mg/kg	96%		0.8	
OU4-FEP-48C-SC									
	K054H1AC	THORIUM	226.0 +- 0.00000	=	mg/kg	98%			
	K054H1AD	TOTAL-URANIUM	276.0 +- 0.00000	=	mg/kg	98%		0.8	
OU4-FEP-48D-SC									
	K05421AC	THORIUM	43.3 +- 0.00000	=	mg/kg	96%			
	K05421AD	TOTAL-URANIUM	89.4 +- 0.00000	=	mg/kg	96%		0.8	
OU4-FEP-49A-SC									
	K05451AC	THORIUM	10.0 +- 0.00000	=	mg/kg	93%			
	K05451AD	TOTAL-URANIUM	4.63 +- 0.00000	=	mg/kg	93%		0.8	
OU4-FEP-49B-SC									
	K05491AC	THORIUM	191.0 +- 0.00000	=	mg/kg	97%			
	K05491AD	TOTAL-URANIUM	102.0 +- 0.00000	=	mg/kg	97%		0.8	
OU4-FEP-49C-SC									
	K055A1AC	THORIUM	16.5 +- 0.00000	=	mg/kg	95%			
	K055A1AD	TOTAL-URANIUM	36.5 +- 0.00000	=	mg/kg	95%		0.8	
OU4-FEP-50A-SC									
	K055F1AC	THORIUM	12.7 +- 0.00000	=	mg/kg	96%			
	K055F1AD	TOTAL-URANIUM	4.79 +- 0.00000	=	mg/kg	96%		0.8	
OU4-FEP-50B-SC									
	K055H1AC	THORIUM	630.0 +- 0.00000	=	mg/kg	95%			
	K055H1AD	TOTAL-URANIUM	337.0 +- 0.00000	=	mg/kg	95%		0.8	
OU4-FEP-50C-SC									
	K05501AD	TOTAL-URANIUM	53.2 +- 0.00000	=	mg/kg	96%		0.8	
OU4-FEP-51A-SC									
	K05511AC	THORIUM	9.57 +- 0.00000	=	mg/kg	95%			
	K05511AD	TOTAL-URANIUM	4.42 +- 0.00000	=	mg/kg	95%		0.8	
OU4-FEP-51B-SC									
	K05541AC	THORIUM	55.8 +- 0.00000	=	mg/kg	94%			
	K05541AD	TOTAL-URANIUM	18.2 +- 0.00000	=	mg/kg	94%		0.8	

TestAmerica
rptSTLRchSaSummary2 V5.2 A2002

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

Sample Results Summary

Date: 16-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40386 **SDG No:** 38605

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8311377	HKQV								
	OU4-FEP-52A-SC								
	K05571AC	THORIUM	8.66 +- 0.00000	=	mg/kg	95%			
	K05571AD	TOTAL-URANIUM	3.20 +- 0.00000	=	mg/kg	95%		0.8	
	OU4-FEP-52B-SC								
	K05591AC	THORIUM	748.0 +- 0.00000	=	mg/kg	96%			
	K05591AD	TOTAL-URANIUM	404.0 +- 0.00000	=	mg/kg	96%		0.8	
	OU4-FEP-52C-SC								
	K056A1AC	THORIUM	13.4 +- 0.00000	=	mg/kg	94%			
	K056A1AD	TOTAL-URANIUM	35.9 +- 0.00000	=	mg/kg	94%		0.8	
	OU4-UEP-07A-SC								
	K056K1AC	THORIUM	30.7 +- 0.00000	=	mg/kg	93%			
	K056K1AD	TOTAL-URANIUM	14.4 +- 0.00000	=	mg/kg	93%		0.8	
	OU4-UEP-07B-SC								
	K05631AC	THORIUM	10.4 +- 0.00000	=	mg/kg	92%			
	K05631AD	TOTAL-URANIUM	4.26 +- 0.00000	=	mg/kg	92%		0.8	
	OU4-UEP-08A-SC								
	K057C1AC	THORIUM	16.7 +- 0.00000	=	mg/kg	94%			
	K057C1AD	TOTAL-URANIUM	2.85 +- 0.00000	=	mg/kg	94%		0.8	
	OU4-UEP-11A-SC								
	K056D1AC	THORIUM	7.86 +- 0.00000	=	mg/kg	94%			
	K056D1AD	TOTAL-URANIUM	3.48 +- 0.00000	=	mg/kg	94%		0.8	
	OU4-UEP-11B-SC								
	K056G1AC	THORIUM	8.25 +- 0.00000	=	mg/kg	94%			
	K056G1AD	TOTAL-URANIUM	1.54 +- 0.00000	=	mg/kg	94%		0.8	
8311385	HKQV								
	OU4-UEP-06A-SC								
	K06DE1AE	THORIUM	14.4 +- 0.00000	=	mg/kg	94%			
	K06DE1AF	TOTAL-URANIUM	5.36 +- 0.00000	=	mg/kg	94%		0.8	
	OU4-UEP-08B-SC								
	K057K1AC	THORIUM	6.64 +- 0.00000	=	mg/kg	95%			
	K057K1AD	TOTAL-URANIUM	2.07 +- 0.00000	=	mg/kg	95%		0.8	
9311377	HKQV								
	OU4-FEP-50C-SC								
	K05501AC	THORIUM	27.2 +- 0.00000	=	mg/kg	96%			
8296312	EPA 901.1								
	OU4-FEP-48A-SC								
	K054F1AA	RA-226	3.00 +- 0.410	=	pCi/g		0.0856		
		RA-228	1.19 +- 0.234	=	pCi/g		0.154	1.0	

J8J180170

TestAmerica rptSTLRchSaSummary2 V5.2 A2002

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

= ERPIMS - Equal To, Analyte Detected

Sample Results Summary

Date: 16-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40386 **SDG No:** 38605

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8296312 EPA 901.1									
OU4-FEP-48A-SC DUP									
	K054F1AG	RA-226	3.04 +- 0.405	=	pCi/g		0.0734		
		RA-228	1.16 +- 0.227	=	pCi/g		0.146		
OU4-FEP-48B-SC									
	K054G1AA	RA-226	4.59 +- 0.684	=	pCi/g		0.241		
		RA-228	22.9 +- 2.91	=	pCi/g		0.345	1.0	
OU4-FEP-48C-SC									
	K054H1AA	RA-226	5.84 +- 0.805	=	pCi/g		0.279		
		RA-228	29.0 +- 3.95	=	pCi/g		0.433	1.0	
OU4-FEP-48D-SC									
	K05421AA	RA-226	1.12 +- 0.185	=	pCi/g		0.0943		
		RA-228	3.17 +- 0.506	=	pCi/g		0.19	1.0	
OU4-FEP-49A-SC									
	K05451AA	RA-226	4.33 +- 0.556	=	pCi/g		0.081		
		RA-228	1.46 +- 0.283	=	pCi/g		0.169	1.0	
OU4-FEP-49B-SC									
	K05491AA	RA-226	4.79 +- 0.642	=	pCi/g		0.177		
		RA-228	24.7 +- 3.50	=	pCi/g		0.287	1.0	
OU4-FEP-49C-SC									
	K055A1AA	RA-226	1.11 +- 0.186	=	pCi/g		0.0848		
		RA-228	1.82 +- 0.319	=	pCi/g		0.179	1.0	
OU4-FEP-50A-SC									
	K055F1AA	RA-226	3.81 +- 0.492	=	pCi/g		0.0794		
		RA-228	1.48 +- 0.286	=	pCi/g		0.157	1.0	
OU4-FEP-50B-SC									
	K055H1AA	RA-226	9.88 +- 1.30	=	pCi/g		0.417		
		RA-228	78.8 +- 10.6	=	pCi/g		0.551	1.0	
OU4-FEP-50C-SC									
	K05501AA	RA-226	1.06 +- 0.186	=	pCi/g		0.0817		
		RA-228	2.40 +- 0.415	=	pCi/g		0.15	1.0	
OU4-FEP-51A-SC									
	K05511AA	RA-226	3.77 +- 0.477	=	pCi/g		0.0739		
		RA-228	1.25 +- 0.262	=	pCi/g		0.143	1.0	
8296315 EPA 901.1									
OU4-FEP-51B-SC									
	K05541AA	RA-226	1.14 +- 0.178	=	pCi/g		0.0805		
		RA-228	4.32 +- 0.655	=	pCi/g		0.146	1.0	
OU4-FEP-51B-SC DUP									

TestAmerica rptSTLRchSaSummary2 V5.2 A2002

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

= ERPIMS - Equal To, Analyte Detected

Sample Results Summary

Date: 16-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40386 **SDG No:** 38605

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8296315	EPA 901.1								
	OU4-FEP-51B-SC DUP								
	K05541AG	RA-226	1.04 +- 0.157	=	pCi/g		0.0634		
		RA-228	3.97 +- 0.609	=	pCi/g		0.109		
	OU4-FEP-52A-SC								
	K05571AA	RA-226	3.75 +- 0.493	=	pCi/g		0.0761		
		RA-228	1.19 +- 0.258	=	pCi/g		0.17	1.0	
	OU4-FEP-52B-SC								
	K05591AA	RA-226	14.0 +- 1.91	=	pCi/g		0.513		
		RA-228	94.6 +- 11.7	=	pCi/g		0.693	1.0	
	OU4-FEP-52C-SC								
	K056A1AA	RA-226	0.822 +- 0.149	=	pCi/g		0.0716		
		RA-228	1.39 +- 0.267	=	pCi/g		0.145	1.0	
	OU4-UEP-07A-SC								
	K056K1AA	RA-226	1.31 +- 0.200	=	pCi/g		0.0871		
		RA-228	2.68 +- 0.444	=	pCi/g		0.158	1.0	
	OU4-UEP-07B-SC								
	K05631AA	RA-226	1.73 +- 0.247	=	pCi/g		0.0743		
		RA-228	1.89 +- 0.350	=	pCi/g		0.146	1.0	
	OU4-UEP-08A-SC								
	K057C1AA	RA-226	1.06 +- 0.147	=	pCi/g		0.0481		
		RA-228	1.04 +- 0.208	=	pCi/g		0.0976	1.0	
	OU4-UEP-08B-SC								
	K057K1AA	RA-226	1.04 +- 0.169	=	pCi/g		0.0679		
		RA-228	1.28 +- 0.256	=	pCi/g		0.138	1.0	
	OU4-UEP-11A-SC								
	K056D1AA	RA-226	1.05 +- 0.166	=	pCi/g		0.0752		
		RA-228	1.28 +- 0.255	=	pCi/g		0.153	1.0	
	OU4-UEP-11B-SC								
	K056G1AA	RA-226	1.28 +- 0.197	=	pCi/g		0.0886		
		RA-228	1.33 +- 0.272	=	pCi/g		0.164	1.0	
8340488	88OV								
	OU4-FEP-48A-SC								
	K054F1AM	Moisture	0.700 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-48B-SC								
	K054G1AG	Moisture	15.6 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-48C-SC								
	K054H1AG	Moisture	38.2 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-48D-SC								

TestAmerica rptSTLRchSaSummary2 V5.2 A2002

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

= ERPIMS - Equal To, Analyte Detected

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8340488 88OV									
	OU4-FEP-48D-SC								
	K05421AG	Moisture	8.60 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-49A-SC								
	K05451AG	Moisture	1.00 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-49B-SC								
	K05491AG	Moisture	19.7 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-49C-SC								
	K055A1AG	Moisture	7.20 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-50A-SC								
	K055F1AG	Moisture	1.00 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-50B-SC								
	K055H1AG	Moisture	40.6 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-50C-SC								
	K05501AG	Moisture	4.30 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-51A-SC								
	K05511AG	Moisture	1.00 +- 0.00000	=	PERCENT	N/A			
8340489 88OV									
	OU4-FEP-51B-SC								
	K05541AH	Moisture	5.20 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-52A-SC								
	K05571AG	Moisture	1.50 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-52B-SC								
	K05591AG	Moisture	46.9 +- 0.00000	=	PERCENT	N/A			
	OU4-FEP-52C-SC								
	K056A1AG	Moisture	4.10 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-07A-SC								
	K056K1AG	Moisture	10.6 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-07B-SC								
	K05631AG	Moisture	13.6 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-08A-SC								
	K057C1AG	Moisture	3.00 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-08B-SC								
	K057K1AG	Moisture	5.60 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-11A-SC								
	K056D1AG	Moisture	7.40 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-11B-SC								
	K056G1AG	Moisture	7.20 +- 0.00000	=	PERCENT	N/A			

No. of Results: 113

TestAmerica

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

= ERPIMS - Equal To, Analyte Detected

QC Results Summary

Date: 16-Dec-08

TestAmerica TALR

Ordered by Method, Batch No, QC Type,.

Report No. : 40386 **SDG No.:** 38605

Batch / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
HKQV								
8311377 BLANK QC,								
K2DQF1AA	THORIUM	0.00000328 +- 0.00000	=N	mg/kg	92%			
K2DQF1AB	TOTAL-URANIUM	0.0000021 +- 0.00000	=N	mg/kg	92%			
8311377 LCS,								
K2DQF1AC	THORIUM	0.000196 +- 0.00000	=	mg/kg	93%	99%	0.0	
K2DQF1AE	TOTAL-URANIUM	0.000204 +- 0.00000	=	mg/kg	93%	103%	0.0	
8311377 MATRIX SPIKE, OU4-FEP-48B-SC								
K054G1AG	THORIUM	0.630 +- 0.00000	=	mg/kg	94%	64%	-0.4	
K054G1AJ	TOTAL-URANIUM	0.560 +- 0.00000	=	mg/kg	94%	58%	-0.4	
K054G1AH	THORIUM	0.500 +- 0.00000	=	mg/kg	95%	50%	-0.5	
K054G1AK	TOTAL-URANIUM	0.520 +- 0.00000	=	mg/kg	95%	53%	-0.5	
HKQV								
8311385 BLANK QC,								
K06EG1AA	THORIUM	0.00164 +- 0.00000	=	mg/kg	95%			
K06EG1AB	TOTAL-URANIUM	0.00105 +- 0.00000	=	mg/kg	95%			
8311385 LCS,								
K06EG1AD	THORIUM	0.000195 +- 0.00000	=	mg/kg	95%	96%	0.0	
K06EG1AE	TOTAL-URANIUM	0.000206 +- 0.00000	=	mg/kg	95%	0%	-1.0	
8311385 MATRIX SPIKE, OU4-UEP-06B-SC								
K06D01AG	THORIUM	3.76 +- 0.00000	=	mg/kg	94%	377%	2.8	
K06D01AJ	TOTAL-URANIUM	0.775 +- 0.00000	=	mg/kg	94%	79%	-0.2	
K06D01AH	THORIUM	10.3 +- 0.00000	=	mg/kg	95%	1042%	9.4	
K06D01AK	TOTAL-URANIUM	1.18 +- 0.00000	=	mg/kg	95%	122%	0.2	
EPA 901.1								
8296312 BLANK QC,								
K1C4Q1AA	RA-226	0.0999 +- 0.0493	N	pCi/g				0.074
	RA-228	0.101 +- 0.0687	N	pCi/g				0.11
8296312 LCS,								
K1C4Q1AC	RA-226	1.08 +- 0.205	=	pCi/g		94%	-0.1	0.107
	RA-228	2.29 +- 0.381	=	pCi/g		122%	0.2	0.228
EPA 901.1								
8296315 BLANK QC,								
K1C451AA	RA-226	0.0770 +- 0.0581	N	pCi/g				0.0778
	RA-228	-0.0059 +- 0.0586	N	pCi/g				0.105
8296315 LCS,								
K1C451AC	RA-226	1.07 +- 0.197	=	pCi/g		93%	-0.1	0.105
	RA-228	2.14 +- 0.366	=	pCi/g		114%	0.1	0.204

No. of Results: 24

TestAmerica rptSTLRchQcSummary V5.2 A2002

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.

D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 11:15:00 AM

Lot-Sample No.: J8J180141-1 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-48A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order: K054F1AA			Report DB ID: 9K054F10					
RA-226	***3.00***	=	0.41	0.41	0.0856	pCi/g		*(35.1)*	12/2/08 06:48 p		327.8	GER5$1
								(14.6)			g	
RA-228	***1.19***	=	0.23	0.23	0.154	pCi/g		*(7.7)*	12/2/08 06:48 p		327.8	GER5$1
							1.0	*(10.1)*			g	
Batch: 8311377	HKQV			Work Order: K054F1AC			Report DB ID: 9K054F10					
THORIUM	***10.1***	=		0.0000		mg/kg	93%	*N/A*	12/5/08		0.5181	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K054F1AD			Report DB ID: 9K054F10					
TOTAL-URANIUM	***6.28***	=		0.0000		mg/kg	93%	*N/A*	12/5/08		0.5181	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order: K054F1AM			Report DB ID: 9K054F10					
Moisture	***0.700***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 11:15:00 AM

Lot-Sample No.: J8J180141-2 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-48B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order: K054G1AA		Report DB ID: 9K054G10						
RA-226	***4.59***	=	0.68	0.68	0.241	pCi/g		*(19.1)*	12/2/08 06:49 p		186.6	GER7$1
								(13.4)			g	
RA-228	***22.9***	=	2.9	2.9	0.345	pCi/g		*(66.4)*	12/2/08 06:49 p		186.6	GER7$1
							1.0	*(15.7)*			g	
Batch: 8311377	HKQV			Work Order: K054G1AC		Report DB ID: 9K054G10						
THORIUM	***191.0***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5161	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K054G1AD		Report DB ID: 9K054G10						
TOTAL-URANIUM	***50.7***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5161	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order: K054G1AG		Report DB ID: 9K054G10						
Moisture	***15.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
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V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 11:15:00 AM

Lot-Sample No.: J8J180141-3 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-48C-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			**Work Order:** K054H1AA		**Report DB ID:** 9K054H10						
RA-226	***5.84***	=	0.80	0.80	0.279	pCi/g		*(21.)*	12/2/08 06:50 p		136.4	GER10$1
								(14.5)			g	
RA-228	***29.0***	=	3.9	3.9	0.433	pCi/g		*(66.9)*	12/2/08 06:50 p		136.4	GER10$1
							1.0	*(14.7)*			g	
Batch: 8311377	HKQV			**Work Order:** K054H1AC		**Report DB ID:** 9K054H10						
THORIUM	***226.0***	=		0.0000		mg/kg	98%	*N/A*	12/5/08		0.5159	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			**Work Order:** K054H1AD		**Report DB ID:** 9K054H10						
TOTAL-URANIUM	***276.0***	=		0.0000		mg/kg	98%	*N/A*	12/5/08		0.5159	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			**Work Order:** K054H1AG		**Report DB ID:** 9K054H10						
Moisture	***38.2***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica SDG: 38605 Collection Date: 10/9/2008 11:15:00 AM

Lot-Sample No.: J8J180141-4 Report No. : 40386 Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-48D-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order:	K05421AA		Report DB ID: 9K054210					
RA-226	***1.12***	=	0.18	0.18	0.0943	pCi/g		*(11.9)*	12/2/08 06:50 p		353.1	GER6$1
								(12.1)			g	
RA-228	***3.17***	=	0.51	0.51	0.19	pCi/g		*(16.7)*	12/2/08 06:50 p		353.1	GER6$1
							1.0	*(12.5)*			g	
Batch: 8311377	HKQV			Work Order:	K05421AC		Report DB ID: 9K054210					
THORIUM	***43.3***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5151	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order:	K05421AD		Report DB ID: 9K054210					
TOTAL-URANIUM	***89.4***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5151	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order:	K05421AG		Report DB ID: 9K054210					
Moisture	***8.60***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
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V5.2 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
= ERPtMS - 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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 11:45:00 AM

Lot-Sample No.: J8J180141-5 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-49A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			**Work Order:** K05451AA		**Report DB ID:** 9K054510						
RA-226	***4.33***	=	0.56	0.56	0.081	pCi/g		*(53.4)*	12/2/08 06:51 p		326.6	GER8$1
								(15.6)			g	
RA-228	***1.46***	=	0.28	0.28	0.169	pCi/g		*(8.6)*	12/2/08 06:51 p		326.6	GER8$1
							1.0	*(10.3)*			g	
Batch: 8311377	HKQV			**Work Order:** K05451AC		**Report DB ID:** 9K054510						
THORIUM	***10.0***	=		0.0000		mg/kg	93%	*N/A*	12/5/08		0.5179	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			**Work Order:** K05451AD		**Report DB ID:** 9K054510						
TOTAL-URANIUM	***4.63***	=		0.0000		mg/kg	93%	*N/A*	12/5/08		0.5179	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			**Work Order:** K05451AG		**Report DB ID:** 9K054510						
Moisture	***1.00***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 11:45:00 AM

Lot-Sample No.: J8J180141-6 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-49B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order: K05491AA		Report DB ID: 9K054910						
RA-226	***4.79***	=	0.64	0.64	0.177	pCi/g		*(27.1)*	12/2/08 07:39 p		180.3	GER11$1
								(14.9)			g	
RA-228	***24.7***	=	3.5	3.5	0.287	pCi/g		*(86.2)*	12/2/08 07:39 p		180.3	GER11$1
							1.0	*(14.1)*			g	
Batch: 8311377	HKQV			Work Order: K05491AC		Report DB ID: 9K054910						
THORIUM	***191.0***	=		0.0000		mg/kg	97%	*N/A*	12/5/08		0.5028	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K05491AD		Report DB ID: 9K054910						
TOTAL-URANIUM	***102.0***	=		0.0000		mg/kg	97%	*N/A*	12/5/08		0.5028	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order: K05491AG		Report DB ID: 9K054910						
Moisture	***19.7***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 11:45:00 AM

Lot-Sample No.: J8J180141-7 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-49C-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order:	K055A1AA		Report DB ID: 9K055A10					
RA-226	***1.11***	=	0.19	0.19	0.0848	pCi/g		*(13.)*	12/2/08 10:19 p		338.1	GER6$1
								(11.9)			g	
RA-228	***1.82***	=	0.32	0.32	0.179	pCi/g		*(10.1)*	12/2/08 10:19 p		338.1	GER6$1
							1.0	*(11.4)*			g	
Batch: 8311377	HKQV			Work Order:	K055A1AC		Report DB ID: 9K055A10					
THORIUM	***16.5***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5142	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order:	K055A1AD		Report DB ID: 9K055A10					
TOTAL-URANIUM	***36.5***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5142	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order:	K055A1AG		Report DB ID: 9K055A10					
Moisture	***7.20***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:00:00 PM

Lot-Sample No.: J8J180141-8 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-50A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			**Work Order:** K055F1AA			**Report DB ID:** 9K055F10					
RA-226	***3.81***	=	0.49	0.49	0.0794	pCi/g		*(48.)*	12/2/08 10:20 p		335.8	GER8$1
								(15.5)			g	
RA-228	***1.48***	=	0.29	0.29	0.157	pCi/g		*(9.4)*	12/2/08 10:20 p		335.8	GER8$1
							1.0	*(10.3)*			g	
Batch: 8311377	HKQV			**Work Order:** K055F1AC			**Report DB ID:** 9K055F10					
THORIUM	***12.7***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.4998	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			**Work Order:** K055F1AD			**Report DB ID:** 9K055F10					
TOTAL-URANIUM	***4.79***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.4998	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			**Work Order:** K055F1AG			**Report DB ID:** 9K055F10					
Moisture	***1.00***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:00:00 PM

Lot-Sample No.: J8J180141-9 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-50B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order: K055H1AA			Report DB ID: 9K055H10					
RA-226	***9.88***	=	1.3	1.3	0.417	pCi/g		*(23.7)*	12/2/08 10:21 p		135.7	GER10$1
								(15.1)			g	
RA-228	***78.8***	=	11.0	11.0	0.551	pCi/g		*(143.)*	12/2/08 10:21 p		135.7	GER10$1
							1.0	*(14.9)*			g	
Batch: 8311377	HKQV			Work Order: K055H1AC			Report DB ID: 9K055H10					
THORIUM	***630.0***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5025	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K055H1AD			Report DB ID: 9K055H10					
TOTAL-URANIUM	***337.0***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5025	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order: K055H1AG			Report DB ID: 9K055H10					
Moisture	***40.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:00:00 PM

Lot-Sample No.: J8J180141-10 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-50C-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order: K05501AA		Report DB ID: 9K055010						
RA-226	***1.06***	=	0.19	0.19	0.0817	pCi/g		*(13.)*	12/2/08 10:21 p		339.1	GER7$1
								(11.4)			g	
RA-228	***2.40***	=	0.41	0.41	0.15	pCi/g		*(16.)*	12/2/08 10:21 p		339.1	GER7$1
							1.0	*(11.6)*			g	
Batch: 8311377	HKQV			Work Order: K05501AD		Report DB ID: 9K055010						
TOTAL-URANIUM	***53.2***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5171	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order: K05501AG		Report DB ID: 9K055010						
Moisture	***4.30***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	
Batch: 9311377	HKQV			Work Order: K05501AC		Report DB ID: 9K055010						
THORIUM	***27.2***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5171	ICP/MS1
								N/A			G	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:20:00 PM

Lot-Sample No.: J8J180141-11 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-51A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296312	EPA 901.1			Work Order:	K05511AA		Report DB ID:	9K055110				
RA-226	***3.77***	=	0.48	0.48	0.0739	pCi/g		*(51.1)*	12/2/08 10:28 p		352.4	GER13$1
								(15.8)			g	
RA-228	***1.25***	=	0.26	0.26	0.143	pCi/g		*(8.8)*	12/2/08 10:28 p		352.4	GER13$1
							1.0	*(9.6)*			g	
Batch: 8311377	HKQV			Work Order:	K05511AC		Report DB ID:	9K055110				
THORIUM	***9.57***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5026	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order:	K05511AD		Report DB ID:	9K055110				
TOTAL-URANIUM	***4.42***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5026	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340488	88OV			Work Order:	K05511AG		Report DB ID:	9K055110				
Moisture	***1.00***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:20:00 PM

Lot-Sample No.: J8J180141-12 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-51B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K05541AA		Report DB ID: 9K055410						
RA-226	***1.14***	=	0.18	0.18	0.0805	pCi/g		*(14.1)*	12/2/08 12:02 a		362.3	GER10$1
								(12.8)			g	
RA-228	***4.32***	=	0.66	0.66	0.146	pCi/g		*(29.6)*	12/2/08 12:02 a		362.3	GER10$1
							1.0	*(13.2)*			g	
Batch: 8311377	HKQV			Work Order: K05541AC		Report DB ID: 9K055410						
THORIUM	***55.8***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5013	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K05541AD		Report DB ID: 9K055410						
TOTAL-URANIUM	***18.2***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5013	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K05541AH		Report DB ID: 9K055410						
Moisture	***5.20***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:35:00 PM

Lot-Sample No.: J8J180141-13 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-52A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K05571AA		Report DB ID: 9K055710						
RA-226	***3.75***	=	0.49	0.49	0.0761	pCi/g		*(49.2)*	12/2/08 04:40 a		319.8	GER15$1
								(15.2)			g	
RA-228	***1.19***	=	0.26	0.26	0.17	pCi/g		*(7.)*	12/2/08 04:40 a		319.8	GER15$1
							1.0	*(9.2)*			g	
Batch: 8311377	HKQV			Work Order: K05571AC		Report DB ID: 9K055710						
THORIUM	***8.66***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5098	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K05571AD		Report DB ID: 9K055710						
TOTAL-URANIUM	***3.20***	=		0.0000		mg/kg	95%	*N/A*	12/5/08		0.5098	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K05571AG		Report DB ID: 9K055710						
Moisture	***1.50***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:35:00 PM

Lot-Sample No.: J8J180141-14 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-52B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K05591AA			Report DB ID: 9K055910					
RA-226	***14.0***	=	1.9	1.9	0.513	pCi/g		*(27.4)*	12/2/08 04:40 a		138.6	GER5$1
								(14.7)			g	
RA-228	***94.6***	=	12.0	12.0	0.693	pCi/g		*(136.6)*	12/2/08 04:40 a		138.6	GER5$1
							1.0	*(16.1)*			g	
Batch: 8311377	HKQV			Work Order: K05591AC			Report DB ID: 9K055910					
THORIUM	***748.0***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5037	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K05591AD			Report DB ID: 9K055910					
TOTAL-URANIUM	***404.0***	=		0.0000		mg/kg	96%	*N/A*	12/5/08		0.5037	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K05591AG			Report DB ID: 9K055910					
Moisture	***46.9***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
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FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 12:35:00 PM

Lot-Sample No.: J8J180141-15 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-52C-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K056A1AA			Report DB ID: 9K056A10					
RA-226	***0.822***	=	0.15	0.15	0.0716	pCi/g		*(11.5)*	12/2/08 04:41 a		372.1	GER7$1
								(11.)			g	
RA-228	***1.39***	=	0.27	0.27	0.145	pCi/g		*(9.6)*	12/2/08 04:41 a		372.1	GER7$1
							1.0	*(10.4)*			g	
Batch: 8311377	HKQV			Work Order: K056A1AC			Report DB ID: 9K056A10					
THORIUM	***13.4***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5167	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K056A1AD			Report DB ID: 9K056A10					
TOTAL-URANIUM	***35.9***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5167	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K056A1AG			Report DB ID: 9K056A10					
Moisture	***4.10***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica SDG: 38605 Collection Date: 10/9/2008 9:00:00 AM

Lot-Sample No.: J8J180141-18 Report No. : 40386 Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-UEP-07A-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order:	K056K1AA		Report DB ID: 9K056K10					
RA-226	***1.31***	=	0.20	0.20	0.0871	pCi/g		*(15.)*	12/2/08 04:42 a		361.4	GER6$1
								(13.1)			g	
RA-228	***2.68***	=	0.44	0.44	0.158	pCi/g		*(17.)*	12/2/08 04:42 a		361.4	GER6$1
							1.0	*(12.1)*			g	
Batch: 8311377	HKQV			Work Order:	K056K1AC		Report DB ID: 9K056K10					
THORIUM	***30.7***	=		0.0000		mg/kg	93%	*N/A*	12/5/08		0.5104	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order:	K056K1AD		Report DB ID: 9K056K10					
TOTAL-URANIUM	***14.4***	=		0.0000		mg/kg	93%	*N/A*	12/5/08		0.5104	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order:	K056K1AG		Report DB ID: 9K056K10					
Moisture	***10.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/9/2008 9:30:00 AM

Lot-Sample No.: J8J180141-19 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-UEP-07B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K05631AA		Report DB ID: 9K056310						
RA-226	***1.73***	=	0.25	0.25	0.0743	pCi/g		*(23.3)*	12/2/08 04:42 a		304.1	GER13$1
								(14.)			g	
RA-228	***1.89***	=	0.35	0.35	0.146	pCi/g		*(12.9)*	12/2/08 04:42 a		304.1	GER13$1
							1.0	*(10.8)*			g	
Batch: 8311377	HKQV			Work Order: K05631AC		Report DB ID: 9K056310						
THORIUM	***10.4***	=		0.0000		mg/kg	92%	*N/A*	12/5/08		0.5092	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K05631AD		Report DB ID: 9K056310						
TOTAL-URANIUM	***4.26***	=		0.0000		mg/kg	92%	*N/A*	12/5/08		0.5092	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K05631AG		Report DB ID: 9K056310						
Moisture	***13.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica SDG: 38605 Collection Date: 10/8/2008 2:00:00 PM

Lot-Sample No.: J8J180141-20 Report No. : 40386 Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-UEP-08A-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order:	K057C1AA		Report DB ID:	9K057C10				
RA-226	***1.06***	=	0.15	0.15	0.0481	pCi/g		*(22.)*	12/2/08 05:42 a		373.6	GER11$1
								(14.4)			g	
RA-228	***1.04***	=	0.21	0.21	0.0976	pCi/g		*(10.7)*	12/2/08 05:42 a		373.6	GER11$1
							1.0	*(10.)*			g	
Batch: 8311377	HKQV			Work Order:	K057C1AC		Report DB ID:	9K057C10				
THORIUM	***16.7***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5102	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order:	K057C1AD		Report DB ID:	9K057C10				
TOTAL-URANIUM	***2.85***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5102	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order:	K057C1AG		Report DB ID:	9K057C10				
Moisture	***3.00***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605 **Collection Date:** 10/8/2008 2:30:00 PM

Lot-Sample No.: J8J180141-21 **Report No. :** 40386 **Received Date:** 10/14/2008 12:00:00 PM

Client Sample ID: OU4-UEP-08B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K057K1AA		Report DB ID: 9K057K10						
RA-226	***1.04***	=	0.17	0.17	0.0679	pCi/g		*(15.4)*	12/2/08 08:09 a		352.7	GER15$1
								(12.3)			g	
RA-228	***1.28***	=	0.26	0.26	0.138	pCi/g		*(9.3)*	12/2/08 08:09 a		352.7	GER15$1
							1.0	*(10.)*			g	
Batch: 8311385	HKQV			Work Order: K057K1AC		Report DB ID: 9K057K10						
THORIUM	***6.64***	=		0.0000		mg/kg	95%	*N/A*	12/4/08		0.5006	ICP/MS1
								N/A			G	
Batch: 8311385	HKQV			Work Order: K057K1AD		Report DB ID: 9K057K10						
TOTAL-URANIUM	***2.07***	=		0.0000		mg/kg	95%	*N/A*	12/4/08		0.5006	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K057K1AG		Report DB ID: 9K057K10						
Moisture	***5.60***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica SDG: 38605 Collection Date: 10/9/2008 8:30:00 AM

Lot-Sample No.: J8J180141-16 Report No. : 40386 Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-UEP-11A-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order:	K056D1AA		Report DB ID:	9K056D10				
RA-226	***1.05***	=	0.17	0.17	0.0752	pCi/g		*(14.)*	12/2/08 04:41 a		266.1	GER10$1
								(12.6)			g	
RA-228	***1.28***	=	0.25	0.25	0.153	pCi/g		*(8.4)*	12/2/08 04:41 a		266.1	GER10$1
							1.0	*(10.1)*			g	
Batch: 8311377	HKQV			Work Order:	K056D1AC		Report DB ID:	9K056D10				
THORIUM	***7.86***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5022	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order:	K056D1AD		Report DB ID:	9K056D10				
TOTAL-URANIUM	***3.48***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5022	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order:	K056D1AG		Report DB ID:	9K056D10				
Moisture	***7.40***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica | SDG: 38605 | Collection Date: 10/9/2008 9:00:00 AM

Lot-Sample No.: J8J180141-17 | Report No. : 40386 | Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-UEP-11B-SC | COC No. : | Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K056G1AA		Report DB ID: 9K056G10						
RA-226	***1.28***	=	0.20	0.20	0.0886	pCi/g		*(14.4)*	12/2/08 04:41 a		261.9	GER8$1
								(13.)			g	
RA-228	***1.33***	=	0.27	0.27	0.164	pCi/g		*(8.1)*	12/2/08 04:41 a		261.9	GER8$1
							1.0	*(9.7)*			g	
Batch: 8311377	HKQV			Work Order: K056G1AC		Report DB ID: 9K056G10						
THORIUM	***8.25***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5055	ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			Work Order: K056G1AD		Report DB ID: 9K056G10						
TOTAL-URANIUM	***1.54***	=		0.0000		mg/kg	94%	*N/A*	12/5/08		0.5055	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340489	88OV			Work Order: K056G1AG		Report DB ID: 9K056G10						
Moisture	***7.20***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM II

Date: 16-Dec-08

DUPLICATE RESULTS

Lab Name: TestAmerica SDG: 38605 Collection Date: 10/9/2008 11:15:00 AM

Lot-Sample No.: J8J180141-1 Report No. : 40386 Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-48A-SC DUP COC No. : Matrix: SOIL SO

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8296312	EPA 901.1			Work Order: K054F1AG		Report DB ID: K054F1GR			Orig Sa DB ID: 9K054F10			
RA-226	3.04	=	0.40	0.40	0.0734	pCi/g		(41.4)	12/2/08 06:49 p		342.5	GER15$1
	3.0	=	RER2 0.1					(15.)			g	
RA-228	1.16	=	0.23	0.23	0.146	pCi/g		(7.9)	12/2/08 06:49 p		342.5	GER15$1
	1.19	=	RER2 0.2					(10.2)			g	
Batch: 8311377	HKQV			Work Order: K054F1AH		Report DB ID: K054F1GR			Orig Sa DB ID: 9K054F10			
THORIUM	10.0	=		0.0000		mg/kg	94%	N/A	12/5/08		0.5083	ICP/MS1
	10.1	=	RER2					N/A			G	
Batch: 8311377	HKQV			Work Order: K054F1AJ		Report DB ID: K054F1GR			Orig Sa DB ID: 9K054F10			
TOTAL-URANIUM	6.35	=		0.0000		mg/kg	94%	N/A	12/5/08		0.5083	ICP/MS1
	6.28	=	RER2			0.8		N/A			G	

No. of Results: 4 Comments:

TestAmerica rptSTLRchDupV5.2 A2002

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

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

Date: 16-Dec-08

DUPLICATE RESULTS

Lab Name: TestAmerica SDG: 38605 Collection Date: 10/9/2008 12:20:00 PM

Lot-Sample No.: J8J180141-12 Report No. : 40386 Received Date: 10/14/2008 12:00:00 PM

Client Sample ID: OU4-FEP-51B-SC DUP COC No. : Matrix: SOIL SO

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8296315	EPA 901.1			Work Order: K05541AG		Report DB ID: K05541GR			Orig Sa DB ID: 9K055410			
RA-226	1.04	=	0.16	0.16	0.0634	pCi/g		(16.4)	12/2/08 02:19 a		366.7	GER11$1
	1.14	=	RER2 0.8					(13.2)			g	
RA-228	3.97	=	0.61	0.61	0.109	pCi/g		(36.3)	12/2/08 02:19 a		366.7	GER11$1
	4.32	=	RER2 0.8					(13.)			g	

No. of Results: 2 Comments:

TestAmerica rptSTLRchDupV5.2 A2002

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

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

Date: 16-Dec-08

DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** 38607 **Collection Date:** 10/14/2008 2:10:00 PM

Lot-Sample No.: J8J180170-1 **Report No. :** 40386 **Received Date:** 10/17/2008 10:00:00 AM

Client Sample ID: OU4-UEP-06A-SC **COC No. :** **Matrix:** SOIL SO

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8311385 HKQV				Work Order: K06DE1AE		Report DB ID: K06DE1ER			Orig Sa DB ID: 9K06DE10			
THORIUM	14.4	=		0.0000		mg/kg	94%	N/A	12/4/08		0.5006	ICP/MS1
	14.0	=	RER2					N/A			G	
Batch: 8311385 HKQV				Work Order: K06DE1AF		Report DB ID: K06DE1ER			Orig Sa DB ID: 9K06DE10			
TOTAL-URANIUM	5.36	=		0.0000		mg/kg	94%	N/A	12/4/08		0.5006	ICP/MS1
	5.33	=	RER2			0.8		N/A			G	

No. of Results: 2 **Comments:**

TestAmerica rptSTLRchDupV5.2 A2002

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

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: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605

Matrix: SOIL **Report No. :** 40386

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8311377	HKQV			**Work Order:** K2DQF1AA			**Report DB ID:** K2DQF1AB					
THORIUM	0.00000328	=ND		0.0000		mg/kg	92%	N/A	12/5/08			ICP/MS1
								N/A			G	
Batch: 8311377	HKQV			**Work Order:** K2DQF1AB			**Report DB ID:** K2DQF1AB					
TOTAL-URANIUM	0.0000021	=ND		0.0000		mg/kg	92%	N/A	12/5/08			ICP/MS1
								N/A			G	
Batch: 8311385	HKQV			**Work Order:** K06EG1AA			**Report DB ID:** K06EG1AB					
THORIUM	0.00164	=		0.0000		mg/kg	95%	N/A	12/4/08			ICP/MS1
								N/A			G	
Batch: 8311385	HKQV			**Work Order:** K06EG1AB			**Report DB ID:** K06EG1AB					
TOTAL-URANIUM	0.00105	=		0.0000		mg/kg	95%	N/A	12/4/08			ICP/MS1
								N/A			G	
Batch: 8296312	EPA 901.1			**Work Order:** K1C4Q1AA			**Report DB ID:** K1C4Q1AB					
RA-226	0.0999	ND	0.049	0.049	0.074	pCi/g		(1.4)	12/2/08 10:22 p		348.0	GER15$1
								(4.1)			g	
RA-228	0.101	ND	0.069	0.069	0.11	pCi/g		0.92	12/2/08 10:22 p		348.0	GER15$1
								(2.9)			g	
Batch: 8296315	EPA 901.1			**Work Order:** K1C451AA			**Report DB ID:** K1C451AB					
RA-226	0.0770	ND	0.058	0.058	0.0778	pCi/g		0.99	12/2/08 08:10 a		348.0	GER5$1
								(2.7)			g	
RA-228	-0.0059	ND	0.059	0.059	0.105	pCi/g		-0.06	12/2/08 08:10 a		348.0	GER5$1
								-0.2			g	

TestAmerica
rptSTLRchBlank
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM II

BLANK RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica SDG: 38605

Matrix: SOIL Report No. : 40386

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
No. of Results: 8	Comments:											

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

rptSTLRchBlank
V5.2 A2002

FORM II

LCS RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605

Matrix: SOIL **Report No. :** 40386

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	Primary Detector
Batch: 8311377	HKQV			Work Order: K2DQF1AC			Report DB ID: K2DQF1CS						
THORIUM	0.000196	=		0.0000		mg/kg	93%	0.000198		99%	12/5/08		ICP/MS1
							Rec Limits:			0.0		G	
Batch: 8311377	HKQV			Work Order: K2DQF1AE			Report DB ID: K2DQF1CS						
TOTAL-URANIUM	0.000204	=		0.0000		mg/kg	93%	0.000198		103%	12/5/08		ICP/MS1
							Rec Limits:			0.0		G	
Batch: 8311385	HKQV			Work Order: K06EG1AD			Report DB ID: K06EG1AC						
THORIUM	0.000195	=		0.0000		mg/kg	95%	0.000202		96%	12/4/08		ICP/MS1
							Rec Limits:			0.0		G	
Batch: 8311385	HKQV			Work Order: K06EG1AE			Report DB ID: K06EG1AC						
TOTAL-URANIUM	0.000206	=		0.0000		mg/kg	95%	1.98		0% → 104%	12/4/08		ICP/MS1
							Rec Limits: 0.000198			-1.0		G	
Batch: 8296312	EPA 901.1			Work Order: K1C4Q1AC			Report DB ID: K1C4Q1CS						
RA-226	1.08	=	0.20	0.20	0.107	pCi/g		1.15	0.052	94%	12/2/08 10:23 p	200.01	GER5$1
							Rec Limits:	70	130	-0.1		g	
RA-228	2.29	=	0.38	0.38	0.228	pCi/g		1.87	0.096	122%	12/2/08 10:23 p	200.01	GER5$1
							Rec Limits:	70	130	0.2		g	
Batch: 8296315	EPA 901.1			Work Order: K1C451AC			Report DB ID: K1C451CS						
RA-226	1.07	=	0.20	0.20	0.105	pCi/g		1.15	0.052	93%	12/2/08 08:10 a	200.01	GER7$1
							Rec Limits:	70	130	-0.1		g	
RA-228	2.14	=	0.37	0.37	0.204	pCi/g		1.87	0.096	114%	12/2/08 08:10 a	200.01	GER7$1
							Rec Limits:	70	130	0.1		g	

No. of Results: 8 Comments:

TestAmerica
rptSTLRchLcs
V5.2 A2002

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

FORM II

MATRIX SPIKE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica SDG: 38605

Lot-Sample No.: J8J180141-2, OU4-FEP-48B-SC Report No. : 40386 Matrix: SOIL SO

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 8311377	Work Order: K054G1AG			Report DB ID: K054G1EW			Orig Sa DB ID: 9K054G10					
THORIUM	0.630	=		0.0000		mg/kg	94%	63.77%	0.988	12/5/08	0.5123	HKQV
	191.0										G	ICP/MS1
Batch: 8311377	Work Order: K054G1AH			Report DB ID: K054G1WD			Orig Sa DB ID: K054G1EW					
THORIUM	0.500	=		0.0000		mg/kg	95%	49.70%	1.01	12/5/08	0.503	HKQV
	0.63										G	ICP/MS1
Batch: 8311377	Work Order: K054G1AJ			Report DB ID: K054G1EW			Orig Sa DB ID: 9K054G10					
TOTAL-URANIUM	0.560	=		0.0000		mg/kg	94%	57.85%	0.968	12/5/08	0.5123	HKQV
	50.7										G	ICP/MS1
Batch: 8311377	Work Order: K054G1AK			Report DB ID: K054G1WD			Orig Sa DB ID: K054G1EW					
TOTAL-URANIUM	0.520	=		0.0000		mg/kg	95%	52.74%	0.986	12/5/08	0.503	HKQV
	0.56										G	ICP/MS1

Number of Results: 4

Comments:

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMs V5.2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
A2002 = ERPIMS - Equal To, Analyte Detected

FORM II

MATRIX SPIKE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38607

Lot-Sample No.: J8J180170-2, OU4-UEP-06B-SC **Report No. :** 40386 **Matrix:** SOIL SO

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 8311385	Work Order: K06D01AG			Report DB ID: K06D01EW			Orig Sa DB ID: 9K06D010					
THORIUM	3.76	=		0.0000		mg/kg	94%	377.13%	0.997	12/4/08	0.5076	HKQV
	10.6										G	ICP/MS1
Batch: 8311385	Work Order: K06D01AH			Report DB ID: K06D01WD			Orig Sa DB ID: K06D01EW					
THORIUM	10.3	=		0.0000		mg/kg	95%	1041.62%	0.985	12/4/08	0.5136	HKQV
	3.76										G	ICP/MS1
Batch: 8311385	Work Order: K06D01AJ			Report DB ID: K06D01EW			Orig Sa DB ID: 9K06D010					
TOTAL-URANIUM	0.775	=		0.0000		mg/kg	94%	79.32%	0.977	12/4/08	0.5076	HKQV
	4.99										G	ICP/MS1
Batch: 8311385	Work Order: K06D01AK			Report DB ID: K06D01WD			Orig Sa DB ID: K06D01EW					
TOTAL-URANIUM	1.18	=		0.0000		mg/kg	95%	122.26%	0.966	12/4/08	0.5136	HKQV
	0.775										G	ICP/MS1

Number of Results: 4

Comments:

TestAmerica
rptSTLRchMs V5.2
A2002

RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA
Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

FORM II

MATRIX SPIKE DUPLICATE RESULTS

Date: 16-Dec-08

Lab Name: TestAmerica **SDG:** 38605

Lot-Sample No.: J8J180141-2, OU4-FEP-48B-SC **Report No. :** 40386 **Matrix:** SOIL SO

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 8311377 HKQV				Work Order: K054G1AG		Report DB ID: K054G1EW			Orig Sa DB ID: K054G1WD			
THORIUM	0.630	=		0.0000		mg/kg	94%	63.77%	0.988	12/5/08	0.5123	ICP/MS1
	0.5	***RER2***									G	
Batch: 8311377 HKQV				Work Order: K054G1AH		Report DB ID: K054G1WD			Orig Sa DB ID: K054G1EW			
THORIUM	0.500	=		0.0000		mg/kg	95%	49.70%	1.01	12/5/08	0.503	ICP/MS1
	0.63	***RER2***									G	
Batch: 8311377 HKQV				Work Order: K054G1AJ		Report DB ID: K054G1EW			Orig Sa DB ID: K054G1WD			
TOTAL-URANIUM	0.560	=		0.0000		mg/kg	94%	57.85%	0.968	12/5/08	0.5123	ICP/MS1
	0.52	***RER2***									G	
Batch: 8311377 HKQV				Work Order: K054G1AK		Report DB ID: K054G1WD			Orig Sa DB ID: K054G1EW			
TOTAL-URANIUM	0.520	=		0.0000		mg/kg	95%	52.74%	0.986	12/5/08	0.503	ICP/MS1
	0.56	***RER2***									G	

No. of Results: 4 **Comments:**

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMsDup2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
V5.2 A2002 = ERPIMS - Equal To, Analyte Detected

FORM II

Date: 16-Dec-08

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** 38607

Lot-Sample No.: J8J180170-2, OU4-UEP-06B-SC **Report No. :** 40386 **Matrix:** SOIL SO

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 8311385 HKQV				**Work Order:** K06D01AG		**Report DB ID:** K06D01EW			**Orig Sa DB ID:** K06D01WD			
THORIUM	3.76	=		0.0000		mg/kg	94%	377.13%	0.997	12/4/08	0.5076	ICP/MS1
	10.3	***RER2***									G	
Batch: 8311385 HKQV				**Work Order:** K06D01AH		**Report DB ID:** K06D01WD			**Orig Sa DB ID:** K06D01EW			
THORIUM	10.3	=		0.0000		mg/kg	95%	1041.62%	0.985	12/4/08	0.5136	ICP/MS1
	3.76	***RER2***									G	
Batch: 8311385 HKQV				**Work Order:** K06D01AJ		**Report DB ID:** K06D01EW			**Orig Sa DB ID:** K06D01WD			
TOTAL-URANIUM	0.775	=		0.0000		mg/kg	94%	79.32%	0.977	12/4/08	0.5076	ICP/MS1
	1.18	***RER2***									G	
Batch: 8311385 HKQV				**Work Order:** K06D01AK		**Report DB ID:** K06D01WD			**Orig Sa DB ID:** K06D01EW			
TOTAL-URANIUM	1.18	=		0.0000		mg/kg	95%	122.26%	0.966	12/4/08	0.5136	ICP/MS1
	0.775	***RER2***									G	

No. of Results: 4 **Comments:**

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMsDup2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
V5.2 A2002 = ERPIMS - Equal To, Analyte Detected

Atlantic Richfield Company
A BP affiliated company

Chain of Custody Record

SDG 38605
JBJ1801141
Due 11/4/08

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

Rich
Soil Geochemical

2020 D
COC # YER ~~2020B~~

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:	
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV
	Richland, WA. 99354	Site Lat/Long:	NA
Lab PM:	Erika Jordan	California Global ID No.	NA
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)	
Address:	6 Centerpoint Avenue	Phase/WBS:	32
	La Palma, CA 90623	Sub Phase/Task:	03
Tele/Fax:	661-287-3855	Cost Element:	05

Consultant/Contractor:	Brown and Caldwell
Address:	3264 Goni Rd
	Carson City, NV 89706
Consultant/Contractor Project No.:	136259
Consultant/Contractor PM:	Penny Bassett
Tele/Fax:	775-315-4343
Report Type & QC Level:	Level 2
E-mail EDD To:	skocsis@brwncald.com
Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: Tot Th-0020	Requested Analysis: Tot U-0020	Sample Point Lat/Long and Comments
1	OU4-FEP-48A-SC	11:15	10/9	X			K0547	1	X					X	X	X	0-.5'
2	OU4-FEP-48B-SC	↓	↓	X			K0546	1	X					X	X	X	.5-5'
3	OU4-FEP-48C-SC			X			K0544	1	X					X	X	X	9-12'
4	OU4-FEP-48D-SC	↓	↓	X			K0542	1	X					X	X	X	12-15'
5																	
6																	
7																	
8																	
9																	
10																	

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Penny Bassett	Penny Bassett	10-9	1200	K Ramaiya	10-10	1200
Sampler's Company:	Brown + Caldwell	K Ramaiya	10-10	1330	TAN	10-14-08	13:00
Shipment Date:	10-10-08						
Shipment Method:	Fedex						
Shipment Tracking No:	8009402 00007014						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

SDG 386055
J8J180141
Due 11/4/08

RICH
Soil Geochemical

2021D
COC # YER 2021B

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	Level 2
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: TOT TH-(2820)	Requested Analysis: TOT U-(6020)	Sample Point Lat/Long and Comments
1	OU4-FEP-49A-SC	11:45	10/9	X			K0515	1	X					X	X	X	0-.5'
2	OU4-FEP-49B-SC	↓	↓	X			K0516	1	X					X	X	X	.5-4'
3	OU4-FEP-49C-SC	↓	↓	X			K0517	1	X					X	X	X	5-8'
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name:	Penny Bassett	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Brown + Caldwell	Penny Bassett	10-9	1200	K Manning	10-9	1200
Shipment Date:	10-10-08	K Manning	10-10	1308	TAR	10-10-08	12:00
Shipment Method:	Fedex						
Shipment Tracking No:	800442000840141						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

SDG 38605
J8J180141
11/4/08

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

RICH
Soil Geochemical

COC # YER 2022 ~~2022B~~

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	Level 2
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: Tot Th 6020	Requested Analysis: Tot U 6020	Sample Point Lat/Long and Comments
1	OU4-FEP-50A-SC	12:00	10/9	X			K0SSF	1	X					X	X	X	0 - .5'
2	OU4-FEP-50B-SC	↓	↓	X			K0SSH	1	X					X	X	X	.5 - 2'
3	OU4-FEP-50C-SC	↓	↓	X			K0S50	1	X					X	X	X	2 - 5'
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name:	Penny Bassett	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Brown + Caldwell	Penny Bassett	10-9	1200	R Bassinger	10-9	1200
Shipment Date:	10-10-08	R Bassinger	10-10	1300	Fedex TAN	10-11-08	1100
Shipment Method:	Fedex						
Shipment Tracking No:	8009420000 4014						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

SDG 381005
JBJ PO 141
Due 11/4/08

RICH
Soil Geochemical

COC # YER 2023D ~~2023-B~~

Atlantic Richfield Company

bp
A BP affiliated company

Chain of Custody Record

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	Level 2
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: Tot-Th 6020	Requested Analysis: Tot-U 6020	Sample Point Lat/Long and Comments
1	OU4-FEP-S1A-SC	12:20	10/9	X			405S1	1	X					X	X	X	0-.5
2	OU4-FEP-S1B-SC	↓	↓	X			405S4	1	X					X	X	X	1-5
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name:	Penny Bassett	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date / Time
Sampler's Company:	Brown + Caldwell	Penny Bassett	10-9	1350	R. Baumgartner	10-9 / 1350
Shipment Date:	10-10-08	R. Baumgartner	10-10	1387	TAR	10-10 / 12:00
Shipment Method:	Fedex					
Shipment Tracking No:	8007942000040141					

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

TestAmerica Laboratories, Inc.

49

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

SDG 38605
JBJ 180141
Due 11/4/08

RICH
Soil Geochemical

2024D
COC # YER-~~2024B~~

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	Level 2
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: Tot Th -6020	Requested Analysis: Tot U - 6020	Sample Point Lat/Long and Comments
1	OU4-FEP-52A-SC	12:35	~~FF~~ 10/9	X			K0557	1	X					X	X	X	0-.5'
2	OU4-FEP-52B-SC	↓	10/9	X			K0559	1	X					X	X	X	.5-4'
3	OU4-FEP-52C-SC	↓	↓	X			K0560A	1	X					X	X	X	5-8'
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name:	Penny Bassett	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date / Time
Sampler's Company:	Brown + Caldwell	Penny Bassett	10-9	1300	K Barrington STAR	10-9 1300
Shipment Date:	10-10-08	K Barrington	10-10	1300	[signature] STAR	10-10 1200
Shipment Method:	Fedex					
Shipment Tracking No:	8 00 942 0000 4014					

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

SDG 386605
JBJ 180141
Due 11/4/08

Atlantic Richfield Company

bp A BP affiliated company

Chain of Custody Record

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

Soil Geochemical COC # YER 2018D

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	Level 2
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: TOT TH 6020	Requested Analysis: TOT U 6020	Sample Point Lat/Long and Comments
1	OU4-UEP-11A-SC	08:30	10/9/08	X			KD5L6D	1	X					X	X	X	15-20'
2	OU4-UEP-11B-SC	09:00	10/9/08	X			KD5L6G	1	X					X	X	X	31-35'
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name:	Penny Bassett	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date / Time
Sampler's Company:	Brown + Caldwell	Penny Bassett	10-9	1200	K Barrington	10-9 1200
Shipment Date:	10-10-08	K Barrington	10-10	1300	[signature] FAR	10-10 12:30
Shipment Method:	Fedex					
Shipment Tracking No:	5009420000 4014					

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

SDG 38605
JBJ 180141
Due 11/4/08

RICH
Soil Geochemical

COC # YER 2016D

Atlantic Richfield Company

bp A BP affiliated company

Chain of Custody Record

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	Level IV
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: Tot Th (6020)	Requested Analysis: Tot U (6020)	Sample Point Lat/Long and Comments
1	OU4-UEP-07A-SC	0900	10/8	X			K0516K	1	X					X	X	X	5-8' bgs
2	OU4-UEP-07B-SC	0930	10/8	X			K0516J	1	X					X	X	X	17-20' bgs
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Penny Bassett	Penny Bassett	10-8	1200	K Baumgartner	10-8	1200
Sampler's Company:	Brown + Caldwell	K Baumgartner	10-10	1300	TAR	10-14-08	0800
Shipment Date:	10-10-08						
Shipment Method:	Fedex						
Shipment Tracking No:	870942000040141						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

TestAmerica Laboratories, Inc.

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

SDG 386005
JBJ 180141
Due 11/4/08

RICH
Soil Geochemical

COC # YER 2017D

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	LEVEL II
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	

Skocsis

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: Tot Th-6020	Requested Analysis: Tot U-6020	Sample Point Lat/Long and Comments
1	OU4-UEP-08A-SC	1400	10/8/08	X			K0857C	1	X					X	X	X	3-6' bgs
2	OU4-UEP-08B-SC	1430	↓	X			K0858C	1	X					X	X	X	10-13' bgs
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name:	Penny Bassett	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Brown + Caldwell	Penny Bassett	10-8	1500	R Barrenger	10-8	1500
Shipment Date:	10-10	R Barrenger	10-10	1300	TAN	10-10	1300
Shipment Method:	Fedex						
Shipment Tracking No:	5009 4200 0040 14						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10-14-08 12:00 GM Screen Result 0.10 mR/hr

Client: Atlantic Richfield SDG #: 38605 NA[ ] SAF #: _____ NA [ ]

Work Order Number: JBJ180141 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? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature: _____ NA [✓] 5. Vermiculite/packing material is NA [ ] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 21
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
8. Samples have:
   _____ Tape
   _____ Custody Seals
   ✓ Hazard Lables
   ✓ Appropriate Sample Lables
9. Samples are:
   ✓ In Good Condition
   _____ Broken
   _____ Leaking
   _____ Have Air Bubbles
   (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____ soil
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): Client omitted Tot Thorium and Tot Uranium test Requested to add the tests by email. MJ 10/20/8

Sample Custodian: _____ Date: 10-14-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date 10/20/8

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10-14-08 12:00 GM Screen Result 0.10 mR/hr

Client: ATLANTIC RICHFIELD SDG #: 38605 NA [ ] SAF #: _____ NA [ ]

Work Order Number: JBJ180141 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? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature: _____ NA [✓] 5. Vermiculite/packing materials is ~~NA [ ]~~ Wet [ ] Dry [ ]
6. Number of samples in shipping container: 21
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
8. Samples have:
   _____ Tape
   _____ Custody Seals
   ___✓___ Hazard Lables
   ___✓___ Appropriate Sample Lables
9. Samples are:
   ___✓___ In Good Condition
   _____ Broken
   _____ Leaking
   _____ Have Air Bubbles
   (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____ SOIL
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): Client omitted Tot Thorium and Tot Uranium test. Requested to add the tests by email. JD 10/20/8

Sample Custodian _____ Date: 10-14-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date 10/20/8

TOTAL THORIUM / URANIUM SAMPLE AND QC DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Metals

Batch Number(s): 8311377

Lab Sample Numbers or SDG:

Method/Test/Parameter: **Metals, ICP/MS**

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

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other 1. Are all nonconformances included and noted?	✓			
2. Is the correct date and time of analysis shown?	✓			
3. Did the analyst sign and date the front page of the analytical run?	✓			
4. Correct methodology used?	✓			
5. Transcriptions checked?	✓			
6. Calculations checked at minimum frequency?	✓			
7. Units checked?	✓			

Comments on any "No" response:

See NCM's

Analyst: [signature] Date: ~~11/5/2008~~ 12/8/08 SE 12/6/08

Second-Level Review: [signature] Date: 12/16/08

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-13436**
NCM Initiated By: Steven Wheland
Date Opened: 12/08/2008
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 200.8
Lot #'s (Sample #'s): J8J180141 (1,10,11,12,13,14,15,16,17,18,19,2,20,3,4,5,6,7,8,9), J8K060000 (377),
QC Batches: 8311377,

Nonconformance: QC data exceeded criteria
Subcategory: MS/MSD out of control: high levels in sample

Problem Description / Root Cause

Name	Date	Description
Steven Wheland	12/08/2008	MS and MSD recovered out of limits due to high analyte levels.

Corrective Action

Name	Date	Corrective Action
Steven Wheland	12/08/2008	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

Date Printed: 12/8/2008

TestAmerica Laboratories, Inc.

11/6/2008 3:10:37 PM

Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK ~~Total Dissolution~~ PRP001 9 11/6/8

QV ICP-Mass Spectrometry ~~(200.8)~~ 8272

01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 **SOIL** ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
1 K054F-1-AC J8J180141-1-SAMP 10/09/2008 11:15		0.5181 g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
2 K054F-1-AD J8J180141-1-SAMP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
3 K054F-1-AE J8J180141-1-SAMP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
4 K054F-1-AF J8J180141-1-SAMP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
5 K054F-1-AH-X J8J180141-1-DUP 10/09/2008 11:15		0.5083g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
6 K054F-1-AJ-X J8J180141-1-DUP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
7 K054F-1-AK-X J8J180141-1-DUP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

11/6/2008 3:10:39 PM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8311377 SOIL ppt PM, Quote: EJ , 73181

SEQ Batch, Test: None

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:
8 K054F-1-AL-X J8J180141-1-DUP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
9 K054G-1-AC J8J180141-2-SAMP 10/09/2008 11:15		0.5161g AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
10 K054G-1-AD J8J180141-2-SAMP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
11 K054G-1-AE J8J180141-2-SAMP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
12 K054G-1-AF J8J180141-2-SAMP 10/09/2008 11:15		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
13 K054G-1-AG-S J8J180141-2-MS 10/09/2008 11:15		0.5123g AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
14 K054G-1-AH-D J8J180141-2-MSD 10/09/2008 11:15		0.5030g AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	

TestAmerica Laboratories, Inc.

11/6/2008 3:10:39 PM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8311377 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:

15 K054G-1-AJ-S

J8J180141-2-MS

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

16 K054G-1-AK-D

J8J180141-2-MSD

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

17 K054G-1-AL-S

J8J180141-2-MS

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

18 K054G-1-AM-D

J8J180141-2-MSD

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

19 K054G-1-AN-S

J8J180141-2-MS

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

20 K054G-1-AP-D

J8J180141-2-MSD

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

21 K054H-1-AC

J8J180141-3-SAMP 0.5159g

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

11/6/2008 3:10:39 PM

Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:

22 K054H-1-AD

J8J180141-3-SAMP

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

23 K054H-1-AE

J8J180141-3-SAMP

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

24 K054H-1-AF

J8J180141-3-SAMP

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

25 K0542-1-AC

J8J180141-4-SAMP 0.5151g

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

26 K0542-1-AD

J8J180141-4-SAMP

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

27 K0542-1-AE

J8J180141-4-SAMP

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

28 K0542-1-AF

J8J180141-4-SAMP

10/09/2008 11:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

11/6/2008 3:10:39 PM

Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
29 K0545-1-AC J8J180141-5-SAMP 10/09/2008 11:45		0.5179g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
30 K0545-1-AD J8J180141-5-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
31 K0545-1-AE J8J180141-5-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
32 K0545-1-AF J8J180141-5-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
33 K0549-1-AC J8J180141-6-SAMP 10/09/2008 11:45		0.5028g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
34 K0549-1-AD J8J180141-6-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
35 K0549-1-AE J8J180141-6-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
36 K0549-1-AF J8J180141-6-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
37 K055A-1-AC J8J180141-7-SAMP 10/09/2008 11:45		0.5142g AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
38 K055A-1-AD J8J180141-7-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
39 K055A-1-AE J8J180141-7-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
40 K055A-1-AF J8J180141-7-SAMP 10/09/2008 11:45		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
41 K055F-1-AC J8J180141-8-SAMP 10/09/2008 12:00		0.4998g AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	
42 K055F-1-AD J8J180141-8-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1				Scr:	Alpha:	Beta:	

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Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
43 K055F-1-AE J8J180141-8-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
44 K055F-1-AF J8J180141-8-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
45 K055H-1-AC J8J180141-9-SAMP 10/09/2008 12:00		0.5025g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
46 K055H-1-AD J8J180141-9-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
47 K055H-1-AE J8J180141-9-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
48 K055H-1-AF J8J180141-9-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
49 K0550-1-AC J8J180141-10-SAMP 10/09/2008 12:00		0.5171g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Richland Wa.

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

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ISV - Insufficient Volume for Analysis

WO Cnt: 49

ICOC v4.8.35

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Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8311377 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:
50 K0550-1-AD J8J180141-10-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
51 K0550-1-AE J8J180141-10-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
52 K0550-1-AF J8J180141-10-SAMP 10/09/2008 12:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
53 K0551-1-AC J8J180141-11-SAMP 10/09/2008 12:20	0.5026g	AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
54 K0551-1-AD J8J180141-11-SAMP 10/09/2008 12:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
55 K0551-1-AE J8J180141-11-SAMP 10/09/2008 12:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
56 K0551-1-AF J8J180141-11-SAMP 10/09/2008 12:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
57 K0554-1-AC J8J180141-12-SAMP 10/09/2008 12:20		0.5013 AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
58 K0554-1-AD J8J180141-12-SAMP 10/09/2008 12:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
59 K0554-1-AE J8J180141-12-SAMP 10/09/2008 12:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
60 K0554-1-AF J8J180141-12-SAMP 10/09/2008 12:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
61 K0557-1-AC J8J180141-13-SAMP 10/09/2008 12:35		0.5098g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
62 K0557-1-AD J8J180141-13-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
63 K0557-1-AE J8J180141-13-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Balance Id:
Pipet #:

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8311377 SOIL ppt PM, Quote: EJ , 73181

SEQ Batch, Test: None

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:
64 K0557-1-AF J8J180141-13-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
65 K0559-1-AC J8J180141-14-SAMP 10/09/2008 12:35		0.5037g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
66 K0559-1-AD J8J180141-14-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
67 K0559-1-AE J8J180141-14-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
68 K0559-1-AF J8J180141-14-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
69 K056A-1-AC J8J180141-15-SAMP 10/09/2008 12:35		0.5167g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
70 K056A-1-AD J8J180141-15-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
71 K056A-1-AE J8J180141-15-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
72 K056A-1-AF J8J180141-15-SAMP 10/09/2008 12:35		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
73 K056D-1-AC J8J180141-16-SAMP 10/09/2008 08:30		0.5022g AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
74 K056D-1-AD J8J180141-16-SAMP 10/09/2008 08:30		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
75 K056D-1-AE J8J180141-16-SAMP 10/09/2008 08:30		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
76 K056D-1-AF J8J180141-16-SAMP 10/09/2008 08:30		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
77 K056G-1-AC J8J180141-17-SAMP 10/09/2008 09:00		0.5055g AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:

78 K056G-1-AD

J8J180141-17-SAMP

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

79 K056G-1-AE

J8J180141-17-SAMP

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

80 K056G-1-AF

J8J180141-17-SAMP

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

81 K056K-1-AC

J8J180141-18-SAMP 0.5104g

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

82 K056K-1-AD

J8J180141-18-SAMP

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

83 K056K-1-AE

J8J180141-18-SAMP

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

84 K056K-1-AF

J8J180141-18-SAMP

10/09/2008 09:00 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt PM, Quote: EJ , 73181

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:
85 K0563-1-AC J8J180141-19-SAMP 10/09/2008 09:30		0.5092g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
86 K0563-1-AD J8J180141-19-SAMP 10/09/2008 09:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
87 K0563-1-AE J8J180141-19-SAMP 10/09/2008 09:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
88 K0563-1-AF J8J180141-19-SAMP 10/09/2008 09:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
89 K057C-1-AC J8J180141-20-SAMP 10/08/2008 14:00		0.5102g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
90 K057C-1-AD J8J180141-20-SAMP 10/08/2008 14:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
91 K057C-1-AE J8J180141-20-SAMP 10/08/2008 14:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311377 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
92 K057C-1-AF J8J180141-20-SAMP 10/08/2008 14:00		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
93 K2DQF-1-AA-B J8K060000-377-BLK 10/09/2008 11:15		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
94 K2DQF-1-AC-B J8K060000-377-BLK 10/09/2008 11:15		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
95 K2DQF-1-AD-C J8K060000-377-LCS 10/09/2008 11:15		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
96 K2DQF-1-AE-C J8K060000-377-LCS 10/09/2008 11:15		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown and Caldwell , EJ , 73181

K054F1AC-SAMP Constituent List:
Uranium RDL:0.8 ppt LCL: UCL: RPD:

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Sample Preparation/Analysis

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 11/03/2008

Batch: 8311377 ppt
SEQ Batch, Test: None

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:

K054G1AG-MS:

K054G1AH-MSD:

K054G1AJ-MS:

K054G1AK-MSD:

K054G1AL-MS:

K054G1AM-MSD:

K054G1AN-MS:

K054G1AP-MSD:

K2DQF1AA-BLK:

K2DQF1AC-BLK:

K2DQF1AD-LCS:

K2DQF1AE-LCS:

K054F1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AG-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AH-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AJ-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AK-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AL-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AM-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AN-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K054G1AP-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQF1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B

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Sample Preparation/Analysis

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 11/03/2008

Batch: 8311377 ppt
SEQ Batch, Test: None

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:

K2DQF1AC-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQF1AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQF1AE-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B

Approved By _____ Date: _____

				Thorium:	Uranium:		Matrix Spike Conc.	ug				
			CCB (ng/L):	3.2802	2.1004		Thorium:	0.506				
Batch ID:			CCV (ng/L):	1012.3	992		Uranium:	0.496				
8311377			MDL (ng/L):	Thorium:	3.2802							
				Uranium:	2.1004			Control QC Yield	Internal Std QC Yield	Spike % Recovery	Dup Rel % Diff	see notes
Sample ID:	Client ID	Sample aliquot (g)	Analyte	Conc. Mean	Report Un	dilution factor	Conc. RSD					
ICV 1125			Th	9.779E-04	mg/Kg		1.319	98.9%	102.3%			
			U	1.020E-03	mg/Kg		1.302	102.8%				
ICB 1125			Th	-9.265E-06	mg/Kg		4.544		107.5%			
			U	-1.557E-07	mg/Kg		108.503					
K054F	OU4-FEP-48A-SC	0.5181	Th	1.011E+01	mg/Kg	500	0.914		93.1%			
			U	6.283E+00	mg/Kg		0.167					
K054F-X	OU4-FEP-48A-SC	0.5083	Th	1.003E+01	mg/Kg	500	1.331		93.6%		0.8%	
			U	6.348E+00	mg/Kg		1.387				1.0%	
K054G	OU4-FEP-48B-SC	0.5161	Th	1.907E+02	mg/Kg	500	1.118		98.1%			
			U	5.065E+01	mg/Kg		0.606					
K054G-MS	OU4-FEP-48B-SC	0.5123	Th	1.9133+02	mg/Kg	500	0.583		94.1%	83.8%		
			U	5.121E+01	mg/Kg		0.483			57.8%		
K054G-MSD	OU4-FEP-48B-SC	0.5030	Th	1.912E+02	mg/Kg	500	0.680		94.5%	49.7%		
			U	5.117E+01	mg/Kg		2.067			52.7%		
K054H	OU4-FEP-48C-SC	0.5159	Th	2.256E+02	mg/Kg	1000	0.607		97.6%			
			U	2.761E+02	mg/Kg		0.479					
K0542	OU4-FEP-48D-SC	0.5151	Th	4.329E+01	mg/Kg	500	0.334		95.5%			
			U	8.943E+01	mg/Kg		0.320					
K0545	OU4-FEP-49A-SC	0.5179	Th	9.997E+00	mg/Kg	500	1.220		93.4%			
			U	4.625E+00	mg/Kg		1.866					
K0549	OU4-FEP-49B-SC	0.5028	Th	1.907E+02	mg/Kg	1000	1.182		96.5%			
			U	1.020E+02	mg/Kg		0.813					
K055A	OU4-FEP-49C-SC	0.5142	Th	1.653E+01	mg/Kg	500	1.174		95.1%			
			U	3.648E+01	mg/Kg		1.156					
CCV 1125			Th	9.830E-04	mg/Kg		0.641	99.5%	99.3%			
			U	1.0083-03	mg/Kg		0.717	98.4%				
CCB1125			Th	-3.808E-01	mg/Kg		140.289		100.7%			
			U	-3.400E-07	mg/Kg		97.069					
K055F	OU4-FEP-50A-SC	0.4998	Th	1.273E+01	mg/Kg	500	1.417		96.1%			
			U	4.787E+00	mg/Kg		0.530					
K055H	OU4-FEP-50B-SC	0.5025	Th	6.298E+02	mg/Kg	500	0.874		95.2%			
			U	3.374E+02	mg/Kg		0.870					
K0550	OU4-FEP-50C-SC	0.5171	Th	2.715E+01	mg/Kg	500	1.381		96.3%			
			U	5.317E+01	mg/Kg		0.899					
K0551	OU4-FEP-51A-SC	0.5026	Th	9.571E+00	mg/Kg	500	1.032		95.3%			
			U	4.424E+00	mg/Kg		6.354					
K0554	OU4-FEP-51B-SC	0.5013	Th	5.578E+01	mg/Kg	500	1.187		94.4%			
			U	1.820E+01	mg/Kg		1.176					
K0557	OU4-FEP-52A-SC	0.5098	Th	8.657E+00	mg/Kg	500	1.923		95.4%			
			U	3.197E+00	mg/Kg		1.937					
K0559	OU4-FEP-52B-SC	0.5037	Th	7.477E+02	mg/Kg	1000	0.755		96.0%			
			U	4.043E+02	mg/Kg		0.454					
K056A	OU4-FEP-52C-SC	0.5167	Th	1.341E+01	mg/Kg	500	0.948		93.8%			
			U	3.587E+01	mg/Kg		0.905					
K056D	OU4-UEP-11A-SC	0.5022	Th	7.856E+00	mg/Kg	500	1.776		93.5%			
			U	3.483E+00	mg/Kg		1.308					
K056G	OU4-UEP-11B-SC	0.5055	Th	8.247E+00	mg/Kg	500	1.627		94.1%			
			U	1.544E+00	mg/Kg		2.918					
CCV 1125			Th	9.933E-04	mg/Kg		0.279	100.5%	98.1%			
			U	1.013E-03	mg/Kg		1.408	102.1%				
CCB1125			Th	2.204E-06	mg/Kg		12.099		99.2%			
			U	-3.089E-07	mg/Kg		159.082					
K056K	OU4-UEP-07A-SC	0.5104	Th	3.065E+01	mg/Kg	500	1.212		93.0%			
			U	1.435E+01	mg/Kg		1.387					
K0563	OU4-UEP-07B-SC	0.5092	Th	1.042E+01	mg/Kg	500	0.637		91.9%			
			U	4.258E+00	mg/Kg		1.086					
K057C	OU4-UEP-08A-SC	0.5102	Th	1.665E+01	mg/Kg	500	0.470		93.7%			
			U	2.845E+00	mg/Kg		1.300					
K2DQF-BLK			Th	-2.181E-06	mg/Kg		12.748		92.3%			
			U	-4.676E-07	mg/Kg		26.204					
K2DQF-LCS			Th	1.958E-04	mg/Kg		2.210		92.8%	96.7%		
			U	2.043E-04	mg/Kg		2.864			103.0%		
CCV 1125			Th	9.932E-04	mg/Kg		0.967	100.5%	99.5%			
			U	1.006E-03	mg/Kg		0.552	101.4%				
CCB1125			Th	-3.557E-07	mg/Kg		78.188		101.5%			
			U	-4.331E-07	mg/Kg		12.860					

Control Limits:
CCV: +/- 10%
Spike Recovery: +/- 30%
Duplicate Recovery: +/- 20%
LCS Recovery: +/- 15%

Sample data reported in mg/L, converted to mg/Kg using 1L (water) = 1KG (water)

12/15/2008
10:42 AM

Run List

Sample File Name: 8311377_8311385.sam

AS Loc.	Sample ID	Batch Index	Sample Type	Method
1	Blank 1125		Blank	unat-th.mth
2	STD1 1125		Standard	unat-th.mth
3	STD2 1125		Standard	unat-th.mth
4	STD3 1125		Standard	unat-th.mth
5	STD4 1125		Standard	unat-th.mth
6	ICV 1125		QC Std	unat-th.mth
7	ICB 1125		QC Std	unat-th.mth
8	K054F	1	Sample	unat-th.mth
9	K054F-X	2	Duplicate of 1	unat-th.mth
10	K054G	3	Sample	unat-th.mth
11	K054G-MS	4	Spike - 1 of 3	unat-th.mth
12	K054G-MSD	5	Duplicate Spike of 4	unat-th.mth
13	K054H	6	Sample	unat-th.mth
14	K0542	7	Sample	unat-th.mth
15	K0545	8	Sample	unat-th.mth
16	K0549	9	Sample	unat-th.mth
17	K055A	10	Sample	unat-th.mth
6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth
18	K055F	11	Sample	unat-th.mth
19	K055H	12	Sample	unat-th.mth
20	K0550	13	Sample	unat-th.mth
21	K0551	14	Sample	unat-th.mth
22	K0554	15	Sample	unat-th.mth
23	K0557	16	Sample	unat-th.mth
24	K0559	17	Sample	unat-th.mth
25	K056A	18	Sample	unat-th.mth
26	K056D	19	Sample	unat-th.mth
27	K056G	20	Sample	unat-th.mth
6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth
28	K056K	21	Sample	unat-th.mth
29	K0563	22	Sample	unat-th.mth
30	K057C	23	Sample	unat-th.mth
31	K2DQF-BLK	24	Sample	unat-th.mth
32	K2DQF-LCS	25	Spike - 1 of 24	unat-th.mth

6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth
33	K057K	26	Sample	unat-th.mth
34	K06DE	27	Sample	unat-th.mth
35	K06DE-X	28	Duplicate of 27	unat-th.mth
36	K06D0	29	Sample	unat-th.mth
37	K06D0-MS	30	Spike - 1 of 29	unat-th.mth
38	K06D0-MSD	31	Duplicate Spike of 30	unat-th.mth
6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth
39	K06D3	32	Sample	unat-th.mth
40	K06D6	33	Sample	unat-th.mth
41	K06D7	34	Sample	unat-th.mth
42	K06D9	35	Sample	unat-th.mth
43	K06EC	36	Sample	unat-th.mth
44	K06EE	37	Sample	unat-th.mth
45	K06EG	38	Sample	unat-th.mth
46	K06EH	39	Sample	unat-th.mth
47	K2DQ9-BLK	40	Sample	unat-th.mth
48	K2DQ9-LCS	41	Sample	unat-th.mth
6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, December 04, 2008 09:54:00
Sample Description:
Method File: C:\Elandata\Method\Daily PerformanceTAL-bv.mth
Dataset File: C:\Elandata\DataSet\Daily Performance\Daily Performance Check.692
Tuning File: C:\Elandata\Tuning\defaultTAL-bv.tun
Optimization File: C:\Elandata\Optimize\Default-bv.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 55
Current Dead Time (ns): 55

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	10760.0	10759.965	119.002	1.1
	In	114.9	46072.7	46072.655	197.652	0.4
	U	238.1	33773.0	33773.020	216.696	0.6
⌈>	Ce	139.9	40233.8	40233.773	319.246	0.8
⌊	CeO	155.9	1139.4	0.028	0.000	0.8
⌈>	Ba	137.9	319601.9	319601.852	1587.086	0.5
⌊	Ba++	69.0	8390.6	0.026	0.000	0.7
	220	220.0	19.7	19.667	2.372	12.1
	8.5	8.5	18.4	18.433	0.962	5.2

Current Optimization File Data

Current Value	Description
0.94	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
7.50	Lens Voltage
1550.00	ICP RF Power
-1550.00	Analog Stage Voltage
800.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-15.00	Cell Rod Offset Std [CRO]
21.00	Discriminator Threshold
-17.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.94	DRC Mode NEB
-6.50	DRC Mode QRO
-1.00	DRC Mode CRO
-15.00	DRC Mode CPV
0.00	Cell Gas A

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	53	6.0	884.0
Co	59	53	7.0	27409.3
In	115	53	7.3	49138.4
U	238	53	10.8	34407.0

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Metals

Batch Number(s): 8311385
Lab Sample Numbers or SDG:
Method/Test/Parameter: **Metals, ICP/MS**

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

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other 1. Are all nonconformances included and noted?	✓			
2. Is the correct date and time of analysis shown?	✓			
3. Did the analyst sign and date the front page of the analytical run?	✓			
4. Correct methodology used?	✓			
5. Transcriptions checked?	✓			
6. Calculations checked at minimum frequency?	✓			
7. Units checked?	✓			

Comments on any "No" response:

See NCM's

Analyst: _____ Date: 12/8/2008

Second-Level Review: _____ Date: 12/14/08

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-13433**
NCM Initiated By: Steven Wheland
Date Opened: 12/08/2008
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 200.8
Lot #'s (Sample #'s): J8J180141 (21), J8J180170 (1,10,2,3,4,5,6,7,8,9), J8K060000 (385),
QC Batches: 8311385,

Nonconformance: QC data exceeded criteria
Subcategory: MS/MSD out of control: high levels in sample

Problem Description / Root Cause

Name	Date	Description
Steven Wheland	12/08/2008	Due to high analyte level in samples the MS and MSD recoveries were out of limits.

Corrective Action

Name	Date	Corrective Action
Steven Wheland	12/08/2008	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

Date Printed: 12/8/2008

TestAmerica Laboratories, Inc.

11/6/2008 3:10:42 PM

Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK ~~Total Dissolution~~ PRP-E001 aq 11/6/08

QV ICP-Mass Spectrometry ~~(200.8)~~ E020

AnalyDueDate: 11/03/2008

01 STANDARD TEST SET

Batch: 8311385 **SOIL** ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
1 K057K-1-AC J8J180141-21-SAMP 10/08/2008 14:30		0.5006 g AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
2 K057K-1-AD J8J180141-21-SAMP 10/08/2008 14:30		WD 11/25/08 AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
3 K057K-1-AE J8J180141-21-SAMP 10/08/2008 14:30		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
4 K057K-1-AF J8J180141-21-SAMP 10/08/2008 14:30		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
5 K06DE-1-AC J8J180170-1-SAMP 10/14/2008 14:10		0.5101 g AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
6 K06DE-1-AD J8J180170-1-SAMP 10/14/2008 14:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
7 K06DE-1-AE J8J180170-1-SAMP 10/14/2008 14:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:

TestAmerica Laboratories, Inc.

11/6/2008 3:10:43 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
8 K06DE-1-AF J8J180170-1-SAMP 10/14/2008 14:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
9 K06DE-1-AG-X J8J180170-1-DUP 10/14/2008 14:10	0.5006g	AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
10 K06DE-1-AH-X J8J180170-1-DUP 10/14/2008 14:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
11 K06DE-1-AJ-X J8J180170-1-DUP 10/14/2008 14:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
12 K06DE-1-AK-X J8J180170-1-DUP 10/14/2008 14:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
13 K06D0-1-AC J8J180170-2-SAMP 10/14/2008 15:10	0.5086g	AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
14 K06D0-1-AD J8J180170-2-SAMP 10/14/2008 15:10		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:

11/6/2008 3:10:43 PM

Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 **SOIL** **ppt**
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
15 K06D0-1-AE J8J180170-2-SAMP 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
16 K06D0-1-AF J8J180170-2-SAMP 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
17 K06D0-1-AG-S J8J180170-2-MS 10/14/2008 15:10		0.5076g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
18 K06D0-1-AH-D J8J180170-2-MSD 10/14/2008 15:10		0.5136g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
19 K06D0-1-AJ-S J8J180170-2-MS 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
20 K06D0-1-AK-D J8J180170-2-MSD 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
21 K06D0-1-AL-S J8J180170-2-MS 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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11/6/2008 3:10:44 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
22 K06D0-1-AM-D J8J180170-2-MSD 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
23 K06D0-1-AN-S J8J180170-2-MS 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
24 K06D0-1-AP-D J8J180170-2-MSD 10/14/2008 15:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
25 K06D3-1-AC J8J180170-3-SAMP 10/14/2008 10:40	0.5033g	AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
26 K06D3-1-AD J8J180170-3-SAMP 10/14/2008 10:40		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
27 K06D3-1-AE J8J180170-3-SAMP 10/14/2008 10:40		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
28 K06D3-1-AF J8J180170-3-SAMP 10/14/2008 10:40		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

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11/6/2008 3:10:44 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
29 K06D6-1-AC J8J180170-4-SAMP 10/14/2008 10:55		0.5039g AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:
30 K06D6-1-AD J8J180170-4-SAMP 10/14/2008 10:55		AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:
31 K06D6-1-AE J8J180170-4-SAMP 10/14/2008 10:55		AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:
32 K06D6-1-AF J8J180170-4-SAMP 10/14/2008 10:55		AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:
33 K06D7-1-AC J8J180170-5-SAMP 10/13/2008 10:30		0.5097g AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:
34 K06D7-1-AD J8J180170-5-SAMP 10/13/2008 10:30		AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:
35 K06D7-1-AE J8J180170-5-SAMP 10/13/2008 10:30		AmtRec: BAG		#Containers: 1				Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

11/6/2008 3:10:44 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
36 K06D7-1-AF J8J180170-5-SAMP 10/13/2008 10:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
37 K06D9-1-AC J8J180170-6-SAMP 10/13/2008 12:30		0.4977 g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
38 K06D9-1-AD J8J180170-6-SAMP 10/13/2008 12:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
39 K06D9-1-AE J8J180170-6-SAMP 10/13/2008 12:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
40 K06D9-1-AF J8J180170-6-SAMP 10/13/2008 12:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
41 K06EC-1-AC J8J180170-7-SAMP 10/12/2008 14:40		0.5028 g AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
42 K06EC-1-AD J8J180170-7-SAMP 10/12/2008 14:40		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

11/6/2008 3:10:45 PM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
43 K06EC-1-AE J8J180170-7-SAMP 10/12/2008 14:40		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
44 K06EC-1-AF J8J180170-7-SAMP 10/12/2008 14:40		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
45 K06EE-1-AC J8J180170-8-SAMP 10/12/2008 17:00		0.5158g AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
46 K06EE-1-AD J8J180170-8-SAMP 10/12/2008 17:00		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
47 K06EE-1-AE J8J180170-8-SAMP 10/12/2008 17:00		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
48 K06EE-1-AF J8J180170-8-SAMP 10/12/2008 17:00		AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:
49 K06EG-1-AC J8J180170-9-SAMP 10/12/2008 10:15		0.5034g AmtRec: BAG	#Containers: 1				Scr:	Alpha:		Beta:

11/6/2008 3:10:45 PM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #: _____

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/03/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311385 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:
50 K06EG-1-AD										
J8J180170-9-SAMP										
10/12/2008 10:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
51 K06EG-1-AE										
J8J180170-9-SAMP										
10/12/2008 10:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
52 K06EG-1-AF										
J8J180170-9-SAMP										
10/12/2008 10:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
53 K06EH-1-AC										
J8J180170-10-SAMP		0.5144g								
10/12/2008 10:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
54 K06EH-1-AD										
J8J180170-10-SAMP										
10/12/2008 10:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
55 K06EH-1-AE										
J8J180170-10-SAMP										
10/12/2008 10:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
56 K06EH-1-AF										
J8J180170-10-SAMP										
10/12/2008 10:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

11/6/2008 3:10:45 PM

Sample Preparation/Analysis

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 11/03/2008

Batch: 8311385 ppt
SEQ Batch, Test: None

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:
57 K2DQ9-1-AA-B J8K060000-385-BLK 10/14/2008 14:10		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
58 K2DQ9-1-AC-B J8K060000-385-BLK 10/14/2008 14:10		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
59 K2DQ9-1-AD-C J8K060000-385-LCS 10/14/2008 14:10		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
60 K2DQ9-1-AE-C J8K060000-385-LCS 10/14/2008 14:10		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown and Caldwell , EJ , 73181

K057K1AC-SAMP Constituent List:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K06D01AG-MS:

K06D01AH-MSD:

K06D01AJ-MS:

11/6/2008 3:10:45 PM

Sample Preparation/Analysis

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/03/2008

Batch: 8311385 ppt
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:

K06D01AK-MSD:

K06D01AL-MS:

K06D01AM-MSD:

K06D01AN-MS:

K06D01AP-MSD:

K2DQ91AA-BLK:

K2DQ91AC-BLK:

K2DQ91AD-LCS:

K2DQ91AE-LCS:

K057K1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AG-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AH-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AJ-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AK-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AL-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AM-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AN-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K06D01AP-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQ91AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQ91AC-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQ91AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DQ91AE-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B

				Thorium:	Uranium:		Matrix Spike Conc.	ug				
			CCB (ng/L):	3.2802	2.1004		Thorium:	0.506				
Batch ID:			CCV (ng/L):	1012.3	992		Uranium:	0.496				
8311385			MDL (ng/L):	Thorium:	3.2802							
				Uranium:	2.1004			Control QC Yield	Internal Std QC Yield	Spike % Recovery	Dup Rel % Diff	see notes
Sample ID:	Client ID	Sample aliquot (g)	Analyte	Conc. Mean	Report Un	dilution factor	Conc. RSD					
ICV 1125			Th	9.629E-04	mg/Kg		0.388	97.1%	98.1%			
			U	1.014E-03	mg/Kg		0.348	102.2%				
ICB 1125			Th	-6.529E-07	mg/Kg		10.842		100.9%			
			U	-4.109E-07	mg/Kg		50.152					
K057K	OU4-UEP-08B-SC	0.5006	Th	6.639E+00	mg/Kg	500	2.952		95.2%			
			U	2.067E+00	mg/Kg		2.088					
K08DE	OU4-UEP-08A-SC	0.5101	Th	1.401E+01	mg/Kg	500	1.199		93.5%			
			U	5.326E+00	mg/Kg		3.006					
K08DE-X	OU4-UEP-08A-SC	0.5006	Th	1.437E+01	mg/Kg	500	1.843		93.8%		2.5%	
			U	5.364E+00	mg/Kg		1.386				0.7%	
CCV 1125			Th	9.784E-04	mg/Kg		0.842	99.0%	100.6%			
			U	9.984E-04	mg/Kg		1.137	100.6%				
CCB 1125			Th	-1.637E-07	mg/Kg		188.982		101.6%			
			U	-5.492E-07	mg/Kg		36.143					
K06D0	OU4-UEP-06B-SC	0.5086	Th	1.061E+01	mg/Kg	500	0.572		95.5%			
			U	4.993E+00	mg/Kg		3.779					
K06D0-MS	OU4-UEP-06B-SC	0.5076	Th	1.437E+01	mg/Kg	500	2.433		93.7%	377.1%		
			U	5.768E+00	mg/Kg		4.705			79.3%		
K06D0-MSD	OU4-UEP-06B-SC	0.5136	Th	2.087E+01	mg/Kg	500	1.119		95.1%	1029.1%		
			U	6.174E+00	mg/Kg		0.806			120.9%		
K06D3	OU4-UEP-09A-SC	0.5033	Th	1.458E+01	mg/Kg	500	2.253		95.1%			
			U	7.866E+00	mg/Kg		1.402					
K06D6	OU4-UEP-09B-SC	0.5039	Th	8.953E+00	mg/Kg	500	1.357		95.2%			
			U	2.931E+00	mg/Kg		2.610					
K06D7	OU4-FEP-12A-SC	0.5097	Th	1.570E+01	mg/Kg	500	1.827		95.0%			
			U	3.037E+01	mg/Kg		1.358					
K06D9	OU4-FEP-12B-SC	0.4977	Th	8.050E+00	mg/Kg	500	1.968		95.5%			
			U	1.508E+01	mg/Kg		2.178					
K06EC	OU4-FEP-13A-SC	0.5028	Th	1.166E+01	mg/Kg	500	0.305		94.6%			
			U	1.809E+01	mg/Kg		1.086					
K06EE	OU4-FEP-13B-SC	0.5158	Th	1.296E+01	mg/Kg	500	1.457		95.3%			
			U	1.157E+01	mg/Kg		2.695					
CCV 1125			Th	9.911E-04	mg/Kg		0.814	97.9%	100.0%			
			U	1.008E-03	mg/Kg		0.613	101.6%				
CCB 1125			Th	-9.093E-07	mg/Kg		79.472		102.3%			
			U	-3.583E-07	mg/Kg		10.924					
K06EG	OU4-UEP-10A-SC	0.5034	Th	2.291E+01	mg/Kg	500	1.915		96.0%			
			U	1.214E+01	mg/Kg		3.623					
K06EH	OU4-UEP-10B-SC	0.5144	Th	9.319E+00	mg/Kg	500	1.332		97.4%			
			U	2.995E+00	mg/Kg		1.713					
K2DQ9-LCS			Th	1.953E-04	mg/Kg		4.274	96.5%	94.9%			
			U	2.062E-04	mg/Kg		1.575	103.9%				
K2DQ9-BLK			Th	-3.580E-08	mg/Kg		9.486		95.3%			
			U	-2.137E-07	mg/Kg		71.662					
CCV 1125			Th	9.896E-04	mg/Kg		1.530	97.8%	101.3%			
			U	1.002E-03	mg/Kg		0.870	101.0%				
CCB 1125			Th	-4.263E-08	mg/Kg		37.657		103.1%			
			U	-3.178E-07	mg/Kg		57.219					

Control Limits:
CCV: +/- 10%
Spike Recovery: +/- 30%
Duplicate Recovery: +/- 20%
LCS Recovery: +/- 15%

Sample data reported in mg/L, converted to mg/Kg using 1L (water) = 1KG (water)

12/15/2008
10:43 AM

6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth
33	K057K	26	Sample	unat-th.mth
34	K06DE	27	Sample	unat-th.mth
35	K06DE-X	28	Duplicate of 27	unat-th.mth
36	K06D0	29	Sample	unat-th.mth
37	K06D0-MS	30	Spike - 1 of 29	unat-th.mth
38	K06D0-MSD	31	Duplicate Spike of 30	unat-th.mth
6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth
39	K06D3	32	Sample	unat-th.mth
40	K06D6	33	Sample	unat-th.mth
41	K06D7	34	Sample	unat-th.mth
42	K06D9	35	Sample	unat-th.mth
43	K06EC	36	Sample	unat-th.mth
44	K06EE	37	Sample	unat-th.mth
45	K06EG	38	Sample	unat-th.mth
46	K06EH	39	Sample	unat-th.mth
47	K2DQ9-BLK	40	Sample	unat-th.mth
48	K2DQ9-LCS	41	Sample	unat-th.mth
6	CCV 1125		QC Std	unat-th.mth
7	CCB 1125		QC Std	unat-th.mth

GAMMA

SAMPLE AND QC DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/5/2008 9:35:14 AM

Lot No., Due Date: J8J180141; 11/04/2008

Client, Site: 536403; BRC GW/SOIL Yerington Quarterly GW/Soil

QC Batch No., Method Test: 8296312; RGAMMA Gamma by GER

SDG, Matrix: 38605; SOIL

	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 John Norton Date 12-5-8

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 8296312

Review Item	Yes (√)	No (√)	NA (√)
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 within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances 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: Erika Ford Date: 12/16/18

LS-038B, Rev. 10, 9/07

TestAmerica Laboratories, Inc.

11/20/2008 9:16:07 AM

Sample Preparation/Analysis

Balance Id:I4 A

536403, Brown and Caldwell and Caldwell , Brown

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8296312 SOIL pCi/g

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BattlesK

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 K055A-1-AA J8J180141-7-SAMP 10/09/2008 11:45		338.10g,in AmtRec: BAG #Containers: 1			S200	200	G 6	0140	12/2/2008 GD Scr: Alpha:	Beta:
9 K055F-1-AA J8J180141-8-SAMP 10/09/2008 12:00		335.80g,in AmtRec: BAG #Containers: 1					G 8	0140	Scr: Alpha:	Beta:
10 K055H-1-AA J8J180141-9-SAMP 10/09/2008 12:00		135.70g,in AmtRec: BAG #Containers: 1			200		G 10	0141	Scr: Alpha:	Beta:
11 K0550-1-AA J8J180141-10-SAMP 10/09/2008 12:00		339.10g,in AmtRec: BAG #Containers: 1			S200		G 7	0141	Scr: Alpha:	Beta:
12 K0551-1-AA J8J180141-11-SAMP 10/09/2008 12:20		352.40g,in AmtRec: BAG #Containers: 1					G 13	0148	Scr: Alpha:	Beta:
13 K1C4Q-1-AA-B J8J220000-312-BLK 10/09/2008 11:15		348.00g,in AmtRec: #Containers: 1					G 15	0142	Scr: Alpha:	Beta:
14 K1C4Q-1-AC-C J8J220000-312-LCS 10/09/2008 11:15		200.01g,in AmtRec: #Containers: 1	cal491 01/01/03,pd 01/01/02 i		200		G5	0143	Scr: Alpha:	Beta:

185

TestAmerica Laboratories, Inc.

11/20/2008 9:16:06 AM

Sample Preparation/Analysis

Balance Id:I4 A

536403, Brown and Caldwell , Brown and Caldwell

AX Gamma PrpRC5013/5017

~~TA-Gamma by TRGE~~

01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8296312 **SOIL** **pCi/g** **PM, Quote: EJ , 73181**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 8296312 AXTA, 8296315 AXTA, 8311377 HKQV, 8311385 HKQV,

Prep Tech: ,BattlesK

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 K054F-1-AA J8J180141-1-SAMP 10/09/2008 11:15		327.80g,in AmtRec: BAG #Containers: 1		5200		200	G5 Scr: Alpha: Beta:	2208	12/2/0804	
2 K054F-1-AG-X J8J180141-1-DUP 10/09/2008 11:15		342.50g,in AmtRec: BAG #Containers: 1					G15 Scr: Alpha: Beta:	2209		
3 K054G-1-AA J8J180141-2-SAMP 10/09/2008 11:15		186.60g,in AmtRec: BAG #Containers: 1		200			G7 Scr: Alpha: Beta:	2209		
4 K054H-1-AA J8J180141-3-SAMP 10/09/2008 11:15		136.40g,in AmtRec: BAG #Containers: 1					G10 Scr: Alpha: Beta:	2210		
5 K0542-1-AA J8J180141-4-SAMP 10/09/2008 11:15		353.10g,in AmtRec: BAG #Containers: 1		5200			G6 Scr: Alpha: Beta:	2211		
6 K0545-1-AA J8J180141-5-SAMP 10/09/2008 11:45		326.60g,in AmtRec: BAG #Containers: 1					G8 Scr: Alpha: Beta:	2211		
7 K0549-1-AA J8J180141-6-SAMP 10/09/2008 11:45		180.30g,in AmtRec: BAG #Containers: 1		200			G11 Scr: Alpha: Beta:	2259	12/2/0820	

12/5/2008 9:14:16 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/6/2007, 12/10/2008, Batch: '8296312', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
8296312							
AC			Rev1C	BattlesK	11/20/2008 7:59:38		
SC				mcginnist	IsBatched	10/23/2008 8:17:18 AM	ICOC_RADCALC v4.8.34
SC				BattlesK	InPrep	11/20/2008 7:59:38 AM	RL-GAM-001 REVISION 0
SC				BattlesK	InPrep2	11/20/2008 9:15:26 AM	RL-GAM-001 REVISION 0
SC				BattlesK	Prep2C	11/20/2008 9:15:46 AM	RL-GAM-001 REVISION 0
SC				ClarkR	InCnt1	11/26/2008 8:05:49 AM	RL-CI-007 REVISION 0
SC				ClarkR	CalcC	12/3/2008 7:59:09 AM	RL-CI-007 REVISION 0
SC				nortonj	Rev1C	12/5/2008 9:14:03 AM	RL-DR-001 REV 0
AC				BattlesK	11/20/2008 9:15:26		
AC				BattlesK	11/20/2008 9:15:46		
AC				ClarkR	11/26/2008 8:05:49		
AC				ClarkR	12/3/2008 7:59:09		
AC				nortonj	12/5/2008 9:14:03		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.35

12/5/2008 9:14:15 AM

Rpt DB Transfer log (Batch Results)

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
38605	9K054210			J8J1801414	OU4-FEP-48D-SC	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0		12/2/2008 6:50:51 PM	1.1173E+00	9.232E-02	9.232E-02	9.428E-02	PCI/GRAM			3.531E+2
RA-228DA	AXTA	0		12/2/2008 6:50:51 PM	3.1742E+00	2.53E-01	2.53E-01	1.901E-01	PCI/GRAM			3.531E+2
38605	9K054510			J8J1801415	OU4-FEP-49A-SC	SOIL	10/14/2008		10/9/2008 11:45:00 AM			
RA-226DA	AXTA	0		12/2/2008 6:51:48 PM	4.328E+00	2.781E-01	2.781E-01	8.098E-02	PCI/GRAM			3.266E+2
RA-228DA	AXTA	0		12/2/2008 6:51:48 PM	1.4561E+00	1.417E-01	1.417E-01	1.686E-01	PCI/GRAM			3.266E+2
38605	9K054910			J8J1801416	OU4-FEP-49B-SC	SOIL	10/14/2008		10/9/2008 11:45:00 AM			
RA-226DA	AXTA	0		12/2/2008 7:39:22 PM	4.7891E+00	3.208E-01	3.208E-01	1.766E-01	PCI/GRAM			1.803E+2
RA-228DA	AXTA	0		12/2/2008 7:39:22 PM	2.4739E+01	1.752E+00	1.752E+00	2.87E-01	PCI/GRAM			1.803E+2
38605	9K054F10			J8J1801411	OU4-FEP-48A-SC	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0		12/2/2008 6:48:41 PM	3.0E+00	2.052E-01	2.052E-01	8.558E-02	PCI/GRAM			3.278E+2
RA-228DA	AXTA	0		12/2/2008 6:48:41 PM	1.1859E+00	1.172E-01	1.172E-01	1.536E-01	PCI/GRAM			3.278E+2
38605	9K054G10			J8J1801412	OU4-FEP-48B-SC	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0		12/2/2008 6:49:55 PM	4.5931E+00	3.421E-01	3.421E-01	2.406E-01	PCI/GRAM			1.866E+2
RA-228DA	AXTA	0		12/2/2008 6:49:55 PM	2.2915E+01	1.455E+00	1.455E+00	3.449E-01	PCI/GRAM			1.866E+2
38605	9K054H10			J8J1801413	OU4-FEP-48C-SC	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0		12/2/2008 6:50:16 PM	5.8381E+00	4.024E-01	4.024E-01	2.786E-01	PCI/GRAM			1.364E+2
RA-228DA	AXTA	0		12/2/2008 6:50:16 PM	2.8974E+01	1.974E+00	1.974E+00	4.331E-01	PCI/GRAM			1.364E+2
38605	9K055010			J8J18014110	OU4-FEP-50C-SC	SOIL	10/14/2008		10/9/2008 12:00:00 PM			
RA-226DA	AXTA	0		12/2/2008 10:21:42 PM	1.061E+00	9.317E-02	9.317E-02	8.167E-02	PCI/GRAM			3.391E+2
RA-228DA	AXTA	0		12/2/2008 10:21:42 PM	2.4022E+00	2.074E-01	2.074E-01	1.505E-01	PCI/GRAM			3.391E+2
38605	9K055110			J8J18014111	OU4-FEP-51A-SC	SOIL	10/14/2008		10/9/2008 12:20:00 PM			
RA-226DA	AXTA	0		12/2/2008 10:28:57 PM	3.7743E+00	2.385E-01	2.385E-01	7.386E-02	PCI/GRAM			3.524E+2
RA-228DA	AXTA	0		12/2/2008 10:28:57 PM	1.2514E+00	1.309E-01	1.309E-01	1.429E-01	PCI/GRAM			3.524E+2
38605	9K055A10			J8J1801417	OU4-FEP-49C-SC	SOIL	10/14/2008		10/9/2008 11:45:00 AM			
RA-226DA	AXTA	0		12/2/2008 10:19:29 PM	1.1061E+00	9.285E-02	9.285E-02	8.484E-02	PCI/GRAM			3.381E+2
RA-228DA	AXTA	0		12/2/2008 10:19:29 PM	1.8179E+00	1.595E-01	1.595E-01	1.794E-01	PCI/GRAM			3.381E+2
38605	9K055F10			J8J1801418	OU4-FEP-50A-SC	SOIL	10/14/2008		10/9/2008 12:00:00 PM			
RA-226DA	AXTA	0		12/2/2008 10:20:00 PM	3.8079E+00	2.462E-01	2.462E-01	7.937E-02	PCI/GRAM			3.358E+2
RA-228DA	AXTA	0		12/2/2008 10:20:00 PM	1.4755E+00	1.43E-01	1.43E-01	1.572E-01	PCI/GRAM			3.358E+2
38605	9K055H10			J8J1801419	OU4-FEP-50B-SC	SOIL	10/14/2008		10/9/2008 12:00:00 PM			
RA-226DA	AXTA	0		12/2/2008 10:21:01 PM	9.8819E+00	6.524E-01	6.524E-01	4.174E-01	PCI/GRAM			1.357E+2
RA-228DA	AXTA	0		12/2/2008 10:21:01 PM	7.8839E+01	5.282E+00	5.282E+00	5.514E-01	PCI/GRAM			1.357E+2
38605	K054F1GR			J8J1801411	OU4-FEP-48A-SC	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0	R	12/2/2008 6:49:10 PM	3.0404E+00	2.024E-01	2.024E-01	7.337E-02	PCI/GRAM			3.425E+2
RA-228DA	AXTA	0	R	12/2/2008 6:49:10 PM	1.1579E+00	1.137E-01	1.137E-01	1.464E-01	PCI/GRAM			3.425E+2
38605	K1C4Q1AB			J8J220000312	INTRA-LAB BLANK	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0	B	12/2/2008 10:22:45 PM	9.9944E-02	2.464E-02	2.464E-02	7.4E-02	PCI/GRAM			3.48E+2
RA-228DA	AXTA	0	B	12/2/2008 10:22:45 PM	1.0075E-01	3.435E-02	3.435E-02	1.097E-01	PCI/GRAM			3.48E+2
38605	K1C4Q1CS			J8J220000312	INTRA-LAB CHECK	SOIL	10/14/2008		10/9/2008 11:15:00 AM			
RA-226DA	AXTA	0	S	12/2/2008 10:23:25 PM	1.0766E+00	1.024E-01	1.024E-01	1.067E-01	PCI/GRAM	1.1483E+00		2.0E+2
RA-228DA	AXTA	0	S	12/2/2008 10:23:25 PM	2.2921E+00	1.905E-01	1.905E-01	2.276E-01	PCI/GRAM	1.873E+00		2.0E+2

RER Ra 226 = 0.1
228 0.2

8296312,8296312, **Samples Inserted | Updated | NotUpdated => 14 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 28 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

TestAmerica Richland : Review v4.8.35

Page 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/3/2008 7:52:55 AM

Lot No., Due Date: J8J180141; 11/04/2008

Client, Site: 536403; BRC GW/SOIL Yerington Quarterly GW/Soil

QC Batch No., Method Test: 8296315; RGAMMA Gamma by GER

SDG, Matrix: 38605; SOIL

1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes ✓	No	N/A
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes ✓	No	N/A
2.2 Are the QC appropriate for the analysis included in the batch?	Yes ✓	No	N/A
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes ✓	No	N/A
2.4 Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A ✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	Yes ✓	No	N/A
3.2 Is the LCS result, yield, and MDA within contract limits?	Yes ✓	No	N/A
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A ✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	Yes ✓	No	N/A
3.5 Are the sample yields and MDAs within contract limits?	Yes ✓	No	N/A
4.0 Raw Data			
4.1 Were results calculated in the correct units?	Yes ✓	No	N/A
4.2 Were analysis volumes entered correctly?	Yes ✓	No	N/A
4.3 Were Yields entered correctly?	Yes ✓	No	N/A
4.4 Were spectra reviewed/meet contractual requirements?	Yes ✓	No	N/A
4.5 Were raw counts reviewed for anomalies?	Yes ✓	No	N/A
5.0 Other			
5.1 Are all nonconformances included and noted?	Yes	No	N/A ✓
5.2 Are all required forms filled out?	Yes ✓	No	N/A
5.3 Was the correct methodology used?	Yes ✓	No	N/A
5.4 Was transcription checked?	Yes ✓	No	N/A
5.5 Were all calculations checked at a minimum frequency?	Yes	No	N/A ✓
5.6 Are worksheet entries complete and correct?	Yes ✓	No	N/A

6.0 Comments on any No response:

First Level Review John Kooth Date 12-3-8

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 83-296315
SJ 12/16/8

Review Item	Yes (√)	No (√)	NA (√)
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 within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances 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: Erika Ford Date: 12/16/8

LS-038B, Rev. 10, 9/07

TestAmerica Laboratories, Inc.

11/19/2008 12:42:08 PM

Sample Preparation/Analysis

Balance Id:1120421763

536403, Brown and Caldwell , Brown and Caldwell

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8296315 SOIL pCi/g **PM, Quote: EJ , 73181**

SEQ Batch, Test: None All Tests: 8296312 AXTA, 8296315 AXTA, 8311377 HKQV, 8311385 HKQV,

Sep2 DT/Tm Tech:

Prep Tech: ,BattlesK

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 K0554-1-AA J8J180141-12-SAMP 10/09/2008 12:20		362.30g,in AmtRec: BAG #Containers: 1			5200	200	G10 Scr:	0322 Alpha:	10/10/08 Beta:	
2 K0554-1-AG-X J8J180141-12-DUP 10/09/2008 12:20		366.70g,in AmtRec: BAG #Containers: 1					G11 Scr:	0539 Alpha:	↓ Beta:	
3 K0557-1-AA J8J180141-13-SAMP 10/09/2008 12:35		319.80g,in AmtRec: BAG #Containers: 1					G15 Scr:	0840 Alpha:	10/10/08 Beta:	
4 K0559-1-AA J8J180141-14-SAMP 10/09/2008 12:35		138.60g,in AmtRec: BAG #Containers: 1			200		G5 Scr:	0800 Alpha:	 Beta:	
5 K056A-1-AA J8J180141-15-SAMP 10/09/2008 12:35		372.10g,in AmtRec: BAG #Containers: 1			SAM		G7 Scr:	0800 Alpha:	 Beta:	
6 K056D-1-AA J8J180141-16-SAMP 10/09/2008 08:30		266.10g,in AmtRec: BAG #Containers: 1			SAM		G13 Scr:	0801 Alpha:	 Beta:	
7 K056G-1-AA J8J180141-17-SAMP 10/09/2008 09:00		261.90g,in AmtRec: BAG #Containers: 1			SAM		G8 Scr:	0801 Alpha:	 Beta:	

TestAmerica Richland Wa.

Key: in - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep_SamplePrep v4.8.34

11/19/2008 12:42:08 PM

Sample Preparation/Analysis

Balance Id:1120421763

536403, Brown and Caldwell and Caldwell , Brown

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8296315 SOIL pCi/g

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BattlesK

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 K056K-1-AA J8J180141-18-SAMP 10/09/2008 09:00		361.40g,in AmtRec: BAG #Containers: 1			S260	200	06	0802	12/8/08 S Scr: Alpha: Beta:	
9 K0563-1-AA J8J180141-19-SAMP 10/09/2008 09:30		304.10g,in AmtRec: BAG #Containers: 1					03	0802 Scr: Alpha: Beta:		
10 K057C-1-AA J8J180141-20-SAMP 10/08/2008 14:00		373.60g,in AmtRec: BAG #Containers: 1					11	0902 Scr: Alpha: Beta:		
11 K057K-1-AA J8J180141-21-SAMP 10/08/2008 14:30		352.70g,in AmtRec: BAG #Containers: 1					15	1129 Scr: Alpha: Beta:	12/2/08 KM	
12 K1C45-1-AA-B J8J220000-315-BLK 10/09/2008 12:20		348.00g,in AmtRec: #Containers: 1					05	1170 Scr: Alpha: Beta:		
13 K1C45-1-AC-C J8J220000-315-LCS 10/09/2008 12:20		200.01g,in AmtRec: #Containers: 1	cal491 01/01/03,pd 01/01/02,r		200ml		07	1170 Scr: Alpha: Beta:		

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

ISV - Insufficient Volume for Analysis

WO Cnt: 13

11/19/2008 12:42:08 PM

Sample Preparation/Analysis

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Balance Id:1120421763

Pipet #: _____

AnalyDueDate: 11/03/2008

Sep1 DT/Tm Tech:

Batch: 8296315 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BattlesK

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:

Comments: 10 day ingrowth started 11/19/08

KB 11/19/08

All Clients for Batch:
536403, Brown and Caldwell Brown and Caldwell , EJ , 73181

K05541AA-SAMP Constituent List:

Cs-137	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35

K1C451AA-BLK:

Cs-137	RDL:0.2	pCi/g	LCL:	UCL:	RPD:	Cs-137DA	RDL:0.2	pCi/g	LCL:	UCL:	RPD:

K1C451AC-LCS:

Cs-137	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35

K05541AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K1C451AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K1C451AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/3/2008 7:52:07 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/4/2007, 12/8/2008, Batch: '8296315', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus		Accepting		Comments
8296315							
AC			Rev1C	BattlesK	11/19/2008 7:25:39		
SC				mcginnist	IsBatched	10/23/2008 8:17:53 AM	ICOC_RADCALC v4.8.34
SC				BattlesK	InPrep	11/19/2008 7:25:39 AM	RL-GAM-001 REVISION 0
SC				BattlesK	InPrep2	11/19/2008 11:53:15 AM	RL-GAM-001 REVISION 0
SC				BattlesK	Prep2C	11/19/2008 11:53:36 AM	RL-GAM-001 REVISION 0
SC				ClarkR	CalcC	12/2/2008 12:27:53 PM	RL-CI-007 REVISION 0
SC				nortonj	Rev1C	12/3/2008 7:51:56 AM	RL-DR-001 REV 0
AC				BattlesK	11/19/2008 11:53:15		
AC				BattlesK	11/19/2008 11:53:36		
AC				ClarkR	12/2/2008 12:27:53		
AC				nortonj	12/3/2008 7:51:56		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.35

12/3/2008 7:52:06 AM

Rpt DB Transfer log (Batch Results)

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
38605	**9K055410**			**J8J18014112**	OU4-FEP-51B-SC	SOIL		10/14/2008		10/9/2008 12:20:00 PM			
RA-226DA	AXTA	0		12/2/2008 12:02:19	**1.1365E+00**	8.91E-02		8.91E-02	8.053E-02	PCI/GRAM			3.623E+2
RA-228DA	AXTA	0		12/2/2008 12:02:19	**4.3191E+00**	3.276E-01		3.276E-01	1.459E-01	PCI/GRAM			3.623E+2
38605	**9K055710**			**J8J18014113**	OU4-FEP-52A-SC	SOIL		10/14/2008		10/9/2008 12:35:00 PM			
RA-226DA	AXTA	0		12/2/2008 4:40:28 AM	**3.7485E+00**	2.465E-01		2.465E-01	7.611E-02	PCI/GRAM			3.198E+2
RA-228DA	AXTA	0		12/2/2008 4:40:28 AM	**1.1895E+00**	1.288E-01		1.288E-01	1.696E-01	PCI/GRAM			3.198E+2
38605	**9K055910**			**J8J18014114**	OU4-FEP-52B-SC	SOIL		10/14/2008		10/9/2008 12:35:00 PM			
RA-226DA	AXTA	0		12/2/2008 4:40:48 AM	**1.4023E+01**	9.564E-01		9.564E-01	5.126E-01	PCI/GRAM			1.386E+2
RA-228DA	AXTA	0		12/2/2008 4:40:48 AM	**9.4625E+01**	5.865E+00		5.865E+00	6.929E-01	PCI/GRAM			1.386E+2
38605	**9K056310**			**J8J18014119**	OU4-UEP-07B-SC	SOIL		10/14/2008		10/9/2008 9:30:00 AM			
RA-226DA	AXTA	0		12/2/2008 4:42:22 AM	**1.7303E+00**	1.236E-01		1.236E-01	7.431E-02	PCI/GRAM			3.041E+2
RA-228DA	AXTA	0		12/2/2008 4:42:22 AM	**1.8855E+00**	1.751E-01		1.751E-01	1.461E-01	PCI/GRAM			3.041E+2
38605	**9K056A10**			**J8J18014115**	OU4-FEP-52C-SC	SOIL		10/14/2008		10/9/2008 12:35:00 PM			
RA-226DA	AXTA	0		12/2/2008 4:41:03 AM	**8.2229E-01**	7.455E-02		7.455E-02	7.164E-02	PCI/GRAM			3.721E+2
RA-228DA	AXTA	0		12/2/2008 4:41:03 AM	**1.3861E+00**	1.334E-01		1.334E-01	1.45E-01	PCI/GRAM			3.721E+2
38605	**9K056D10**			**J8J18014116**	OU4-UEP-11A-SC	SOIL		10/14/2008		10/9/2008 8:30:00 AM			
RA-226DA	AXTA	0		12/2/2008 4:41:21 AM	**1.052E+00**	8.317E-02		8.317E-02	7.525E-02	PCI/GRAM			2.661E+2
RA-228DA	AXTA	0		12/2/2008 4:41:21 AM	**1.2812E+00**	1.274E-01		1.274E-01	1.531E-01	PCI/GRAM			2.661E+2
38605	**9K056G10**			**J8J18014117**	OU4-UEP-11B-SC	SOIL		10/14/2008		10/9/2008 9:00:00 AM			
RA-226DA	AXTA	0		12/2/2008 4:41:51 AM	**1.2755E+00**	9.827E-02		9.827E-02	8.855E-02	PCI/GRAM			2.619E+2
RA-228DA	AXTA	0		12/2/2008 4:41:51 AM	**1.327E+00**	1.361E-01		1.361E-01	1.643E-01	PCI/GRAM			2.619E+2
38605	**9K056K10**			**J8J18014118**	OU4-UEP-07A-SC	SOIL		10/14/2008		10/9/2008 9:00:00 AM			
RA-226DA	AXTA	0		12/2/2008 4:42:05 AM	**1.3113E+00**	1.002E-01		1.002E-01	8.715E-02	PCI/GRAM			3.614E+2
RA-228DA	AXTA	0		12/2/2008 4:42:05 AM	**2.6808E+00**	2.22E-01		2.22E-01	1.575E-01	PCI/GRAM			3.614E+2
38605	**9K057C10**			**J8J18014120**	OU4-UEP-08A-SC	SOIL		10/14/2008		10/8/2008 2:00:00 PM			
RA-226DA	AXTA	0		12/2/2008 5:42:46 AM	**1.0589E+00**	7.371E-02		7.371E-02	4.811E-02	PCI/GRAM			3.736E+2
RA-228DA	AXTA	0		12/2/2008 5:42:46 AM	**1.0404E+00**	1.038E-01		1.038E-01	9.762E-02	PCI/GRAM			3.736E+2
38605	**9K057K10**			**J8J18014121**	OU4-UEP-08B-SC	SOIL		10/14/2008		10/8/2008 2:30:00 PM			
RA-226DA	AXTA	0		12/2/2008 8:09:16 AM	**1.0419E+00**	8.441E-02		8.441E-02	6.787E-02	PCI/GRAM			3.527E+2
RA-228DA	AXTA	0		12/2/2008 8:09:16 AM	**1.2769E+00**	1.279E-01		1.279E-01	1.379E-01	PCI/GRAM			3.527E+2
38605	**K05541GR**			**J8J18014112**	OU4-FEP-51B-SC	SOIL		10/14/2008		10/9/2008 12:20:00 PM			
RA-226DA	AXTA	0	R	12/2/2008 2:19:54 AM	**1.041E+00**	7.86E-02		7.86E-02	6.337E-02	PCI/GRAM			3.667E+2
RA-228DA	AXTA	0	R	12/2/2008 2:19:54 AM	**3.9697E+00**	3.043E-01		3.043E-01	1.094E-01	PCI/GRAM			3.667E+2
38605	**K1C451AB**			**J8J220000315**	INTRA-LAB BLANK	SOIL		10/14/2008		10/9/2008 12:20:00 PM			
RA-226DA	AXTA	0	B	12/2/2008 8:10:27 AM	**7.7045E-02**	2.907E-02		2.907E-02	7.781E-02	PCI/GRAM			3.48E+2
RA-228DA	AXTA	0	B	12/2/2008 8:10:27 AM	**-5.9047E-03**	2.932E-02		2.932E-02	1.054E-01	PCI/GRAM			3.48E+2
38605	**K1C451CS**			**J8J220000315**	INTRA-LAB CHECK	SOIL		10/14/2008		10/9/2008 12:20:00 PM			
RA-226DA	AXTA	0	S	12/2/2008 8:10:57 AM	**1.066E+00**	9.846E-02		9.846E-02	1.052E-01	PCI/GRAM	1.1483E+00		2.0E+2
RA-228DA	AXTA	0	S	12/2/2008 8:10:57 AM	**2.1437E+00**	1.828E-01		1.828E-01	2.037E-01	PCI/GRAM	1.873E+00		2.0E+2

8296315,8296315, **Samples Inserted | Updated | NotUpdated => 13 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 26 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

GAMMA

STANDARDS AND TRACEABILITY

INTERNATIONAL TECHNOLOGY CORPORATION

Q.C. VIAL TRANSMITTAL RECORD

PURPOSE: Issuance of:

- Spikes _____
- Yield Monitor(s) _____
- Quench Monitor(s) _____
- Carrier(s) _____
- Internal Audit Sample(s) _____
- Sealed Source(s) _____
- Other _____

If "Other," explain: LCS

DESCRIPTION OF ITEM:

ITAS #	Vial Code #	Quantity	Matrix
	CAL 491	1	Rocky Flats Soil

Prepared By: WG Reviewed By: DS

Date Prepared: 5/13/93 Date Reviewed: 5-21-93

Form: CC-002, 11/90, Rev 1

INTERNATIONAL TECHNOLOGY CORPORATION

SPIKE PREPARATION RECORD

1. Prepared By: WG
2. Date: 5/13/93
3. Source Identification: ROCKY FLATS SOIL # 4353
4. Source Activity (dpm/g ± dpm/g) _____

Source Identification _____

Source Activity (dpm/g ± dpm/g) _____

5. Spike ID	6. Weight	7. Activity (4*6)	8. Comments
CAL 491	200.01g		

CC Reviewer: DS Date: 5-21-93

Form CC-001, 11/90, Rev. 1

U. S. Department of Commerce
Malcolm Baldrige
Secretary
National Bureau of Standards
Ernest Ambler, Director

10 (ea) Recieved 5-18-82
~900 grams total

Betty;

cation:
Old Isotope
Cab. Net Room
99

<100 cm³
Bottle(Gm)

National Bureau of Standards

Certificate

Standard Reference Material 4353

Environmental Radioactivity

Source description	Rocky Flats Soil Number 1
Source identification	4353-
Reference time	December 15, 1980

General Comments(1)*

This Standard Reference Material (SRM), which has been developed in cooperation with member laboratories of the International Committee for Radionuclide Metrology, consists of approximately 90 grams of air-dried, pulverized soil(2) in a polyethylene bottle. The sample was collected from Rocky Flats, Colorado. This SRM is intended for use in tests of measurements of environmental radioactivity contained in matrices similar to the sample(3,4,5).

Working samples of this SRM should be dried in air at 40°C for at least 24 hours prior to weighing. The material has been tested extensively for homogeneity and the results are summarized in(6). Based on over 70 plutonium measurements, the sample contains typically one or two "hot" particles in each bottle. As described in Note (5), by judicious handling of user data, the effect of the "hot" particles upon estimates of deduced user analytical error can be made negligible for most applications.

Concentrations and uncertainties, EXCLUDING HOT PARTICLES, are quoted in the following table.

When additional data become available, it is expected that other radioactivity concentrations will be certified and purchasers will be notified. To aid in these certifications, users are requested to send their measurement results for uncertified radioactivities together with the methods used to NBS(1).

* See notes

Notes

(1) For further information contact K.G.W. Inn (301) 921-2383 or J.M.R. Hutchinson (301) 921-2396, National Bureau of Standards, Room C114, Building 245, Washington, D.C., 20234.

(2) The soil was pulverized with a "pancake" style air jet mill. The average particle size for the resulting powder is 8 μm. More than 99 percent, by weight, of the particles are less than 20 μm in diameter (VFI80).

(3) Semi-quantitative mineralogical composition by x-ray diffraction measurements (performed by Dr. H. Tourtelot, U.S. Geological Survey, Denver, CO):

Mineral	Percent by Weight
Quartz	55 - 60
Clays	25 - 30
Alkali Feldspars	5 - 10
Plagioclase	5

(4) See attached sheets: Semi-quantitative emission spectrographic analysis and Gamma-ray spectrum for SRM 4353.

(5) Suggested handling of data to obtain estimate of user analytical error for plutonium 239+240 measurements.

.482 Bq/g

A. For each sample measurement, consider the difference between it and the certified $^{239+240}Pu$ concentration of 8.03×10^{-3} Bq g^{-1}. Classify each measurement according to whether the difference is too negative to be attributed to measurement error (outside the sum of the user and NBS uncertainties at the 3s estimated standard deviation level), too positive to be attributed to measurement error, or in between. The user uncertainty for a single measurement should be taken to be larger than 10 percent (1s), the uncertainty of the certifying laboratories. This 10 percent may reflect some inhomogeneity in the material.

B. If all sample measurements are in between take no action.

If any sample measurement is too low, the user's measurements process is suspect.

If no measurements are too low but k out of a total of n sample measurements are too high, calculate the probability of k or more being caused by hot particles and decide accordingly. The probability of at least one hot particle in a sample is given by $p = 1 - e^{-\alpha w}$, where $\alpha = 0.02$ with a 95 percent confidence interval of $0.004 < \alpha < 0.047$, and w is the sample weight in grams. Thus, the probability of k or more samples with hot particles is given by

$$\sum_{i=k}^{n} \frac{n!}{(n-i)!\, i!} p^i (1-p)^{n-i}$$

This probability has been calculated for a few typical examples and is given on the next page.

(6) Summary of homogeneity measurements

A. Fourteen 100g bottled samples were examined for inhomogeneities in their gamma-ray-emission rates by counting them in a 5-in NaI(Tl) well detector coupled to a multichannel analyzer. The count rates from each bottle were compared over each of twelve selected energy regions and also over the total gamma-ray spectrum (0.04-2.05 MeV). The net sample-to-sample inhomogeneities in the gamma-ray-emission rates are summarized below:

Energy Region (MeV)	Standard deviation of the mean (%)
0.04 - 0.11	0.70
0.11 - 0.16	1.81
0.16 - 0.19	0.57
0.19 - 0.27	0.59
0.27 - 0.31	2.21
0.31 - 0.45	1.37
0.45 - 0.79	0.76
0.79 - 1.03	0.73
1.03 - 1.28	1.06
1.28 - 1.62	0.58
1.62 - 1.95	1.05
1.95 - 2.05	4.08
0.04 - 2.05	0.35

B. Inhomogeneities of ^{90}Sr and ^{137}Cs are less than 2 percent for 10g samples.

C. Inhomogeneities of alpha-particle emitting radionuclides, excluding "hot" particles, are less than 3 percent.

(7) Certified values are those measured by two or more methods and/or two or more laboratories.

(8) The random and systematic uncertainties have been combined in quadrature at a level corresponding to a standard deviation of the mean. The stated overall uncertainties are three times this value.

(9) Analytical Methods (References in parentheses)

1. $HF-HNO_3$ or $HF-HNO_3-HClO_4$ dissolution
2. KF-pyrosulfate fusion (BPH80, MAR79, SHA79)
3. HCl, HNO_3 or $HCl-HNO_3$ leaching # (HAR80, LMB75, WNB70)
4. HCl-NaOH leaching (HAR80)

continued next page

UNCERTIFIED VALUES

The following activities are uncertified because there are no corroborative measurements with which to compare them, or because, as is the case for $^{239}Pu+^{240}Pu$ the value has been measured directly by only one laboratory (EML). The quoted $^{239}Pu+^{240}Pu$ value, below, is deduced from measurements on smaller samples and agrees, within estimated uncertainties with the EML value. A 90 g sample contains an average of 1.8 hot particles, each with an average activity of about 0.04 Bq.

Radionuclide	Activity concentration (Bq g^{-1})	Laboratory	Method Code
^{55}Fe	2.49×10^{-3}	WHOI	3f
^{235}U	1.9×10^{-3}	RESL	2c
$^{239}Pu+^{240}Pu$ (total in a large sample)	8.8×10^{-3}	Refer to certification page	

REFERENCES

BPH 80 R.P. Bernabee, D.R. Percival and F.D. Hindman, Liquid-liquid extraction separation and determination of plutonium and americium, Analytical Chemistry, 52 (14), 2351 (1980).

HAR 80 Environmental Measurements Laboratory Procedures Manual, HASL 300 with 8 supplements, J.H. Harley, ed., New York (1980).

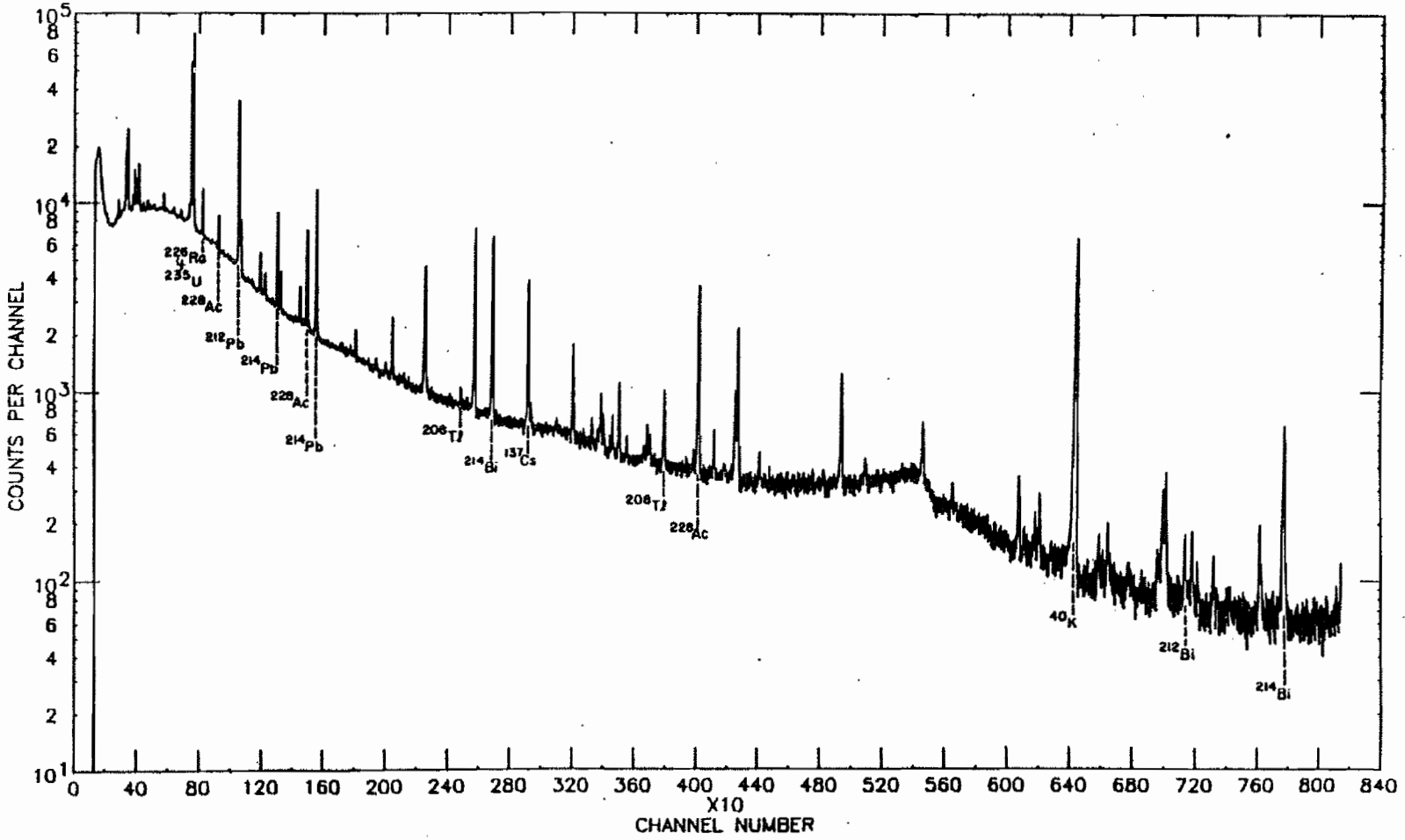
LMB 75 H.D. Livingston, D.R. Mann and V.T. Bowen, Analytical procedures for transuranic elements in seawater and marine sediments, Analytical Methods in Oceanography, Advances in Chemistry Series No. 147, T.R.P. Gibb, Jr., ed., American Chemical Society, New York, 124 (1975).

MAR 79 D.B. Martin, Determination of strontium-89 and -90 in soil with total sample decomposition, Analytical Chemistry, 51 (12), 1968 (1979).

SHA 79 C.W. Sill, F.D. Hindman and J.I. Anderson, Simultaneous determination of alpha-emitting nuclides of radium through californium in large environmental and biological samples, Analytical Chemistry, 51 (8), 1307 (1979).

VFI 80 H.L. Volchok, M.S. Feiner, K.G.W. Inn and J.F. McInroy, Development of some natural matrix standards - progress report, Environmental International, 3, 395 (1980).

WNB 70 K.M. Wong, V.E. Noshkin and V.T. Bowen, Radiochemical procedures for the analysis of strontium, antimony, rare earths, caesium, and plutonium in seawater samples, Reference Methods for Marine Radiochemistry Studies, International Atomic Energy Agency Technical Report Series No. 118, International Atomic Energy Agency, Vienna, 119 (1970).



Gamma-ray spectum of SRM 4353, with 60 cm^3 Ge(Li) detector. Background has not been subtracted and contributes typically 20 percent to the peaks for many natural radioelements.

GAMMA

CONTINUING CALIBRATION

Quality Assurance Report. Generated 16-DEC-2008 14:46:26.27

QA Filename : RDND06::RDND06$DKA100:[GER5.QA]CHECK.QAF;4

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

analysis 12/2/08

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.004930 Upper Bound : 0.005230

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 7 M Slope Samples: 7

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.005079 Std Deviation : 0.000053

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0052	| | |
17-NOV-2008 06:31	chk		0.0050	|In| |
18-NOV-2008 00:55	chk		0.0052	| | |
19-NOV-2008 01:23	chk		0.0050	| | |
20-NOV-2008 01:33	chk		0.0050	| | |
21-NOV-2008 03:50	chk		0.0051	| | |
24-NOV-2008 04:44	chk		0.0050	| | |
25-NOV-2008 04:38	chk		0.0050	| | |
26-NOV-2008 03:18	chk		0.0050	| | |
27-NOV-2008 06:34	chk		0.0052	| | |
28-NOV-2008 06:47	chk		0.0051	| | |
29-NOV-2008 07:09	chk		0.0051	| | |
1-DEC-2008 03:22	chk		0.0052	| | |
1-DEC-2008 23:35	chk		0.0051	| | |
2-DEC-2008 04:13	chk		0.0051	| | |
3-DEC-2008 01:56	chk		0.0051	| | |
4-DEC-2008 03:16	chk		0.0050	| | |
5-DEC-2008 01:32	chk		0.0051	| | |

6-DEC-2008 04:58	chk	0.0050	| |	|
8-DEC-2008 00:53	chk	0.0050	| |	|
9-DEC-2008 02:29	chk	0.0051	| |	|
10-DEC-2008 05:37	chk	0.0051	| |	|
11-DEC-2008 03:05	chk	0.0051	| |	|
12-DEC-2008 06:50	chk	0.0050	| |	|
13-DEC-2008 06:32	chk	0.0050	| |	|

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 389.500000 Upper Bound : 590.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		489.7390	| | |
17-NOV-2008 06:31	chk		489.6794	| | |
18-NOV-2008 00:55	chk		489.6746	| | |
19-NOV-2008 01:23	chk		489.7210	| | |
20-NOV-2008 01:33	chk		489.7383	| | |
21-NOV-2008 03:50	chk		489.6931	| | |
24-NOV-2008 04:44	chk		489.8210	| | |
25-NOV-2008 04:38	chk		489.7655	| | |
26-NOV-2008 03:18	chk		489.7065	| | |
27-NOV-2008 06:34	chk		489.7241	| | |
28-NOV-2008 06:47	chk		489.6766	| | |
29-NOV-2008 07:09	chk		489.7155	| | |
1-DEC-2008 03:22	chk		489.6859	| | |
1-DEC-2008 23:35	chk		489.6988	| | |
2-DEC-2008 04:13	chk		489.8084	| | |
3-DEC-2008 01:56	chk		489.7712	| | |
4-DEC-2008 03:16	chk		489.7422	| | |
5-DEC-2008 01:32	chk		489.6913	| | |
6-DEC-2008 04:58	chk		489.6260	| | |
8-DEC-2008 00:53	chk		489.6528	| | |
9-DEC-2008 02:29	chk		489.6632	| | |

10-DEC-2008 05:37	chk	489.6837	| |	|
11-DEC-2008 03:05	chk	489.6739	| |	|
12-DEC-2008 06:50	chk	489.6421	| |	|
13-DEC-2008 06:32	chk	489.5469	| |	|

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.941771 Std Deviation : 0.015859

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.9564	| | |
17-NOV-2008 06:31	chk		0.9766	|In| |
18-NOV-2008 00:55	chk		0.9556	| | |
19-NOV-2008 01:23	chk		0.9360	| | |
20-NOV-2008 01:33	chk		0.9239	| | |
21-NOV-2008 03:50	chk		0.9667	| | |
24-NOV-2008 04:44	chk		0.9584	| | |
25-NOV-2008 04:38	chk		0.9305	| | |
26-NOV-2008 03:18	chk		0.9670	| | |
27-NOV-2008 06:34	chk		0.9349	| | |
28-NOV-2008 06:47	chk		0.9488	| | |
29-NOV-2008 07:09	chk		0.9308	| | |
1-DEC-2008 03:22	chk		0.9638	| | |
1-DEC-2008 23:35	chk		0.9603	| | |
2-DEC-2008 04:13	chk		0.9377	| | |
3-DEC-2008 01:56	chk		0.9356	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
4-DEC-2008 03:16	chk		0.9370	| | |
5-DEC-2008 01:32	chk		0.9392	| | |
6-DEC-2008 04:58	chk		0.9499	| | |
8-DEC-2008 00:53	chk		0.9474	| | |
9-DEC-2008 02:29	chk		0.9716	| | |

10-DEC-2008 05:37	chk	0.9448	| | |
11-DEC-2008 03:05	chk	0.9572	| | |
12-DEC-2008 06:50	chk	0.9728	| | |
13-DEC-2008 06:32	chk	0.9389	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000681 Upper Bound : 0.000781

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000728 Std Deviation : 0.000020

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0008	| | |
17-NOV-2008 06:31	chk		0.0007	| | |
18-NOV-2008 00:55	chk		0.0008	| | |
19-NOV-2008 01:23	chk		0.0007	| | |
20-NOV-2008 01:33	chk		0.0007	| | |
21-NOV-2008 03:50	chk		0.0007	| | |
24-NOV-2008 04:44	chk		0.0007	| | |
25-NOV-2008 04:38	chk		0.0007	| | |
26-NOV-2008 03:18	chk		0.0007	| | |
27-NOV-2008 06:34	chk		0.0007	| | |
28-NOV-2008 06:47	chk		0.0008	|In| |
29-NOV-2008 07:09	chk		0.0007	| | |
1-DEC-2008 03:22	chk		0.0007	| | |
1-DEC-2008 23:35	chk		0.0008	|In| |
2-DEC-2008 04:13	chk		0.0007	| | |
3-DEC-2008 01:56	chk		0.0007	| | |
4-DEC-2008 03:16	chk		0.0007	| | |
5-DEC-2008 01:32	chk		0.0007	| | |
6-DEC-2008 04:58	chk		0.0007	| | |
8-DEC-2008 00:53	chk		0.0007	| | |
9-DEC-2008 02:29	chk		0.0007	| | |
10-DEC-2008 05:37	chk		0.0007	| | |

11-DEC-2008 03:05	chk	0.0007	| | |
12-DEC-2008 06:50	chk	0.0007	| | |
13-DEC-2008 06:32	chk	0.0007	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5544.399902 Upper Bound : 5744.399902

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5647.6689	| | |
17-NOV-2008 06:31	chk		5647.3403	| | |
18-NOV-2008 00:55	chk		5647.1890	| | |
19-NOV-2008 01:23	chk		5647.2656	| | |
20-NOV-2008 01:33	chk		5647.2671	| | |
21-NOV-2008 03:50	chk		5647.1021	| | |
24-NOV-2008 04:44	chk		5648.5225	| | |
25-NOV-2008 04:38	chk		5648.2163	| | |
26-NOV-2008 03:18	chk		5647.5815	| | |
27-NOV-2008 06:34	chk		5647.3730	| | |
28-NOV-2008 06:47	chk		5647.2983	| | |
29-NOV-2008 07:09	chk		5647.4067	| | |
1-DEC-2008 03:22	chk		5647.5220	| | |
1-DEC-2008 23:35	chk		5647.2549	| | |
2-DEC-2008 04:13	chk		5648.4404	| | |
3-DEC-2008 01:56	chk		5648.6523	| | |
4-DEC-2008 03:16	chk		5648.1992	| | |
5-DEC-2008 01:32	chk		5647.5005	| | |
6-DEC-2008 04:58	chk		5646.9854	| | |
8-DEC-2008 00:53	chk		5646.9824	| | |
9-DEC-2008 02:29	chk		5646.9707	| | |
10-DEC-2008 05:37	chk		5647.3032	| | |
11-DEC-2008 03:05	chk		5647.6045	| | |
12-DEC-2008 06:50	chk		5647.1362	| | |
13-DEC-2008 06:32	chk		5646.3540	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.842248 Std Deviation : 0.118346

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.7886	| | |
17-NOV-2008 06:31	chk		1.9089	| | |
18-NOV-2008 00:55	chk		1.7358	| | |
19-NOV-2008 01:23	chk		1.7371	| | |
20-NOV-2008 01:33	chk		2.0451	| | |
21-NOV-2008 03:50	chk		1.8750	| | |
24-NOV-2008 04:44	chk		1.7050	| | |
25-NOV-2008 04:38	chk		1.6782	| | |
26-NOV-2008 03:18	chk		1.9132	| | |
27-NOV-2008 06:34	chk		2.0338	| | |
28-NOV-2008 06:47	chk		1.8840	| | |
29-NOV-2008 07:09	chk		1.8287	| | |
1-DEC-2008 03:22	chk		1.8421	| | |
1-DEC-2008 23:35	chk		1.8835	| | |
2-DEC-2008 04:13	chk		1.9704	| | |
3-DEC-2008 01:56	chk		1.9277	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
4-DEC-2008 03:16	chk		1.9906	| | |
5-DEC-2008 01:32	chk		1.9541	| | |
6-DEC-2008 04:58	chk		1.9936	| | |
8-DEC-2008 00:53	chk		1.8546	| | |
9-DEC-2008 02:29	chk		1.9830	| | |
10-DEC-2008 05:37	chk		1.9341	| | |
11-DEC-2008 03:05	chk		1.9313	| | |
12-DEC-2008 06:50	chk		1.9471	| | |
13-DEC-2008 06:32	chk		1.8327	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001110 Upper Bound : 0.001330

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001220 Std Deviation : 0.000036

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0012				
17-NOV-2008 06:31	chk		0.0012				
18-NOV-2008 00:55	chk		0.0012				
19-NOV-2008 01:23	chk		0.0012				
20-NOV-2008 01:33	chk		0.0012				
21-NOV-2008 03:50	chk		0.0012				
24-NOV-2008 04:44	chk		0.0013				
25-NOV-2008 04:38	chk		0.0013				
26-NOV-2008 03:18	chk		0.0012				
27-NOV-2008 06:34	chk		0.0012				
28-NOV-2008 06:47	chk		0.0012				
29-NOV-2008 07:09	chk		0.0012				
1-DEC-2008 03:22	chk		0.0012				
1-DEC-2008 23:35	chk		0.0013	In			
2-DEC-2008 04:13	chk		0.0012				
3-DEC-2008 01:56	chk		0.0012				
4-DEC-2008 03:16	chk		0.0012				
5-DEC-2008 01:32	chk		0.0012				
6-DEC-2008 04:58	chk		0.0012				
8-DEC-2008 00:53	chk		0.0012				
9-DEC-2008 02:29	chk		0.0012				
10-DEC-2008 05:37	chk		0.0012				
11-DEC-2008 03:05	chk		0.0013				
12-DEC-2008 06:50	chk		0.0012				
13-DEC-2008 06:32	chk		0.0013				

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3023.000000 Upper Bound : 3223.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3124.9219	| | |
17-NOV-2008 06:31	chk		3124.9072	| | |
18-NOV-2008 00:55	chk		3124.9377	| | |
19-NOV-2008 01:23	chk		3124.9077	| | |
20-NOV-2008 01:33	chk		3124.7329	| | |
21-NOV-2008 03:50	chk		3124.6765	| | |
24-NOV-2008 04:44	chk		3125.5288	| | |
25-NOV-2008 04:38	chk		3125.3601	| | |
26-NOV-2008 03:18	chk		3124.8318	| | |
27-NOV-2008 06:34	chk		3125.0212	| | |
28-NOV-2008 06:47	chk		3124.9067	| | |
29-NOV-2008 07:09	chk		3124.7402	| | |
1-DEC-2008 03:22	chk		3124.9575	| | |
1-DEC-2008 23:35	chk		3124.7441	| | |
2-DEC-2008 04:13	chk		3125.4148	| | |
3-DEC-2008 01:56	chk		3125.4519	| | |
4-DEC-2008 03:16	chk		3125.0999	| | |
5-DEC-2008 01:32	chk		3124.9678	| | |
6-DEC-2008 04:58	chk		3124.7056	| | |
8-DEC-2008 00:53	chk		3124.6050	| | |
9-DEC-2008 02:29	chk		3124.5457	| | |
10-DEC-2008 05:37	chk		3124.8301	| | |
11-DEC-2008 03:05	chk		3124.7651	| | |
12-DEC-2008 06:50	chk		3124.6946	| | |
13-DEC-2008 06:32	chk		3124.1626	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution

Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.461725 Std Deviation : 0.085097

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.5055	| | |
17-NOV-2008 06:31	chk		1.4762	| | |
18-NOV-2008 00:55	chk		1.5065	| | |
19-NOV-2008 01:23	chk		1.5650	| | |
20-NOV-2008 01:33	chk		1.4979	| | |
21-NOV-2008 03:50	chk		1.5239	| | |
24-NOV-2008 04:44	chk		1.4118	| | |
25-NOV-2008 04:38	chk		1.6304	| | |
26-NOV-2008 03:18	chk		1.5888	| | |
27-NOV-2008 06:34	chk		1.4274	| | |
28-NOV-2008 06:47	chk		1.4709	| | |
29-NOV-2008 07:09	chk		1.4877	| | |
1-DEC-2008 03:22	chk		1.5409	| | |
1-DEC-2008 23:35	chk		1.4545	| | |
2-DEC-2008 04:13	chk		1.3341	| | |
3-DEC-2008 01:56	chk		1.4269	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
4-DEC-2008 03:16	chk		1.6042	| | |
5-DEC-2008 01:32	chk		1.4757	| | |
6-DEC-2008 04:58	chk		1.4774	| | |
8-DEC-2008 00:53	chk		1.5293	| | |
9-DEC-2008 02:29	chk		1.3129	| | |
10-DEC-2008 05:37	chk		1.6196	| | |
11-DEC-2008 03:05	chk		1.3663	| | |
12-DEC-2008 06:50	chk		1.3833	| | |
13-DEC-2008 06:32	chk		1.3679	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:46:28.37

QA Filename : RDND06::RDND06$DKA100:[GER5.QA]BKG.QAF;2

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.099977 Std Deviation : 0.006165

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.1068	| | |
23-NOV-2008 05:01	BKG		0.1053	| | |
30-NOV-2008 05:53	BKG		0.1109	| | |
7-DEC-2008 04:34	BKG		0.1100	| | |
14-DEC-2008 06:39	BKG		0.1127	|In| |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.091075 Std Deviation : 0.003643

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0912	| | |
23-NOV-2008 05:01	BKG		0.0908	| | |
30-NOV-2008 05:53	BKG		0.0979	| | |
7-DEC-2008 04:34	BKG		0.0936	| | |
14-DEC-2008 06:39	BKG		0.0945	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM

Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.040056 Std Deviation : 0.002037

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0372	| | |
23-NOV-2008 05:01	BKG		0.0351	|In| |
30-NOV-2008 05:53	BKG		0.0418	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
7-DEC-2008 04:34	BKG		0.0396	| | |
14-DEC-2008 06:39	BKG		0.0403	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.045888 Std Deviation : 0.002011

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0429	| | |
23-NOV-2008 05:01	BKG		0.0448	| | |
30-NOV-2008 05:53	BKG		0.0466	| | |
7-DEC-2008 04:34	BKG		0.0483	| | |
14-DEC-2008 06:39	BKG		0.0479	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.064189 Std Deviation : 0.002182

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0646	| | |
23-NOV-2008 05:01	BKG		0.0648	| | |
30-NOV-2008 05:53	BKG		0.0652	| | |
7-DEC-2008 04:34	BKG		0.0683	| | |
14-DEC-2008 06:39	BKG		0.0616	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.070870 Std Deviation : 0.002840

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0726	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-NOV-2008 05:01	BKG		0.0716	| | |
30-NOV-2008 05:53	BKG		0.0692	| | |
7-DEC-2008 04:34	BKG		0.0708	| | |
14-DEC-2008 06:39	BKG		0.0740	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.061159 Std Deviation : 0.001786

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0628	| | |
23-NOV-2008 05:01	BKG		0.0629	| | |
30-NOV-2008 05:53	BKG		0.0637	| | |
7-DEC-2008 04:34	BKG		0.0617	| | |
14-DEC-2008 06:39	BKG		0.0648	|In| |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.131986 Std Deviation : 0.005058

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.1380	| | |
23-NOV-2008 05:01	BKG		0.1376	| | |
30-NOV-2008 05:53	BKG		0.1409	| | |
7-DEC-2008 04:34	BKG		0.1355	| | |
14-DEC-2008 06:39	BKG		0.1410	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.085252 Std Deviation : 0.005175

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0966	|In| |
23-NOV-2008 05:01	BKG		0.0907	| | |
30-NOV-2008 05:53	BKG		0.0962	|In| |
7-DEC-2008 04:34	BKG		0.0995	|In| |
14-DEC-2008 06:39	BKG		0.0923	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.066161 Std Deviation : 0.003338

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0661	| | |
23-NOV-2008 05:01	BKG		0.0676	| | |
30-NOV-2008 05:53	BKG		0.0716	| | |
7-DEC-2008 04:34	BKG		0.0728	| | |
14-DEC-2008 06:39	BKG		0.0727	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.119677 Std Deviation : 0.005205

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.1276	| | |
23-NOV-2008 05:01	BKG		0.1228	| | |
30-NOV-2008 05:53	BKG		0.1282	| | |
7-DEC-2008 04:34	BKG		0.1254	| | |
14-DEC-2008 06:39	BKG		0.1283	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.764756 Std Deviation : 0.026590

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.7912	| | |
23-NOV-2008 05:01	BKG		0.7680	| | |
30-NOV-2008 05:53	BKG		0.7415	| | |
7-DEC-2008 04:34	BKG		0.7985	| | |
14-DEC-2008 06:39	BKG		0.8401	|In| |

Quality Assurance Report. Generated 16-DEC-2008 14:48:30.14

QA Filename : RDND07$DKA100:[GER6.QA]CHECK.QAF;5

analysis 12/2/08

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005700 Upper Bound : 0.006100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.005896 Std Deviation : 0.000062

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0058	| | |
17-NOV-2008 06:30	chk		0.0059	| | |
17-NOV-2008 06:51	chk		0.0058	| | |
18-NOV-2008 03:39	chk		0.0059	| | |
19-NOV-2008 01:22	chk		0.0060	| | |
20-NOV-2008 01:32	chk		0.0059	| | |
21-NOV-2008 03:49	chk		0.0059	| | |
24-NOV-2008 04:43	chk		0.0059	| | |
25-NOV-2008 04:38	chk		0.0057	|In| |
26-NOV-2008 03:17	chk		0.0060	| | |
27-NOV-2008 06:34	chk		0.0059	| | |
28-NOV-2008 06:47	chk		0.0059	| | |
29-NOV-2008 07:09	chk		0.0060	| | |
1-DEC-2008 03:22	chk		0.0059	| | |
1-DEC-2008 23:35	chk		0.0059	| | |
2-DEC-2008 04:12	chk		0.0059	| | |
3-DEC-2008 01:55	chk		0.0059	| | |
4-DEC-2008 03:22	chk		0.0059	| | |
5-DEC-2008 01:31	chk		0.0059	| | |
6-DEC-2008 04:51	chk		0.0058	| | |
8-DEC-2008 00:53	chk		0.0058	| | |

9-DEC-2008 00:27	chk	0.0058	| |	
10-DEC-2008 05:37	chk	0.0059	| |	
11-DEC-2008 05:47	chk	0.0058	| |	
12-DEC-2008 05:53	chk	0.0058	| |	
13-DEC-2008 06:32	chk	0.0059	| |	

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 389.000000 Upper Bound : 588.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		487.0942	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
17-NOV-2008 06:30	chk		487.3486	| | |
17-NOV-2008 06:51	chk		487.3699	| | |
18-NOV-2008 03:39	chk		487.5394	| | |
19-NOV-2008 01:22	chk		487.5514	| | |
20-NOV-2008 01:32	chk		487.4128	| | |
21-NOV-2008 03:49	chk		487.6554	| | |
24-NOV-2008 04:43	chk		487.5970	| | |
25-NOV-2008 04:38	chk		487.6623	| | |
26-NOV-2008 03:17	chk		487.6005	| | |
27-NOV-2008 06:34	chk		487.7194	| | |
28-NOV-2008 06:47	chk		487.6514	| | |
29-NOV-2008 07:09	chk		487.6421	| | |
1-DEC-2008 03:22	chk		487.7628	| | |
1-DEC-2008 23:35	chk		487.8476	| | |
2-DEC-2008 04:12	chk		487.8679	| | |
3-DEC-2008 01:55	chk		487.8302	| | |
4-DEC-2008 03:22	chk		487.7790	| | |
5-DEC-2008 01:31	chk		487.6982	| | |
6-DEC-2008 04:51	chk		487.6971	| | |
8-DEC-2008 00:53	chk		487.7862	| | |
9-DEC-2008 00:27	chk		487.7845	| | |
10-DEC-2008 05:37	chk		487.7944	| | |

11-DEC-2008 05:47	chk	487.6706	| | |
12-DEC-2008 05:53	chk	487.7454	| | |
13-DEC-2008 06:32	chk	487.6093	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.960000 Upper Bound : 1.080000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.034877 Std Deviation : 0.024536

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.0602	| | |
17-NOV-2008 06:30	chk		1.0430	| | |
17-NOV-2008 06:51	chk		1.0354	| | |
18-NOV-2008 03:39	chk		1.0344	| | |
19-NOV-2008 01:22	chk		1.0463	| | |
20-NOV-2008 01:32	chk		1.0340	| | |
21-NOV-2008 03:49	chk		1.0401	| | |
24-NOV-2008 04:43	chk		1.0429	| | |
25-NOV-2008 04:38	chk		1.0110	| | |
26-NOV-2008 03:17	chk		1.0385	| | |
27-NOV-2008 06:34	chk		1.0274	| | |
28-NOV-2008 06:47	chk		1.0230	| | |
29-NOV-2008 07:09	chk		1.0478	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
1-DEC-2008 03:22	chk		1.0338	| | |
1-DEC-2008 23:35	chk		1.0330	| | |
2-DEC-2008 04:12	chk		1.0022	| | |
3-DEC-2008 01:55	chk		1.0505	| | |
4-DEC-2008 03:22	chk		1.0596	| | |
5-DEC-2008 01:31	chk		0.9888	| | |

6-DEC-2008 04:51	chk	1.0207		
8-DEC-2008 00:53	chk	1.0397		
9-DEC-2008 00:27	chk	1.0331		
10-DEC-2008 05:37	chk	1.0371		
11-DEC-2008 05:47	chk	1.0348		
12-DEC-2008 05:53	chk	1.0542		
13-DEC-2008 06:32	chk	1.0268		

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000369 Upper Bound : 0.001250

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000782 Std Deviation : 0.000162

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0005	|In| |
17-NOV-2008 06:30	chk		0.0003	Be|Ac| |
17-NOV-2008 06:51	chk		0.0008	| |
18-NOV-2008 03:39	chk		0.0006	| |
19-NOV-2008 01:22	chk		0.0007	| |
20-NOV-2008 01:32	chk		0.0009	| |
21-NOV-2008 03:49	chk		0.0005	| |
24-NOV-2008 04:43	chk		0.0007	| |
25-NOV-2008 04:38	chk		0.0009	| |
26-NOV-2008 03:17	chk		0.0007	| |
27-NOV-2008 06:34	chk		0.0009	| |
28-NOV-2008 06:47	chk		0.0009	| |
29-NOV-2008 07:09	chk		0.0009	| |
1-DEC-2008 03:22	chk		0.0009	| |
1-DEC-2008 23:35	chk		0.0004	|In| |
2-DEC-2008 04:12	chk		0.0009	| |
3-DEC-2008 01:55	chk		0.0009	| |
4-DEC-2008 03:22	chk		0.0008	| |
5-DEC-2008 01:31	chk		0.0005	| |

6-DEC-2008 04:51	chk	0.0009	| | |
8-DEC-2008 00:53	chk	0.0009	| | |
9-DEC-2008 00:27	chk	0.0005	| | |
10-DEC-2008 05:37	chk	0.0009	| | |
11-DEC-2008 05:47	chk	0.0007	| | |
12-DEC-2008 05:53	chk	0.0005	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
13-DEC-2008 06:32	chk		0.0006	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5541.000000 Upper Bound : 5741.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5642.0000	| | |
17-NOV-2008 06:30	chk		5645.4243	| | |
17-NOV-2008 06:51	chk		5645.4814	| | |
18-NOV-2008 03:39	chk		5647.6914	| | |
19-NOV-2008 01:22	chk		5650.0000	| | |
20-NOV-2008 01:32	chk		5645.0391	| | |
21-NOV-2008 03:49	chk		5643.9268	| | |
24-NOV-2008 04:43	chk		5644.5630	| | |
25-NOV-2008 04:38	chk		5646.3203	| | |
26-NOV-2008 03:17	chk		5645.5469	| | |
27-NOV-2008 06:34	chk		5645.5840	| | |
28-NOV-2008 06:47	chk		5645.8979	| | |
29-NOV-2008 07:09	chk		5645.5088	| | |
1-DEC-2008 03:22	chk		5645.9634	| | |
1-DEC-2008 23:35	chk		5642.0967	| | |
2-DEC-2008 04:12	chk		5645.8979	| | |
3-DEC-2008 01:55	chk		5646.3960	| | |
4-DEC-2008 03:22	chk		5646.0938	| | |
5-DEC-2008 01:31	chk		5648.3442	| | |
6-DEC-2008 04:51	chk		5645.3945	| | |
8-DEC-2008 00:53	chk		5645.6479	| | |

9-DEC-2008 00:27	chk	5643.9316	|	| |
10-DEC-2008 05:37	chk	5645.7549	|	| |
11-DEC-2008 05:47	chk	5644.8481	|	| |
12-DEC-2008 05:53	chk	5643.3525	|	| |
13-DEC-2008 06:32	chk	5644.8047	|	| |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.900000 Upper Bound : 3.570000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 2.795203 Std Deviation : 0.329020

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		2.8478	| | |
17-NOV-2008 06:30	chk		2.8147	| | |
17-NOV-2008 06:51	chk		2.7652	| | |
18-NOV-2008 03:39	chk		2.4518	| | |
19-NOV-2008 01:22	chk		2.7766	| | |
20-NOV-2008 01:32	chk		2.9916	| | |
21-NOV-2008 03:49	chk		2.7322	| | |
24-NOV-2008 04:43	chk		3.2383	| | |
25-NOV-2008 04:38	chk		2.4838	| | |
26-NOV-2008 03:17	chk		3.0812	| | |
27-NOV-2008 06:34	chk		3.2090	| | |
28-NOV-2008 06:47	chk		3.0429	| | |
29-NOV-2008 07:09	chk		3.4672	|In| |
1-DEC-2008 03:22	chk		3.1904	| | |
1-DEC-2008 23:35	chk		3.0025	| | |
2-DEC-2008 04:12	chk		3.2623	| | |
3-DEC-2008 01:55	chk		2.7352	| | |

4-DEC-2008 03:22	chk	2.7181	| |	
5-DEC-2008 01:31	chk	2.3504	| |	
6-DEC-2008 04:51	chk	3.1573	| |	
8-DEC-2008 00:53	chk	2.7837	| |	
9-DEC-2008 00:27	chk	3.0232	| |	
10-DEC-2008 05:37	chk	2.9988	| |	
11-DEC-2008 05:47	chk	3.0575	| |	
12-DEC-2008 05:53	chk	2.9828	| |	
13-DEC-2008 06:32	chk	3.1740	| |	

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001300 Upper Bound : 0.016100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001482 Std Deviation : 0.000046

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0015	| | |
17-NOV-2008 06:30	chk		0.0016	| | |
17-NOV-2008 06:51	chk		0.0014	| | |
18-NOV-2008 03:39	chk		0.0015	| | |
19-NOV-2008 01:22	chk		0.0014	| | |
20-NOV-2008 01:32	chk		0.0015	| | |
21-NOV-2008 03:49	chk		0.0015	| | |
24-NOV-2008 04:43	chk		0.0016	| | |
25-NOV-2008 04:38	chk		0.0015	| | |
26-NOV-2008 03:17	chk		0.0014	| | |
27-NOV-2008 06:34	chk		0.0015	| | |
28-NOV-2008 06:47	chk		0.0015	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
29-NOV-2008 07:09	chk		0.0014	| | |

1-DEC-2008 03:22	chk	0.0015		
1-DEC-2008 23:35	chk	0.0015		
2-DEC-2008 04:12	chk	0.0015		
3-DEC-2008 01:55	chk	0.0015		
4-DEC-2008 03:22	chk	0.0015		
5-DEC-2008 01:31	chk	0.0015		
6-DEC-2008 04:51	chk	0.0015		
8-DEC-2008 00:53	chk	0.0014		
9-DEC-2008 00:27	chk	0.0014		
10-DEC-2008 05:37	chk	0.0014		
11-DEC-2008 05:47	chk	0.0015		
12-DEC-2008 05:53	chk	0.0015		
13-DEC-2008 06:32	chk	0.0014	In	

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3020.000000 Upper Bound : 3220.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		3122.4236				
17-NOV-2008 06:30	chk		3122.5930				
17-NOV-2008 06:51	chk		3122.8486				
18-NOV-2008 03:39	chk		3122.8147				
19-NOV-2008 01:22	chk		3122.8823				
20-NOV-2008 01:32	chk		3122.5688				
21-NOV-2008 03:49	chk		3123.3799				
24-NOV-2008 04:43	chk		3122.9109				
25-NOV-2008 04:38	chk		3123.1182				
26-NOV-2008 03:17	chk		3122.9448				
27-NOV-2008 06:34	chk		3122.8174				
28-NOV-2008 06:47	chk		3123.3867				
29-NOV-2008 07:09	chk		3122.9858				
1-DEC-2008 03:22	chk		3123.5205				
1-DEC-2008 23:35	chk		3123.6362				
2-DEC-2008 04:12	chk		3123.5186				
3-DEC-2008 01:55	chk		3124.3606				
4-DEC-2008 03:22	chk		3123.5671				
5-DEC-2008 01:31	chk		3123.0134				

6-DEC-2008 04:51	chk	3122.8472 | | |
8-DEC-2008 00:53	chk	3123.2551 | | |
9-DEC-2008 00:27	chk	3123.5269 | | |
10-DEC-2008 05:37	chk	3123.7563 | | |
11-DEC-2008 05:47	chk	3123.5034 | | |
12-DEC-2008 05:53	chk	3123.1294 | | |
13-DEC-2008 06:32	chk	3122.3335 | | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.495000 Upper Bound : 2.030000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.926119 Std Deviation : 0.127192

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		2.0700	Ab| | |
17-NOV-2008 06:30	chk		2.0573	Ab| | |
17-NOV-2008 06:51	chk		1.9586	| | |
18-NOV-2008 03:39	chk		2.1173	Ab| | |
19-NOV-2008 01:22	chk		1.8644	| | |
20-NOV-2008 01:32	chk		2.0249	| | |
21-NOV-2008 03:49	chk		1.8309	| | |
24-NOV-2008 04:43	chk		1.9411	| | |
25-NOV-2008 04:38	chk		2.2794	Ab|In| |
26-NOV-2008 03:17	chk		1.8886	| | |
27-NOV-2008 06:34	chk		2.0201	| | |
28-NOV-2008 06:47	chk		1.8381	| | |
29-NOV-2008 07:09	chk		2.0448	Ab| | |
1-DEC-2008 03:22	chk		1.9741	| | |
1-DEC-2008 23:35	chk		2.0728	Ab| | |

2-DEC-2008 04:12	chk	1.8315	| |	
3-DEC-2008 01:55	chk	2.0528	Ab| |	
4-DEC-2008 03:22	chk	1.8653	| |	
5-DEC-2008 01:31	chk	2.0184	| |	
6-DEC-2008 04:51	chk	1.8915	| |	
8-DEC-2008 00:53	chk	1.7649	| |	
9-DEC-2008 00:27	chk	1.8207	| |	
10-DEC-2008 05:37	chk	2.0848	Ab| |	
11-DEC-2008 05:47	chk	2.0798	Ab| |	
12-DEC-2008 05:53	chk	2.0506	Ab| |	
13-DEC-2008 06:32	chk	1.8523	| |	

Quality Assurance Report. Generated 16-DEC-2008 14:48:30.97

QA Filename : RDND07$DKA100:[GER6.QA]BKG.QAF;4

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.107544 Std Deviation : 0.002871

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1114	| | |
17-NOV-2008 07:16	bkg		0.1098	| | |
23-NOV-2008 05:00	bkg		0.1117	| | |
24-NOV-2008 05:22	bkg		0.1035	| | |
30-NOV-2008 05:53	bkg		0.1100	| | |
7-DEC-2008 04:33	bkg		0.1087	| | |
8-DEC-2008 04:10	bkg		0.1126	| | |
14-DEC-2008 06:39	bkg		0.1102	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.086360 Std Deviation : 0.002269

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0917	|In| |
17-NOV-2008 07:16	bkg		0.0846	| | |
23-NOV-2008 05:00	bkg		0.0909	| | |
24-NOV-2008 05:22	bkg		0.0857	| | |
30-NOV-2008 05:53	bkg		0.0890	| | |
7-DEC-2008 04:33	bkg		0.0914	|In| |
8-DEC-2008 04:10	bkg		0.0856	| | |
14-DEC-2008 06:39	bkg		0.0870	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.047199 Std Deviation : 0.002058

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0467	| | |
17-NOV-2008 07:16	bkg		0.0470	| | |
23-NOV-2008 05:00	bkg		0.0468	| | |
24-NOV-2008 05:22	bkg		0.0468	| | |
30-NOV-2008 05:53	bkg		0.0462	| | |
7-DEC-2008 04:33	bkg		0.0494	| | |
8-DEC-2008 04:10	bkg		0.0472	| | |
14-DEC-2008 06:39	bkg		0.0459	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.056656 Std Deviation : 0.001734

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0558	| | |
17-NOV-2008 07:16	bkg		0.0520	|In| |
23-NOV-2008 05:00	bkg		0.0609	|In| |
24-NOV-2008 05:22	bkg		0.0580	| | |
30-NOV-2008 05:53	bkg		0.0588	| | |
7-DEC-2008 04:33	bkg		0.0586	| | |
8-DEC-2008 04:10	bkg		0.0574	| | |
14-DEC-2008 06:39	bkg		0.0577	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.070078 Std Deviation : 0.002113

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0699	| | |
17-NOV-2008 07:16	bkg		0.0697	| | |
23-NOV-2008 05:00	bkg		0.0684	| | |
24-NOV-2008 05:22	bkg		0.0693	| | |
30-NOV-2008 05:53	bkg		0.0681	| | |
7-DEC-2008 04:33	bkg		0.0662	| | |
8-DEC-2008 04:10	bkg		0.0666	| | |

14-DEC-2008 06:39 bkg 0.0686 | | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.075855 Std Deviation : 0.002138

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0753	| | |
17-NOV-2008 07:16	bkg		0.0814	|In| |
23-NOV-2008 05:00	bkg		0.0768	| | |
24-NOV-2008 05:22	bkg		0.0784	| | |
30-NOV-2008 05:53	bkg		0.0757	| | |
7-DEC-2008 04:33	bkg		0.0823	|Ac| |
8-DEC-2008 04:10	bkg		0.0743	| | |
14-DEC-2008 06:39	bkg		0.0791	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.066619 Std Deviation : 0.002202

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0687	| | |
17-NOV-2008 07:16	bkg		0.0702	| | |

23-NOV-2008 05:00	bkg	0.0689	| | |
24-NOV-2008 05:22	bkg	0.0661	| | |
30-NOV-2008 05:53	bkg	0.0682	| | |
7-DEC-2008 04:33	bkg	0.0675	| | |
8-DEC-2008 04:10	bkg	0.0665	| | |
14-DEC-2008 06:39	bkg	0.0691	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.106940 Std Deviation : 0.003202

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1128	| | |
17-NOV-2008 07:16	bkg		0.1081	| | |
23-NOV-2008 05:00	bkg		0.1110	| | |
24-NOV-2008 05:22	bkg		0.1075	| | |
30-NOV-2008 05:53	bkg		0.1062	| | |
7-DEC-2008 04:33	bkg		0.1088	| | |
8-DEC-2008 04:10	bkg		0.1114	| | |
14-DEC-2008 06:39	bkg		0.1101	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.086534 Std Deviation : 0.003037

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0954	|In| |
17-NOV-2008 07:16	bkg		0.0925	| | |
23-NOV-2008 05:00	bkg		0.0919	| | |
24-NOV-2008 05:22	bkg		0.0890	| | |
30-NOV-2008 05:53	bkg		0.0896	| | |
7-DEC-2008 04:33	bkg		0.0960	|Ac| |
8-DEC-2008 04:10	bkg		0.0924	| | |
14-DEC-2008 06:39	bkg		0.0876	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.068306 Std Deviation : 0.001519

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0732	|Ac| |
17-NOV-2008 07:16	bkg		0.0710	| | |
23-NOV-2008 05:00	bkg		0.0736	|Ac| |
24-NOV-2008 05:22	bkg		0.0698	| | |
30-NOV-2008 05:53	bkg		0.0701	| | |
7-DEC-2008 04:33	bkg		0.0701	| | |
8-DEC-2008 04:10	bkg		0.0707	| | |
14-DEC-2008 06:39	bkg		0.0672	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.092564 Std Deviation : 0.002830

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0942	| | |
17-NOV-2008 07:16	bkg		0.0934	| | |
23-NOV-2008 05:00	bkg		0.0936	| | |
24-NOV-2008 05:22	bkg		0.0927	| | |
30-NOV-2008 05:53	bkg		0.0914	| | |
7-DEC-2008 04:33	bkg		0.0911	| | |
8-DEC-2008 04:10	bkg		0.0934	| | |
14-DEC-2008 06:39	bkg		0.0951	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.712145 Std Deviation : 0.018728

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.7517	|In| |
17-NOV-2008 07:16	bkg		0.7174	| | |
23-NOV-2008 05:00	bkg		0.7124	| | |
24-NOV-2008 05:22	bkg		0.7151	| | |
30-NOV-2008 05:53	bkg		0.7294	| | |
7-DEC-2008 04:33	bkg		0.7248	| | |
8-DEC-2008 04:10	bkg		0.7249	| | |
14-DEC-2008 06:39	bkg		0.7442	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:21.58

QA Filename : RDND07$DKA100:[GER7.QA]CHECK.QAF;4

-- Multi-Test Full Report --

analysis 12/2/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005842 Upper Bound : 0.006184

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.006018 Std Deviation : 0.000057

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0061	| | |
17-NOV-2008 06:30	CHK		0.0060	| | |
18-NOV-2008 00:58	CHK		0.0060	| | |
19-NOV-2008 01:22	CHK		0.0060	| | |
20-NOV-2008 01:39	CHK		0.0060	| | |
21-NOV-2008 03:49	CHK		0.0060	| | |
24-NOV-2008 04:43	CHK		0.0061	| | |
25-NOV-2008 08:45	CHK		0.0060	| | |
25-NOV-2008 08:57	CHK		0.0060	| | |
26-NOV-2008 03:17	CHK		0.0061	| | |
27-NOV-2008 06:34	CHK		0.0061	| | |
28-NOV-2008 06:47	CHK		0.0061	| | |
29-NOV-2008 07:09	CHK		0.0060	| | |
1-DEC-2008 03:22	CHK		0.0060	| | |
1-DEC-2008 23:35	CHK		0.0060	| | |
2-DEC-2008 04:18	CHK		0.0060	| | |
3-DEC-2008 02:00	CHK		0.0060	| | |
4-DEC-2008 03:16	CHK		0.0060	| | |
5-DEC-2008 01:50	CHK		0.0060	| | |
6-DEC-2008 04:51	CHK		0.0060	| | |
8-DEC-2008 00:53	CHK		0.0059	| | |

9-DEC-2008 02:29	CHK	0.0060	| | |
10-DEC-2008 05:37	CHK	0.0060	| | |
11-DEC-2008 03:05	CHK	0.0060	| | |
12-DEC-2008 04:09	CHK	0.0061	| | |
13-DEC-2008 07:10	CHK	0.0060	| | |
13-DEC-2008 07:22	CHK	0.0059	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 386.500000 Upper Bound : 586.500000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 486.049683 Std Deviation : 0.077154

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		485.9893	| | |
17-NOV-2008 06:30	CHK		485.9739	| | |
18-NOV-2008 00:58	CHK		485.9930	| | |
19-NOV-2008 01:22	CHK		486.0076	| | |
20-NOV-2008 01:39	CHK		485.9880	| | |
21-NOV-2008 03:49	CHK		485.9667	| | |
24-NOV-2008 04:43	CHK		485.9151	| | |
25-NOV-2008 08:45	CHK		485.9541	| | |
25-NOV-2008 08:57	CHK		485.9394	| | |
26-NOV-2008 03:17	CHK		485.9104	| | |
27-NOV-2008 06:34	CHK		485.9295	| | |
28-NOV-2008 06:47	CHK		485.9575	| | |
29-NOV-2008 07:09	CHK		485.9527	| | |
1-DEC-2008 03:22	CHK		485.9818	| | |
1-DEC-2008 23:35	CHK		485.9749	| | |
2-DEC-2008 04:18	CHK		485.9682	| | |

3-DEC-2008 02:00	CHK	486.0133		
4-DEC-2008 03:16	CHK	485.9651		
5-DEC-2008 01:50	CHK	485.8887	In	
6-DEC-2008 04:51	CHK	485.8758	In	
8-DEC-2008 00:53	CHK	485.8727	In	
9-DEC-2008 02:29	CHK	485.8788	In	
10-DEC-2008 05:37	CHK	485.8703	In	
11-DEC-2008 03:05	CHK	485.9495		
12-DEC-2008 04:09	CHK	485.9257		
13-DEC-2008 07:10	CHK	485.8198	In	
13-DEC-2008 07:22	CHK	485.8552	In	

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.004411 Std Deviation : 0.025032

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.0772	In	
17-NOV-2008 06:30	CHK		0.9826		
18-NOV-2008 00:58	CHK		1.0031		
19-NOV-2008 01:22	CHK		0.9980		
20-NOV-2008 01:39	CHK		0.9774		
21-NOV-2008 03:49	CHK		0.9970		
24-NOV-2008 04:43	CHK		1.0185		
25-NOV-2008 08:45	CHK		1.1368	Ac	
25-NOV-2008 08:57	CHK		1.0306		
26-NOV-2008 03:17	CHK		1.0276		
27-NOV-2008 06:34	CHK		0.9958		
28-NOV-2008 06:47	CHK		0.9777		
29-NOV-2008 07:09	CHK		1.0004		
1-DEC-2008 03:22	CHK		1.0214		

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

1-DEC-2008 23:35	CHK	1.0270	|	|	|
2-DEC-2008 04:18	CHK	1.0228	|	|	|
3-DEC-2008 02:00	CHK	1.0162	|	|	|
4-DEC-2008 03:16	CHK	1.0294	|	|	|
5-DEC-2008 01:50	CHK	1.0337	|	|	|
6-DEC-2008 04:51	CHK	0.9895	|	|	|
8-DEC-2008 00:53	CHK	1.0015	|	|	|
9-DEC-2008 02:29	CHK	1.0117	|	|	|
10-DEC-2008 05:37	CHK	0.9877	|	|	|
11-DEC-2008 03:05	CHK	1.0148	|	|	|
12-DEC-2008 04:09	CHK	1.0579	In	|	|
13-DEC-2008 07:10	CHK	0.9843	|	|	|
13-DEC-2008 07:22	CHK	1.0483	|	|	|

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000876 Upper Bound : 0.001030

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000949 Std Deviation : 0.000025

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	CHK		0.0010	|	|	|	
17-NOV-2008 06:30	CHK		0.0009	In	|	|	
18-NOV-2008 00:58	CHK		0.0010	|	|	|	
19-NOV-2008 01:22	CHK		0.0009	|	|	|	
20-NOV-2008 01:39	CHK		0.0009	|	|	|	
21-NOV-2008 03:49	CHK		0.0009	|	|	|	
24-NOV-2008 04:43	CHK		0.0009	|	|	|	
25-NOV-2008 08:45	CHK		0.0009	|	|	|	
25-NOV-2008 08:57	CHK		0.0009	|	|	|	
26-NOV-2008 03:17	CHK		0.0009	|	|	|	
27-NOV-2008 06:34	CHK		0.0010	|	|	|	
28-NOV-2008 06:47	CHK		0.0010	|	|	|	
29-NOV-2008 07:09	CHK		0.0010	|	|	|	

1-DEC-2008 03:22	CHK	0.0010	| |	|
1-DEC-2008 23:35	CHK	0.0009	| |	|
2-DEC-2008 04:18	CHK	0.0010	| |	|
3-DEC-2008 02:00	CHK	0.0010	| |	|
4-DEC-2008 03:16	CHK	0.0010	| |	|
5-DEC-2008 01:50	CHK	0.0009	| |	|
6-DEC-2008 04:51	CHK	0.0009	| |	|
8-DEC-2008 00:53	CHK	0.0010	| |	|
9-DEC-2008 02:29	CHK	0.0010	| |	|
10-DEC-2008 05:37	CHK	0.0010	|In|	|
11-DEC-2008 03:05	CHK	0.0010	| |	|
12-DEC-2008 04:09	CHK	0.0009	| |	|

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
13-DEC-2008 07:10	CHK		0.0010	|In| |
13-DEC-2008 07:22	CHK		0.0010	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5528.299805 Upper Bound : 5728.299805

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 5626.695801 Std Deviation : 0.467058

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		5626.6445	| | |
17-NOV-2008 06:30	CHK		5626.4199	| | |
18-NOV-2008 00:58	CHK		5626.5459	| | |
19-NOV-2008 01:22	CHK		5626.5513	| | |
20-NOV-2008 01:39	CHK		5626.3154	| | |
21-NOV-2008 03:49	CHK		5626.3730	| | |
24-NOV-2008 04:43	CHK		5625.6909	|In| |
25-NOV-2008 08:45	CHK		5625.9355	| | |

25-NOV-2008 08:57	CHK	5626.4111		
26-NOV-2008 03:17	CHK	5625.9014		
27-NOV-2008 06:34	CHK	5625.9111		
28-NOV-2008 06:47	CHK	5626.0190		
29-NOV-2008 07:09	CHK	5626.0674		
1-DEC-2008 03:22	CHK	5626.0991		
1-DEC-2008 23:35	CHK	5625.9155		
2-DEC-2008 04:18	CHK	5626.2959		
3-DEC-2008 02:00	CHK	5626.6372		
4-DEC-2008 03:16	CHK	5626.3306		
5-DEC-2008 01:50	CHK	5626.0376		
6-DEC-2008 04:51	CHK	5625.7959		
8-DEC-2008 00:53	CHK	5625.8037		
9-DEC-2008 02:29	CHK	5625.7378	In	
10-DEC-2008 05:37	CHK	5625.7705		
11-DEC-2008 03:05	CHK	5625.8965		
12-DEC-2008 04:09	CHK	5625.9287		
13-DEC-2008 07:10	CHK	5625.2319	Ac	
13-DEC-2008 07:22	CHK	5625.3857	In	

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.995020 Std Deviation : 0.135708

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		2.0653	
17-NOV-2008 06:30	CHK		1.8155	
18-NOV-2008 00:58	CHK		1.9645	
19-NOV-2008 01:22	CHK		2.0665	
20-NOV-2008 01:39	CHK		2.0272	
21-NOV-2008 03:49	CHK		2.1284	

24-NOV-2008 04:43	CHK		2.1373	| |	
25-NOV-2008 08:45	CHK		1.9322	| |	
25-NOV-2008 08:57	CHK		2.1389	| |	
26-NOV-2008 03:17	CHK		2.1034	| |	
27-NOV-2008 06:34	CHK		1.7972	| |	
28-NOV-2008 06:47	CHK		1.8329	| |	
29-NOV-2008 07:09	CHK		1.9806	| |	
1-DEC-2008 03:22	CHK		2.0427	| |	
1-DEC-2008 23:35	CHK		1.9423	| |	
2-DEC-2008 04:18	CHK		1.8932	| |	
3-DEC-2008 02:00	CHK		2.2781	In |	
4-DEC-2008 03:16	CHK		2.0062	| |	
5-DEC-2008 01:50	CHK		1.7408	| |	
6-DEC-2008 04:51	CHK		2.0654	| |	
8-DEC-2008 00:53	CHK		1.9338	| |	
9-DEC-2008 02:29	CHK		1.9174	| |	
10-DEC-2008 05:37	CHK		2.1941	| |	
11-DEC-2008 03:05	CHK		2.0787	| |	
12-DEC-2008 04:09	CHK		2.1996	| |	
13-DEC-2008 07:10	CHK		1.9456	| |	
13-DEC-2008 07:22	CHK		2.1601	| |	

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001424 Upper Bound : 0.001700

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001560 Std Deviation : 0.000048

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0015	| | |
17-NOV-2008 06:30	CHK		0.0016	| | |
18-NOV-2008 00:58	CHK		0.0016	| | |
19-NOV-2008 01:22	CHK		0.0016	| | |
20-NOV-2008 01:39	CHK		0.0016	| | |

21-NOV-2008 03:49	CHK	0.0016	| |	|
24-NOV-2008 04:43	CHK	0.0015	| |	|
25-NOV-2008 08:45	CHK	0.0016	| |	|
25-NOV-2008 08:57	CHK	0.0015	| |	|
26-NOV-2008 03:17	CHK	0.0015	| |	|
27-NOV-2008 06:34	CHK	0.0015	| |	|

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
28-NOV-2008 06:47	CHK		0.0016	| | |
29-NOV-2008 07:09	CHK		0.0016	| | |
1-DEC-2008 03:22	CHK		0.0016	| | |
1-DEC-2008 23:35	CHK		0.0015	| | |
2-DEC-2008 04:18	CHK		0.0016	| | |
3-DEC-2008 02:00	CHK		0.0016	| | |
4-DEC-2008 03:16	CHK		0.0016	| | |
5-DEC-2008 01:50	CHK		0.0017	|In| |
6-DEC-2008 04:51	CHK		0.0015	| | |
8-DEC-2008 00:53	CHK		0.0016	| | |
9-DEC-2008 02:29	CHK		0.0017	|In| |
10-DEC-2008 05:37	CHK		0.0015	| | |
11-DEC-2008 03:05	CHK		0.0016	| | |
12-DEC-2008 04:09	CHK		0.0015	| | |
13-DEC-2008 07:10	CHK		0.0016	| | |
13-DEC-2008 07:22	CHK		0.0017	|In| |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3016.000000 Upper Bound : 3216.000000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 3116.505859 Std Deviation : 0.276815

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

15-NOV-2008 06:29	CHK	3116.9106	|	| |
17-NOV-2008 06:30	CHK	3116.4700	|	| |
18-NOV-2008 00:58	CHK	3116.7075	|	| |
19-NOV-2008 01:22	CHK	3116.8645	|	| |
20-NOV-2008 01:39	CHK	3116.4890	|	| |
21-NOV-2008 03:49	CHK	3116.5784	|	| |
24-NOV-2008 04:43	CHK	3116.4343	|	| |
25-NOV-2008 08:45	CHK	3116.2666	|	| |
25-NOV-2008 08:57	CHK	3116.6431	|	| |
26-NOV-2008 03:17	CHK	3116.5950	|	| |
27-NOV-2008 06:34	CHK	3116.3267	|	| |
28-NOV-2008 06:47	CHK	3116.5493	|	| |
29-NOV-2008 07:09	CHK	3116.4812	|	| |
1-DEC-2008 03:22	CHK	3116.5144	|	| |
1-DEC-2008 23:35	CHK	3116.2754	|	| |
2-DEC-2008 04:18	CHK	3116.5667	|	| |
3-DEC-2008 02:00	CHK	3116.5332	|	| |
4-DEC-2008 03:16	CHK	3116.5754	|	| |
5-DEC-2008 01:50	CHK	3116.5522	|	| |
6-DEC-2008 04:51	CHK	3116.0461	|	| |
8-DEC-2008 00:53	CHK	3116.1897	|	| |
9-DEC-2008 02:29	CHK	3116.3547	|	| |

Quality Assurance Multi-Test Full Report (continued) Page : 7

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-DEC-2008 05:37	CHK		3116.4482	| | |
11-DEC-2008 03:05	CHK		3116.2861	| | |
12-DEC-2008 04:09	CHK		3116.3215	| | |
13-DEC-2008 07:10	CHK		3116.0154	| | |
13-DEC-2008 07:22	CHK		3116.0137	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.538682 Std Deviation : 0.085779

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.6939	| | |
17-NOV-2008 06:30	CHK		1.5841	| | |
18-NOV-2008 00:58	CHK		1.4170	| | |
19-NOV-2008 01:22	CHK		1.4739	| | |
20-NOV-2008 01:39	CHK		1.5354	| | |
21-NOV-2008 03:49	CHK		1.3675	| | |
24-NOV-2008 04:43	CHK		1.4202	| | |
25-NOV-2008 08:45	CHK		1.4368	| | |
25-NOV-2008 08:57	CHK		1.4117	| | |
26-NOV-2008 03:17	CHK		1.6080	| | |
27-NOV-2008 06:34	CHK		1.3050	|In| |
28-NOV-2008 06:47	CHK		1.6857	| | |
29-NOV-2008 07:09	CHK		1.5832	| | |
1-DEC-2008 03:22	CHK		1.5421	| | |
1-DEC-2008 23:35	CHK		1.4810	| | |
2-DEC-2008 04:18	CHK		1.4807	| | |
3-DEC-2008 02:00	CHK		1.5948	| | |
4-DEC-2008 03:16	CHK		1.7693	|In| |
5-DEC-2008 01:50	CHK		1.4687	| | |
6-DEC-2008 04:51	CHK		1.6230	| | |
8-DEC-2008 00:53	CHK		1.4746	| | |
9-DEC-2008 02:29	CHK		1.4877	| | |
10-DEC-2008 05:37	CHK		1.4244	| | |
11-DEC-2008 03:05	CHK		1.6402	| | |
12-DEC-2008 04:09	CHK		1.5187	| | |
13-DEC-2008 07:10	CHK		1.5167	| | |
13-DEC-2008 07:22	CHK		1.6469	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:22.35

QA Filename : RDND07$DKA100:[GER7.QA]BKG.QAF;3

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.088878 Std Deviation : 0.010153

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0861	| | |
23-NOV-2008 05:00	bkg		0.0884	| | |
30-NOV-2008 05:53	bkg		0.0887	| | |
7-DEC-2008 04:34	bkg		0.0889	| | |
14-DEC-2008 06:39	bkg		0.0871	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.079813 Std Deviation : 0.004134

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0873	| | |
23-NOV-2008 05:00	bkg		0.0768	| | |
30-NOV-2008 05:53	bkg		0.0787	| | |
7-DEC-2008 04:34	bkg		0.0829	| | |
14-DEC-2008 06:39	bkg		0.0784	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.038980 Std Deviation : 0.001947

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg	0.0420	| | |
23-NOV-2008 05:00 bkg	0.0368	| | |
30-NOV-2008 05:53 bkg	0.0349	|In| |

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
7-DEC-2008 04:34	bkg		0.0394	| | |
14-DEC-2008 06:39	bkg		0.0395	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.044938 Std Deviation : 0.002805

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0455	| | |
23-NOV-2008 05:00	bkg		0.0432	| | |
30-NOV-2008 05:53	bkg		0.0468	| | |
7-DEC-2008 04:34	bkg		0.0438	| | |
14-DEC-2008 06:39	bkg		0.0460	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.060576 Std Deviation : 0.002796

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0603	| | |

23-NOV-2008 05:00 bkg 0.0622 | | |
30-NOV-2008 05:53 bkg 0.0595 | | |
7-DEC-2008 04:34 bkg 0.0611 | | |
14-DEC-2008 06:39 bkg 0.0643 | | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.068494 Std Deviation : 0.002754

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0706	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-NOV-2008 05:00	bkg		0.0662	| | |
30-NOV-2008 05:53	bkg		0.0657	| | |
7-DEC-2008 04:34	bkg		0.0686	| | |
14-DEC-2008 06:39	bkg		0.0699	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.058259 Std Deviation : 0.002335

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0583	| | |
23-NOV-2008 05:00	bkg		0.0556	| | |

30-NOV-2008 05:53 bkg 0.0596 | | |
7-DEC-2008 04:34 bkg 0.0554 | | |
14-DEC-2008 06:39 bkg 0.0606 | | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.110889 Std Deviation : 0.007089

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1131	| | |
23-NOV-2008 05:00	bkg		0.1074	| | |
30-NOV-2008 05:53	bkg		0.1049	| | |
7-DEC-2008 04:34	bkg		0.1069	| | |
14-DEC-2008 06:39	bkg		0.1062	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.083383 Std Deviation : 0.005570

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0915	| | |
23-NOV-2008 05:00	bkg		0.0882	| | |
30-NOV-2008 05:53	bkg		0.0825	| | |

7-DEC-2008 04:34	bkg	0.0977 |In| |
14-DEC-2008 06:39	bkg	0.0846 | | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.061808 Std Deviation : 0.003244

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0616	| | |
23-NOV-2008 05:00	bkg		0.0624	| | |
30-NOV-2008 05:53	bkg		0.0586	| | |
7-DEC-2008 04:34	bkg		0.0667	| | |
14-DEC-2008 06:39	bkg		0.0596	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.094509 Std Deviation : 0.006636

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0946	| | |
23-NOV-2008 05:00	bkg		0.0918	| | |
30-NOV-2008 05:53	bkg		0.0924	| | |
7-DEC-2008 04:34	bkg		0.0929	| | |
14-DEC-2008 06:39	bkg		0.0912	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.669135 Std Deviation : 0.030834

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.6816	| | |
23-NOV-2008 05:00	bkg		0.6870	| | |
30-NOV-2008 05:53	bkg		0.6735	| | |
7-DEC-2008 04:34	bkg		0.6860	| | |
14-DEC-2008 06:39	bkg		0.6747	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:37.77

QA Filename : RDND07$DKA100:[GER8.QA]CHECK.QAF;4

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005600 Upper Bound : 0.005900

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.005727 Std Deviation : 0.000051

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0056	| | |
17-NOV-2008 06:30	chk		0.0058	| | |
18-NOV-2008 00:55	chk		0.0057	| | |
19-NOV-2008 01:23	chk		0.0056	|In| |
20-NOV-2008 01:32	chk		0.0057	| | |
21-NOV-2008 03:49	chk		0.0057	| | |
24-NOV-2008 04:43	chk		0.0058	| | |
24-NOV-2008 04:55	chk		0.0057	| | |
25-NOV-2008 04:38	chk		0.0056	|In| |
26-NOV-2008 03:17	chk		0.0057	| | |
27-NOV-2008 06:34	chk		0.0058	| | |
28-NOV-2008 06:47	chk		0.0058	| | |
29-NOV-2008 07:09	chk		0.0057	| | |
29-NOV-2008 07:27	chk		0.0057	| | |
1-DEC-2008 03:22	chk		0.0057	| | |
1-DEC-2008 03:35	chk		0.0058	| | |
1-DEC-2008 23:39	chk		0.0057	| | |
2-DEC-2008 04:23	chk		0.0058	|In| |
3-DEC-2008 01:56	chk		0.0057	| | |
4-DEC-2008 03:16	chk		0.0057	| | |
5-DEC-2008 01:31	chk		0.0056	|In| |

6-DEC-2008 04:51	chk	0.0056		
6-DEC-2008 05:04	chk	0.0056	Be|Ac|	
6-DEC-2008 05:16	chk	0.0056	|In|	
8-DEC-2008 00:58	chk	0.0058		
9-DEC-2008 00:32	chk	0.0058		
10-DEC-2008 05:46	chk	0.0056		
11-DEC-2008 05:47	chk	0.0058		
12-DEC-2008 05:54	chk	0.0057		
13-DEC-2008 06:32	chk	0.0057		

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 386.000000 Upper Bound : 586.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		494.0360	
17-NOV-2008 06:30	chk		493.8856	
18-NOV-2008 00:55	chk		493.7870	
19-NOV-2008 01:23	chk		493.7892	
20-NOV-2008 01:32	chk		493.8440	
21-NOV-2008 03:49	chk		493.7338	
24-NOV-2008 04:43	chk		490.0156	
24-NOV-2008 04:55	chk		490.0070	
25-NOV-2008 04:38	chk		489.9158	
26-NOV-2008 03:17	chk		489.3595	
27-NOV-2008 06:34	chk		489.3191	
28-NOV-2008 06:47	chk		489.3628	
29-NOV-2008 07:09	chk		490.2481	
29-NOV-2008 07:27	chk		490.2728	
1-DEC-2008 03:22	chk		490.2609	
1-DEC-2008 03:35	chk		490.3565	
1-DEC-2008 23:39	chk		490.1304	
2-DEC-2008 04:23	chk		490.0785	
3-DEC-2008 01:56	chk		489.8708	

4-DEC-2008 03:16	chk	489.7955	|	|
5-DEC-2008 01:31	chk	489.7253	|	|
6-DEC-2008 04:51	chk	489.8713	|	|
6-DEC-2008 05:04	chk	489.8534	|	|
6-DEC-2008 05:16	chk	489.8661	|	|
8-DEC-2008 00:58	chk	489.9066	|	|
9-DEC-2008 00:32	chk	489.9601	|	|
10-DEC-2008 05:46	chk	489.8828	|	|
11-DEC-2008 05:47	chk	489.8966	|	|
12-DEC-2008 05:54	chk	489.7899	|	|
13-DEC-2008 06:32	chk	489.7968	|	|

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.020000 Upper Bound : 1.130000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.121632 Std Deviation : 0.022860

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.1256	| | |
17-NOV-2008 06:30	chk		1.1366	Ab| | |
18-NOV-2008 00:55	chk		1.1502	Ab| | |
19-NOV-2008 01:23	chk		1.1458	Ab| | |
20-NOV-2008 01:32	chk		1.1417	Ab| | |
21-NOV-2008 03:49	chk		1.1657	Ab| | |
24-NOV-2008 04:43	chk		1.1215	| | |
24-NOV-2008 04:55	chk		1.1285	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-NOV-2008 04:38	chk		1.1456	Ab| | |
26-NOV-2008 03:17	chk		1.1331	Ab| | |
27-NOV-2008 06:34	chk		1.1451	Ab| | |

28-NOV-2008 06:47	chk	1.1688	Ab|In|	
29-NOV-2008 07:09	chk	1.1489	Ab|	
29-NOV-2008 07:27	chk	1.1280		
1-DEC-2008 03:22	chk	1.1437	Ab|	
1-DEC-2008 03:35	chk	1.1758	Ab|In|	
1-DEC-2008 23:39	chk	1.1451	Ab|	
2-DEC-2008 04:23	chk	1.1445	Ab|	
3-DEC-2008 01:56	chk	1.1591	Ab|	
4-DEC-2008 03:16	chk	1.1433	Ab|	
5-DEC-2008 01:31	chk	1.1443	Ab|	
6-DEC-2008 04:51	chk	1.1654	Ab|	
6-DEC-2008 05:04	chk	1.1522	Ab|	
6-DEC-2008 05:16	chk	1.1293		
8-DEC-2008 00:58	chk	1.1528	Ab|	
9-DEC-2008 00:32	chk	1.1494	Ab|	
10-DEC-2008 05:46	chk	1.1792	Ab|In|	
11-DEC-2008 05:47	chk	1.1199		
12-DEC-2008 05:54	chk	1.1030		
13-DEC-2008 06:32	chk	1.0902		

above not cut

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001230 Upper Bound : 0.001460

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001344 Std Deviation : 0.000039

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0014	
17-NOV-2008 06:30	chk		0.0013	
18-NOV-2008 00:55	chk		0.0014	
19-NOV-2008 01:23	chk		0.0013	
20-NOV-2008 01:32	chk		0.0014	
21-NOV-2008 03:49	chk		0.0013	
24-NOV-2008 04:43	chk		No Value	

24-NOV-2008 04:55	chk	0.0013	|	| |
25-NOV-2008 04:38	chk	0.0014	|	| |
26-NOV-2008 03:17	chk	0.0013	|	| |
27-NOV-2008 06:34	chk	0.0013	|	| |
28-NOV-2008 06:47	chk	0.0014	|	| |
29-NOV-2008 07:09	chk	0.0014	|	| |
29-NOV-2008 07:27	chk	0.0013	|	| |
1-DEC-2008 03:22	chk	0.0014	|	| |
1-DEC-2008 03:35	chk	0.0013	|	| |

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
1-DEC-2008 23:39	chk		0.0013	| | |
2-DEC-2008 04:23	chk		0.0014	| | |
3-DEC-2008 01:56	chk		0.0014	| | |
4-DEC-2008 03:16	chk		0.0014	| | |
5-DEC-2008 01:31	chk		0.0014	| | |
6-DEC-2008 04:51	chk		0.0013	| | |
6-DEC-2008 05:04	chk		0.0013	| | |
6-DEC-2008 05:16	chk		0.0013	| | |
8-DEC-2008 00:58	chk		0.0013	| | |
9-DEC-2008 00:32	chk		0.0014	| | |
10-DEC-2008 05:46	chk		0.0014	| | |
11-DEC-2008 05:47	chk		0.0014	| | |
12-DEC-2008 05:54	chk		0.0013	| | |
13-DEC-2008 06:32	chk		0.0014	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3012.000000 Upper Bound : 3212.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3144.6279	| | |
17-NOV-2008 06:30	chk		3144.0269	| | |
18-NOV-2008 00:55	chk		3143.5400	| | |
19-NOV-2008 01:23	chk		3143.9521	| | |
20-NOV-2008 01:32	chk		3143.5110	| | |

21-NOV-2008 03:49	chk	3143.5938	| |	
24-NOV-2008 04:43	chk	No Value	| |	
24-NOV-2008 04:55	chk	3129.0959	| |	
25-NOV-2008 04:38	chk	3128.8838	| |	
26-NOV-2008 03:17	chk	3126.7095	| |	
27-NOV-2008 06:34	chk	3126.6816	| |	
28-NOV-2008 06:47	chk	3126.9365	| |	
29-NOV-2008 07:09	chk	3130.7043	| |	
29-NOV-2008 07:27	chk	3130.6589	| |	
1-DEC-2008 03:22	chk	3130.4705	| |	
1-DEC-2008 03:35	chk	3130.4368	| |	
1-DEC-2008 23:39	chk	3129.9048	| |	
2-DEC-2008 04:23	chk	3129.3264	| |	
3-DEC-2008 01:56	chk	3128.8145	| |	
4-DEC-2008 03:16	chk	3128.6790	| |	
5-DEC-2008 01:31	chk	3128.4375	| |	
6-DEC-2008 04:51	chk	3128.9116	| |	
6-DEC-2008 05:04	chk	3128.6401	| |	
6-DEC-2008 05:16	chk	3128.9165	| |	
8-DEC-2008 00:58	chk	3128.9304	| |	
9-DEC-2008 00:32	chk	3128.9819	| |	
10-DEC-2008 05:46	chk	3128.7346	| |	
11-DEC-2008 05:47	chk	3128.9553	| |	
12-DEC-2008 05:54	chk	3128.4548	| |	
13-DEC-2008 06:32	chk	3128.2703	| |	

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.544829 Std Deviation : 0.083273

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

15-NOV-2008 06:29	chk	1.7396	|In| |
17-NOV-2008 06:30	chk	1.4979	| | |
18-NOV-2008 00:55	chk	1.6482	| | |
19-NOV-2008 01:23	chk	1.7432	|In| |
20-NOV-2008 01:32	chk	1.5694	| | |
21-NOV-2008 03:49	chk	1.4023	| | |
24-NOV-2008 04:43	chk	No Value	| | |
24-NOV-2008 04:55	chk	1.4458	| | |
25-NOV-2008 04:38	chk	1.6520	| | |
26-NOV-2008 03:17	chk	1.3720	|In| |
27-NOV-2008 06:34	chk	1.5001	| | |
28-NOV-2008 06:47	chk	1.6511	| | |
29-NOV-2008 07:09	chk	1.5871	| | |
29-NOV-2008 07:27	chk	1.5524	| | |
1-DEC-2008 03:22	chk	1.8600	|Ac| |
1-DEC-2008 03:35	chk	1.5421	| | |
1-DEC-2008 23:39	chk	1.5235	| | |
2-DEC-2008 04:23	chk	1.5055	| | |
3-DEC-2008 01:56	chk	1.5582	| | |
4-DEC-2008 03:16	chk	1.6477	| | |
5-DEC-2008 01:31	chk	1.4794	| | |
6-DEC-2008 04:51	chk	1.8066	|Ac| |
6-DEC-2008 05:04	chk	1.5021	| | |
6-DEC-2008 05:16	chk	1.5582	| | |
8-DEC-2008 00:58	chk	1.5006	| | |
9-DEC-2008 00:32	chk	1.6384	| | |
10-DEC-2008 05:46	chk	1.4954	| | |
11-DEC-2008 05:47	chk	1.5398	| | |
12-DEC-2008 05:54	chk	1.3614	|In| |
13-DEC-2008 06:32	chk	1.5220	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000740 Upper Bound : 0.000860

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.000803 Std Deviation : 0.000020

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0008	|In| |
17-NOV-2008 06:30	chk		0.0008	| | |
18-NOV-2008 00:55	chk		0.0008	| | |
19-NOV-2008 01:23	chk		0.0008	| | |
20-NOV-2008 01:32	chk		0.0008	| | |
21-NOV-2008 03:49	chk		0.0008	| | |
24-NOV-2008 04:43	chk		No Value	| | |
24-NOV-2008 04:55	chk		0.0008	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-NOV-2008 04:38	chk		0.0008	| | |
26-NOV-2008 03:17	chk		0.0008	| | |
27-NOV-2008 06:34	chk		0.0009	|In| |
28-NOV-2008 06:47	chk		0.0008	| | |
29-NOV-2008 07:09	chk		0.0000	Be|Ac| |
29-NOV-2008 07:27	chk		0.0008	| | |
1-DEC-2008 03:22	chk		0.0008	| | |
1-DEC-2008 03:35	chk		0.0008	| | |
1-DEC-2008 23:39	chk		0.0008	| | |
2-DEC-2008 04:23	chk		0.0008	| | |
3-DEC-2008 01:56	chk		0.0008	| | |
4-DEC-2008 03:16	chk		0.0008	| | |
5-DEC-2008 01:31	chk		0.0008	| | |
6-DEC-2008 04:51	chk		0.0008	| | |
6-DEC-2008 05:04	chk		0.0008	| | |
6-DEC-2008 05:16	chk		0.0008	| | |
8-DEC-2008 00:58	chk		0.0008	| | |
9-DEC-2008 00:32	chk		0.0008	| | |
10-DEC-2008 05:46	chk		0.0008	| | |
11-DEC-2008 05:47	chk		0.0008	| | |
12-DEC-2008 05:54	chk		0.0008	| | |
13-DEC-2008 06:32	chk		0.0008	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5526.000000 Upper Bound : 5726.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5681.7856	| | |
17-NOV-2008 06:30	chk		5680.7310	| | |
18-NOV-2008 00:55	chk		5680.1899	| | |
19-NOV-2008 01:23	chk		5680.1978	| | |
20-NOV-2008 01:32	chk		5679.9604	| | |
21-NOV-2008 03:49	chk		5679.8901	| | |
24-NOV-2008 04:43	chk		No Value	| | |
24-NOV-2008 04:55	chk		5655.1812	| | |
25-NOV-2008 04:38	chk		5654.3867	| | |
26-NOV-2008 03:17	chk		5651.2578	| | |
27-NOV-2008 06:34	chk		5650.8389	| | |
28-NOV-2008 06:47	chk		5651.1602	| | |
29-NOV-2008 07:09	chk		5657.6045	| | |
29-NOV-2008 07:27	chk		5657.5708	| | |
1-DEC-2008 03:22	chk		5656.9023	| | |
1-DEC-2008 03:35	chk		5657.0566	| | |
1-DEC-2008 23:39	chk		5655.6943	| | |
2-DEC-2008 04:23	chk		5655.4946	| | |
3-DEC-2008 01:56	chk		5654.5010	| | |
4-DEC-2008 03:16	chk		5654.2061	| | |
5-DEC-2008 01:31	chk		5654.0073	| | |
6-DEC-2008 04:51	chk		5654.6992	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
6-DEC-2008 05:04	chk		5654.4668	| | |
6-DEC-2008 05:16	chk		5654.5938	| | |
8-DEC-2008 00:58	chk		5654.4585	| | |
9-DEC-2008 00:32	chk		5654.7173	| | |
10-DEC-2008 05:46	chk		5654.5205	| | |
11-DEC-2008 05:47	chk		5655.0015	| | |
12-DEC-2008 05:54	chk		5654.3135	| | |
13-DEC-2008 06:32	chk		5653.4863	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.879941 Std Deviation : 0.114758

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		2.1713	In			
17-NOV-2008 06:30	chk		1.7528				
18-NOV-2008 00:55	chk		1.9354				
19-NOV-2008 01:23	chk		1.7315				
20-NOV-2008 01:32	chk		1.9013				
21-NOV-2008 03:49	chk		1.8083				
24-NOV-2008 04:43	chk		No Value				
24-NOV-2008 04:55	chk		1.9530				
25-NOV-2008 04:38	chk		1.9173				
26-NOV-2008 03:17	chk		1.8889				
27-NOV-2008 06:34	chk		1.8125				
28-NOV-2008 06:47	chk		1.7592				
29-NOV-2008 07:09	chk		1.9424				
29-NOV-2008 07:27	chk		1.8940				
1-DEC-2008 03:22	chk		1.9872				
1-DEC-2008 03:35	chk		1.9949				
1-DEC-2008 23:39	chk		1.8774				
2-DEC-2008 04:23	chk		1.7638				
3-DEC-2008 01:56	chk		2.1354	In			
4-DEC-2008 03:16	chk		1.9349				
5-DEC-2008 01:31	chk		1.7032				
6-DEC-2008 04:51	chk		1.7846				
6-DEC-2008 05:04	chk		1.7232				
6-DEC-2008 05:16	chk		1.9096				
8-DEC-2008 00:58	chk		1.8497				
9-DEC-2008 00:32	chk		2.0222				
10-DEC-2008 05:46	chk		2.0456				
11-DEC-2008 05:47	chk		1.9030				
12-DEC-2008 05:54	chk		1.7309				
13-DEC-2008 06:32	chk		1.8073				

Quality Assurance Report. Generated 16-DEC-2008 14:48:38.48

QA Filename : RDND07$DKA100:[GER8.QA]BKG.QAF;5

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.058668 Std Deviation : 0.001502

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0604	| | |
23-NOV-2008 05:00	bkg		0.0333	|Ac| |
24-NOV-2008 07:50	bkg		0.0586	| | |
30-NOV-2008 05:53	bkg		0.0592	| | |
7-DEC-2008 04:34	bkg		0.0619	|In| |
8-DEC-2008 04:10	bkg		0.0604	| | |
9-DEC-2008 09:26	bkg		0.0594	| | |
14-DEC-2008 06:39	bkg		0.0586	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.083706 Std Deviation : 0.001966

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0834	| | |
23-NOV-2008 05:00	bkg		0.0829	| | |
24-NOV-2008 07:50	bkg		0.0839	| | |
30-NOV-2008 05:53	bkg		0.0846	| | |

7-DEC-2008 04:34	bkg	0.0842 | | |
8-DEC-2008 04:10	bkg	0.0838 | | |
9-DEC-2008 09:26	bkg	0.0841 | | |
14-DEC-2008 06:39	bkg	0.0824 | | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.036300 Std Deviation : 0.001988

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0374	| | |
23-NOV-2008 05:00	bkg		0.0357	| | |
24-NOV-2008 07:50	bkg		0.0384	| | |
30-NOV-2008 05:53	bkg		0.0366	| | |
7-DEC-2008 04:34	bkg		0.0378	| | |
8-DEC-2008 04:10	bkg		0.0392	| | |
9-DEC-2008 09:26	bkg		0.0363	| | |
14-DEC-2008 06:39	bkg		0.0326	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.042382 Std Deviation : 0.002014

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg	0.0442	| | |
23-NOV-2008 05:00 bkg	0.0553	|Ac| |
24-NOV-2008 07:50 bkg	0.0419	| | |
30-NOV-2008 05:53 bkg	0.0434	| | |
7-DEC-2008 04:34 bkg	0.0426	| | |
8-DEC-2008 04:10 bkg	0.0447	| | |
9-DEC-2008 09:26 bkg	0.0396	| | |
14-DEC-2008 06:39 bkg	0.0407	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.059169 Std Deviation : 0.002112

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0618	| | |
23-NOV-2008 05:00	bkg		0.0567	| | |
24-NOV-2008 07:50	bkg		0.0611	| | |
30-NOV-2008 05:53	bkg		0.0620	| | |
7-DEC-2008 04:34	bkg		0.0615	| | |
8-DEC-2008 04:10	bkg		0.0623	| | |
9-DEC-2008 09:26	bkg		0.0622	| | |
14-DEC-2008 06:39	bkg		0.0585	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.065426 Std Deviation : 0.002219

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0658	| | |
23-NOV-2008 05:00	bkg		0.0885	|Ac| |
24-NOV-2008 07:50	bkg		0.0672	| | |
30-NOV-2008 05:53	bkg		0.0667	| | |
7-DEC-2008 04:34	bkg		0.0652	| | |
8-DEC-2008 04:10	bkg		0.0655	| | |
9-DEC-2008 09:26	bkg		0.0662	| | |
14-DEC-2008 06:39	bkg		0.0628	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.055917 Std Deviation : 0.001558

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0560	| | |
23-NOV-2008 05:00	bkg		0.0559	| | |
24-NOV-2008 07:50	bkg		0.0531	| | |
30-NOV-2008 05:53	bkg		0.0599	|In| |
7-DEC-2008 04:34	bkg		0.0599	|In| |
8-DEC-2008 04:10	bkg		0.0562	| | |
9-DEC-2008 09:26	bkg		0.0544	| | |
14-DEC-2008 06:39	bkg		0.0569	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.106958 Std Deviation : 0.002353

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1080	| | |
23-NOV-2008 05:00	bkg		0.1093	| | |
24-NOV-2008 07:50	bkg		0.1125	|In| |
30-NOV-2008 05:53	bkg		0.1097	| | |
7-DEC-2008 04:34	bkg		0.1106	| | |
8-DEC-2008 04:10	bkg		0.1107	| | |
9-DEC-2008 09:26	bkg		0.1073	| | |
14-DEC-2008 06:39	bkg		0.1060	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.087737 Std Deviation : 0.007717

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0999	| | |
23-NOV-2008 05:00	bkg		0.0699	|In| |
24-NOV-2008 07:50	bkg		0.1050	|In| |
30-NOV-2008 05:53	bkg		0.0954	| | |
7-DEC-2008 04:34	bkg		0.1168	|Ac| |
8-DEC-2008 04:10	bkg		0.1109	|Ac| | rerun
9-DEC-2008 09:26	bkg		0.0913	| | |
14-DEC-2008 06:39	bkg		0.0832	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.051846 Std Deviation : 0.001742

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0509	| | |
23-NOV-2008 05:00	bkg		0.0434	|Ac| |
24-NOV-2008 07:50	bkg		0.0487	| | |
30-NOV-2008 05:53	bkg		0.0539	| | |
7-DEC-2008 04:34	bkg		0.0530	| | |
8-DEC-2008 04:10	bkg		0.0506	| | |
9-DEC-2008 09:26	bkg		0.0506	| | |
14-DEC-2008 06:39	bkg		0.0527	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.103530 Std Deviation : 0.001948

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1039	| | |
23-NOV-2008 05:00	bkg		0.1020	| | |
24-NOV-2008 07:50	bkg		0.1044	| | |
30-NOV-2008 05:53	bkg		0.0997	| | |
7-DEC-2008 04:34	bkg		0.1097	|Ac| |
8-DEC-2008 04:10	bkg		0.1070	| | |
9-DEC-2008 09:26	bkg		0.1016	| | |
14-DEC-2008 06:39	bkg		0.1039	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.6970	| | |
23-NOV-2008 05:00	bkg		0.6484	| | |
24-NOV-2008 07:50	bkg		0.6781	| | |
30-NOV-2008 05:53	bkg		0.7020	| | |
7-DEC-2008 04:34	bkg		0.7300	| | |
8-DEC-2008 04:10	bkg		0.6873	| | |
9-DEC-2008 09:26	bkg		0.6692	| | |
14-DEC-2008 06:39	bkg		0.7035	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:05.88

QA Filename : RDND07$DKA100:[GER10.QA]CHECK.QAF;5

-- Multi-Test Full Report --

analysis 12/2/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005400 Upper Bound : 0.005800

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 0.005563 Std Deviation : 0.000065

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		0.0056	| | |
17-NOV-2008 06:51	chk		0.0056	| | |
18-NOV-2008 01:08	chk		0.0055	| | |
19-NOV-2008 01:37	chk		0.0056	| | |
20-NOV-2008 01:50	chk		0.0055	| | |
21-NOV-2008 04:04	chk		0.0056	| | |
24-NOV-2008 04:58	chk		0.0056	| | |
25-NOV-2008 04:38	chk		0.0055	| | |
26-NOV-2008 03:32	chk		0.0055	| | |
27-NOV-2008 06:58	chk		0.0056	| | |
28-NOV-2008 07:05	chk		0.0057	| | |
29-NOV-2008 07:27	chk		0.0056	| | |
1-DEC-2008 03:37	chk		0.0056	| | |
1-DEC-2008 23:49	chk		0.0055	| | |
2-DEC-2008 04:25	chk		0.0054	|In| |
3-DEC-2008 01:56	chk		0.0055	| | |
4-DEC-2008 03:28	chk		0.0055	| | |
5-DEC-2008 01:46	chk		0.0056	| | |
6-DEC-2008 04:51	chk		0.0056	| | |
8-DEC-2008 01:07	chk		0.0056	| | |
9-DEC-2008 02:41	chk		0.0056	| | |

10-DEC-2008 05:51	chk	0.0054 Be|In| |
10-DEC-2008 06:02	chk	0.0056 | | |
11-DEC-2008 03:05	chk	0.0054 |In| |
12-DEC-2008 04:09	chk	0.0056 | | |
13-DEC-2008 07:10	chk	0.0056 | | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 333.000000 Upper Bound : 533.000000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 433.058258 Std Deviation : 0.124967

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		433.0967	| | |
17-NOV-2008 06:51	chk		433.1759	| | |
18-NOV-2008 01:08	chk		433.1715	| | |
19-NOV-2008 01:37	chk		433.1398	| | |
20-NOV-2008 01:50	chk		433.1876	| | |
21-NOV-2008 04:04	chk		433.1740	| | |
24-NOV-2008 04:58	chk		433.1576	| | |
25-NOV-2008 04:38	chk		433.1603	| | |
26-NOV-2008 03:32	chk		433.1746	| | |
27-NOV-2008 06:58	chk		433.2084	| | |
28-NOV-2008 07:05	chk		433.0641	| | |
29-NOV-2008 07:27	chk		433.0799	| | |
1-DEC-2008 03:37	chk		433.1214	| | |
1-DEC-2008 23:49	chk		433.1850	| | |
2-DEC-2008 04:25	chk		433.1355	| | |
3-DEC-2008 01:56	chk		433.0698	| | |
4-DEC-2008 03:28	chk		433.0114	| | |

5-DEC-2008 01:46	chk	433.1079	|	| |
6-DEC-2008 04:51	chk	433.1816	|	| |
8-DEC-2008 01:07	chk	433.1736	|	| |
9-DEC-2008 02:41	chk	433.1022	|	| |
10-DEC-2008 05:51	chk	433.2469	|	| |
10-DEC-2008 06:02	chk	433.1710	|	| |
11-DEC-2008 03:05	chk	433.0982	|	| |
12-DEC-2008 04:09	chk	433.1744	|	| |
13-DEC-2008 07:10	chk	432.9931	|	| |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.200000 Upper Bound : 1.450000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 1.561248 Std Deviation : 0.078361

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		1.7406	Ab|In| |
17-NOV-2008 06:51	chk		1.7271	Ab|In| |
18-NOV-2008 01:08	chk		1.7226	Ab|In| |
19-NOV-2008 01:37	chk		1.6937	Ab| | |
20-NOV-2008 01:50	chk		1.7306	Ab|In| |
21-NOV-2008 04:04	chk		1.6430	Ab| | |
24-NOV-2008 04:58	chk		1.7664	Ab|In| |
25-NOV-2008 04:38	chk		1.6699	Ab| | |
26-NOV-2008 03:32	chk		1.7137	Ab| | |
27-NOV-2008 06:58	chk		1.6424	Ab| | |
28-NOV-2008 07:05	chk		1.7001	Ab| | |
29-NOV-2008 07:27	chk		1.7255	Ab|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
1-DEC-2008 03:37	chk		1.6964	Ab| | |

1-DEC-2008 23:49	chk	1.6541 Ab| | |
2-DEC-2008 04:25	chk	1.6855 Ab| | |
3-DEC-2008 01:56	chk	1.6668 Ab| | |
4-DEC-2008 03:28	chk	1.7781 Ab|In| |
5-DEC-2008 01:46	chk	1.7095 Ab| | |
6-DEC-2008 04:51	chk	1.7338 Ab|In| |
8-DEC-2008 01:07	chk	1.7078 Ab| | |
9-DEC-2008 02:41	chk	1.7759 Ab|In| |
10-DEC-2008 05:51	chk	1.7359 Ab|In| |
10-DEC-2008 06:02	chk	1.7399 Ab|In| |
11-DEC-2008 03:05	chk	1.7447 Ab|In| |
12-DEC-2008 04:09	chk	1.6517 Ab| | |
13-DEC-2008 07:10	chk	1.6425 Ab| | |

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-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001250 Upper Bound : 0.001410

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 0.001337 Std Deviation : 0.000027

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		0.0014	| | |
17-NOV-2008 06:51	chk		0.0013	| | |
18-NOV-2008 01:08	chk		0.0013	| | |
19-NOV-2008 01:37	chk		0.0013	|In| |
20-NOV-2008 01:50	chk		0.0013	| | |
21-NOV-2008 04:04	chk		0.0014	| | |
24-NOV-2008 04:58	chk		0.0014	| | |
25-NOV-2008 04:38	chk		0.0014	| | |
26-NOV-2008 03:32	chk		0.0013	| | |
27-NOV-2008 06:58	chk		0.0013	| | |
28-NOV-2008 07:05	chk		0.0013	| | |
29-NOV-2008 07:27	chk		0.0014	| | |
1-DEC-2008 03:37	chk		0.0013	| | |

1-DEC-2008 23:49	chk	0.0013	|	|
2-DEC-2008 04:25	chk	0.0013	|	|
3-DEC-2008 01:56	chk	0.0013	|	|
4-DEC-2008 03:28	chk	0.0013	|	|
5-DEC-2008 01:46	chk	0.0013	|In|	|
6-DEC-2008 04:51	chk	0.0013	|	|
8-DEC-2008 01:07	chk	0.0013	|	|
9-DEC-2008 02:41	chk	0.0014	|	|
10-DEC-2008 05:51	chk	0.0014	|	|
10-DEC-2008 06:02	chk	0.0013	|	|
11-DEC-2008 03:05	chk	0.0013	|	|

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
12-DEC-2008 04:09	chk		0.0013	|In| |
13-DEC-2008 07:10	chk		0.0013	| |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5534.000000 Upper Bound : 5737.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		5638.6895	| | |
17-NOV-2008 06:51	chk		5638.7734	| | |
18-NOV-2008 01:08	chk		5638.8633	| | |
19-NOV-2008 01:37	chk		5638.6226	| | |
20-NOV-2008 01:50	chk		5638.9150	| | |
21-NOV-2008 04:04	chk		5638.6797	| | |
24-NOV-2008 04:58	chk		5638.7817	| | |
25-NOV-2008 04:38	chk		5638.7822	| | |
26-NOV-2008 03:32	chk		5638.7578	| | |
27-NOV-2008 06:58	chk		5638.9497	| | |
28-NOV-2008 07:05	chk		5638.7583	| | |
29-NOV-2008 07:27	chk		5638.7388	| | |
1-DEC-2008 03:37	chk		5638.6362	| | |
1-DEC-2008 23:49	chk		5638.4663	| | |
2-DEC-2008 04:25	chk		5638.6309	| | |

3-DEC-2008 01:56	chk	5638.7056	| | |
4-DEC-2008 03:28	chk	5638.7539	| | |
5-DEC-2008 01:46	chk	5638.9673	| | |
6-DEC-2008 04:51	chk	5638.6450	| | |
8-DEC-2008 01:07	chk	5638.4683	| | |
9-DEC-2008 02:41	chk	5638.6772	| | |
10-DEC-2008 05:51	chk	5638.7778	| | |
10-DEC-2008 06:02	chk	5638.8765	| | |
11-DEC-2008 03:05	chk	5638.7505	| | |
12-DEC-2008 04:09	chk	5638.6968	| | |
13-DEC-2008 07:10	chk	5638.4663	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 2.138280 Std Deviation : 0.124905

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		2.4033	|In| |
17-NOV-2008 06:51	chk		2.4059	|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
18-NOV-2008 01:08	chk		2.2251	| | |
19-NOV-2008 01:37	chk		1.9792	| | |
20-NOV-2008 01:50	chk		2.4176	|In| |
21-NOV-2008 04:04	chk		2.2959	| | |
24-NOV-2008 04:58	chk		2.4458	|In| |
25-NOV-2008 04:38	chk		2.1685	| | |
26-NOV-2008 03:32	chk		2.2704	| | |
27-NOV-2008 06:58	chk		2.0313	| | |
28-NOV-2008 07:05	chk		2.4247	|In| |
29-NOV-2008 07:27	chk		2.2561	| | |
1-DEC-2008 03:37	chk		2.1345	| | |
1-DEC-2008 23:49	chk		2.4009	|In| |

2-DEC-2008 04:25	chk	1.9897	| | |
3-DEC-2008 01:56	chk	2.2501	| | |
4-DEC-2008 03:28	chk	2.3938	|In| |
5-DEC-2008 01:46	chk	2.2773	| | |
6-DEC-2008 04:51	chk	2.4280	|In| |
8-DEC-2008 01:07	chk	2.1735	| | |
9-DEC-2008 02:41	chk	1.9910	| | |
10-DEC-2008 05:51	chk	2.1459	| | |
10-DEC-2008 06:02	chk	2.2659	| | |
11-DEC-2008 03:05	chk	2.4048	|In| |
12-DEC-2008 04:09	chk	2.3559	| | |
13-DEC-2008 07:10	chk	2.1502	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001870 Upper Bound : 0.002150

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 0.002013 Std Deviation : 0.000051

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		0.0020	| | |
17-NOV-2008 06:51	chk		0.0021	| | |
18-NOV-2008 01:08	chk		0.0019	| | |
19-NOV-2008 01:37	chk		0.0020	| | |
20-NOV-2008 01:50	chk		0.0020	| | |
21-NOV-2008 04:04	chk		0.0020	| | |
24-NOV-2008 04:58	chk		0.0020	| | |
25-NOV-2008 04:38	chk		0.0021	| | |
26-NOV-2008 03:32	chk		0.0020	| | |
27-NOV-2008 06:58	chk		0.0020	| | |
28-NOV-2008 07:05	chk		0.0020	| | |
29-NOV-2008 07:27	chk		0.0020	| | |
1-DEC-2008 03:37	chk		0.0020	| | |
1-DEC-2008 23:49	chk		0.0020	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-DEC-2008 04:25	chk		0.0020	| | |
3-DEC-2008 01:56	chk		0.0020	| | |
4-DEC-2008 03:28	chk		0.0020	| | |
5-DEC-2008 01:46	chk		0.0020	| | |
6-DEC-2008 04:51	chk		0.0021	| | |
8-DEC-2008 01:07	chk		0.0020	| | |
9-DEC-2008 02:41	chk		0.0020	| | |
10-DEC-2008 05:51	chk		0.0019	|In| |
10-DEC-2008 06:02	chk		0.0020	| | |
11-DEC-2008 03:05	chk		0.0020	| | |
12-DEC-2008 04:09	chk		0.0019	| | |
13-DEC-2008 07:10	chk		0.0019	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 2990.000000 Upper Bound : 3190.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		3092.4253	| | |
17-NOV-2008 06:51	chk		3092.7986	| | |
18-NOV-2008 01:08	chk		3092.7900	| | |
19-NOV-2008 01:37	chk		3092.7876	| | |
20-NOV-2008 01:50	chk		3092.8025	| | |
21-NOV-2008 04:04	chk		3092.9097	| | |
24-NOV-2008 04:58	chk		3092.8347	| | |
25-NOV-2008 04:38	chk		3092.7046	| | |
26-NOV-2008 03:32	chk		3092.8291	| | |
27-NOV-2008 06:58	chk		3092.8220	| | |
28-NOV-2008 07:05	chk		3092.6851	| | |
29-NOV-2008 07:27	chk		3092.8987	| | |
1-DEC-2008 03:37	chk		3092.7053	| | |
1-DEC-2008 23:49	chk		3092.6328	| | |
2-DEC-2008 04:25	chk		3092.8660	| | |
3-DEC-2008 01:56	chk		3092.7053	| | |

4-DEC-2008 03:28	chk	3092.4888	| | |
5-DEC-2008 01:46	chk	3092.7593	| | |
6-DEC-2008 04:51	chk	3092.8164	| | |
8-DEC-2008 01:07	chk	3092.9102	| | |
9-DEC-2008 02:41	chk	3092.8140	| | |
10-DEC-2008 05:51	chk	3092.7190	| | |
10-DEC-2008 06:02	chk	3093.0332	| | |
11-DEC-2008 03:05	chk	3092.9927	| | |
12-DEC-2008 04:09	chk	3092.8350	| | |
13-DEC-2008 07:10	chk	3092.3647	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 1.864267 Std Deviation : 0.116797

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 7

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		1.9250	| | |
17-NOV-2008 06:51	chk		2.0727	| | |
18-NOV-2008 01:08	chk		1.8251	| | |
19-NOV-2008 01:37	chk		2.0238	| | |
20-NOV-2008 01:50	chk		2.0348	| | |
21-NOV-2008 04:04	chk		1.9263	| | |
24-NOV-2008 04:58	chk		1.7760	| | |
25-NOV-2008 04:38	chk		2.0421	| | |
26-NOV-2008 03:32	chk		1.8675	| | |
27-NOV-2008 06:58	chk		2.1040	|In| |
28-NOV-2008 07:05	chk		2.1170	|In| |
29-NOV-2008 07:27	chk		2.0663	| | |
1-DEC-2008 03:37	chk		1.9197	| | |
1-DEC-2008 23:49	chk		2.0832	| | |
2-DEC-2008 04:25	chk		1.8828	| | |

3-DEC-2008 01:56	chk	1.8633	|	|
4-DEC-2008 03:28	chk	1.9542	|	|
5-DEC-2008 01:46	chk	1.9584	|	|
6-DEC-2008 04:51	chk	2.0637	|	|
8-DEC-2008 01:07	chk	1.9299	|	|
9-DEC-2008 02:41	chk	2.1259	In	|
10-DEC-2008 05:51	chk	1.9632	|	|
10-DEC-2008 06:02	chk	1.8519	|	|
11-DEC-2008 03:05	chk	2.0166	|	|
12-DEC-2008 04:09	chk	1.8919	|	|
13-DEC-2008 07:10	chk	1.9076	|	|

Quality Assurance Report. Generated 16-DEC-2008 14:48:06.73

QA Filename : RDND07$DKA100:[GER10.QA]BKG.QAF;5

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000000 Std Deviation : 0.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0000	| | |
23-NOV-2008 05:00	bkg		0.0000	| | |
30-NOV-2008 05:53	bkg		0.0000	| | |
7-DEC-2008 04:34	bkg		0.0000	| | |
14-DEC-2008 06:39	bkg		0.0000	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 11.319424 Std Deviation : 1.098946

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		12.6220	| | |
23-NOV-2008 05:00	bkg		13.0301	| | |
30-NOV-2008 05:53	bkg		13.1640	| | |
7-DEC-2008 04:34	bkg		13.0903	| | |
14-DEC-2008 06:39	bkg		12.8249	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.300282 Std Deviation : 2.282564

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		22.5006	| | |
23-NOV-2008 05:00	bkg		21.8305	| | |
30-NOV-2008 05:53	bkg		23.7271	| | |
7-DEC-2008 04:34	bkg		25.9761	|In| |
14-DEC-2008 06:39	bkg		22.4768	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.225100 Std Deviation : 2.318473

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		24.1150	| | |
23-NOV-2008 05:00	bkg		22.8452	| | |
30-NOV-2008 05:53	bkg		24.0651	| | |
7-DEC-2008 04:34	bkg		24.4680	| | |
14-DEC-2008 06:39	bkg		23.1923	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 16.909996 Std Deviation : 1.780819

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		18.9627	| | |
23-NOV-2008 05:00	bkg		17.7379	| | |
30-NOV-2008 05:53	bkg		18.3748	| | |
7-DEC-2008 04:34	bkg		19.0206	| | |
14-DEC-2008 06:39	bkg		18.0979	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.133825 Std Deviation : 1.958617

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		20.9143	| | |
23-NOV-2008 05:00	bkg		20.5564	| | |
30-NOV-2008 05:53	bkg		22.3607	| | |
7-DEC-2008 04:34	bkg		21.6413	| | |
14-DEC-2008 06:39	bkg		20.0899	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 16.492334 Std Deviation : 1.768150

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		18.6753	| | |
23-NOV-2008 05:00	bkg		17.4640	| | |
30-NOV-2008 05:53	bkg		18.9724	| | |
7-DEC-2008 04:34	bkg		18.7779	| | |
14-DEC-2008 06:39	bkg		17.8877	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 9.759295 Std Deviation : 1.045471

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		11.8175	| | |
23-NOV-2008 05:00	bkg		11.2594	| | |
30-NOV-2008 05:53	bkg		11.5950	| | |
7-DEC-2008 04:34	bkg		11.4917	| | |
14-DEC-2008 06:39	bkg		10.3103	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.600639 Std Deviation : 2.611883

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		27.1133	|In| |
23-NOV-2008 05:00	bkg		24.6161	| | |
30-NOV-2008 05:53	bkg		27.0164	|In| |
7-DEC-2008 04:34	bkg		28.0442	|In| |
14-DEC-2008 06:39	bkg		22.7542	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.496037 Std Deviation : 2.096033

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg	21.2216	| | |
23-NOV-2008 05:00 bkg	21.2384	| | |
30-NOV-2008 05:53 bkg	20.5183	| | |
7-DEC-2008 04:34 bkg	22.4241	| | |
14-DEC-2008 06:39 bkg	20.9695	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 6.537992 Std Deviation : 0.702433

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		7.5861	| | |
23-NOV-2008 05:00	bkg		7.3111	| | |
30-NOV-2008 05:53	bkg		7.6474	| | |
7-DEC-2008 04:34	bkg		7.8260	| | |
14-DEC-2008 06:39	bkg		7.4866	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 93.340706 Std Deviation : 9.980039

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08	bkg	105.0201	|	|
23-NOV-2008 05:00	bkg	102.0229	|	|
30-NOV-2008 05:53	bkg	109.1483	|	|
7-DEC-2008 04:34	bkg	108.0977	|	|
14-DEC-2008 06:39	bkg	103.1793	|	|

Quality Assurance Report. Generated 16-DEC-2008 14:48:13.71

QA Filename : RDND07$DKA100:[GER11.QA]CHECK.QAF;3

-- Multi-Test Full Report --

analysis 12/2/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.006900 Upper Bound : 0.007270

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.007082 Std Deviation : 0.000063

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0070	| | |
17-NOV-2008 06:36	chk		0.0071	| | |
18-NOV-2008 03:39	chk		0.0070	| | |
19-NOV-2008 01:23	chk		0.0071	| | |
20-NOV-2008 01:32	chk		0.0071	| | |
21-NOV-2008 03:49	chk		0.0071	| | |
24-NOV-2008 04:43	chk		0.0071	| | |
25-NOV-2008 04:38	chk		0.0071	| | |
26-NOV-2008 03:17	chk		0.0070	| | |
1-DEC-2008 03:22	chk		0.0070	| | |
2-DEC-2008 01:27	chk		0.0071	| | |
3-DEC-2008 02:40	chk		0.0071	| | |
4-DEC-2008 01:53	chk		0.0070	| | |
5-DEC-2008 02:36	chk		0.0071	| | |
6-DEC-2008 04:57	chk		0.0071	| | |
8-DEC-2008 00:53	chk		0.0069	|In| |
9-DEC-2008 00:27	chk		0.0072	|In| |
10-DEC-2008 05:37	chk		0.0072	| | |
11-DEC-2008 03:05	chk		0.0071	| | |
12-DEC-2008 04:09	chk		0.0071	| | |
13-DEC-2008 06:32	chk		0.0072	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 430.000000 Upper Bound : 630.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		530.4779	| | |
17-NOV-2008 06:36	chk		530.4814	| | |
18-NOV-2008 03:39	chk		530.4937	| | |
19-NOV-2008 01:23	chk		530.5020	| | |
20-NOV-2008 01:32	chk		530.4959	| | |
21-NOV-2008 03:49	chk		530.4891	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
24-NOV-2008 04:43	chk		530.4467	| | |
25-NOV-2008 04:38	chk		530.4711	| | |
26-NOV-2008 03:17	chk		530.4622	| | |
1-DEC-2008 03:22	chk		530.4895	| | |
2-DEC-2008 01:27	chk		530.5137	| | |
3-DEC-2008 02:40	chk		530.5065	| | |
4-DEC-2008 01:53	chk		530.4823	| | |
5-DEC-2008 02:36	chk		530.4402	| | |
6-DEC-2008 04:57	chk		530.4782	| | |
8-DEC-2008 00:53	chk		530.5183	| | |
9-DEC-2008 00:27	chk		530.4990	| | |
10-DEC-2008 05:37	chk		530.5015	| | |
11-DEC-2008 03:05	chk		530.4547	| | |
12-DEC-2008 04:09	chk		530.5172	| | |
13-DEC-2008 06:32	chk		530.4569	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.692335 Std Deviation : 0.011525

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.6882	| | |
17-NOV-2008 06:36	chk		0.6908	| | |
18-NOV-2008 03:39	chk		0.6781	| | |
19-NOV-2008 01:23	chk		0.6863	| | |
20-NOV-2008 01:32	chk		0.6839	| | |
21-NOV-2008 03:49	chk		0.6866	| | |
24-NOV-2008 04:43	chk		0.6950	| | |
25-NOV-2008 04:38	chk		0.6873	| | |
26-NOV-2008 03:17	chk		0.6746	| | |
1-DEC-2008 03:22	chk		0.6770	| | |
2-DEC-2008 01:27	chk		0.7143	| | |
3-DEC-2008 02:40	chk		0.6952	| | |
4-DEC-2008 01:53	chk		0.6845	| | |
5-DEC-2008 02:36	chk		0.6788	| | |
6-DEC-2008 04:57	chk		0.6858	| | |
8-DEC-2008 00:53	chk		0.6790	| | |
9-DEC-2008 00:27	chk		0.6840	| | |
10-DEC-2008 05:37	chk		0.6871	| | |
11-DEC-2008 03:05	chk		0.6887	| | |
12-DEC-2008 04:09	chk		0.6912	| | |
13-DEC-2008 06:32	chk		0.6963	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001420 Upper Bound : 0.158000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001499 Std Deviation : 0.000026

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0015	| | |
17-NOV-2008 06:36	chk		0.0015	| | |
18-NOV-2008 03:39	chk		0.0015	| | |
19-NOV-2008 01:23	chk		0.0015	| | |
20-NOV-2008 01:32	chk		0.0015	| | |
21-NOV-2008 03:49	chk		0.0015	| | |
24-NOV-2008 04:43	chk		0.0015	| | |
25-NOV-2008 04:38	chk		0.0015	| | |
26-NOV-2008 03:17	chk		0.0016	|In| |
1-DEC-2008 03:22	chk		0.0015	| | |
2-DEC-2008 01:27	chk		0.0015	| | |
3-DEC-2008 02:40	chk		0.0015	| | |
4-DEC-2008 01:53	chk		0.0015	| | |
5-DEC-2008 02:36	chk		0.0015	| | |
6-DEC-2008 04:57	chk		0.0015	| | |
8-DEC-2008 00:53	chk		0.0015	| | |
9-DEC-2008 00:27	chk		0.0015	| | |
10-DEC-2008 05:37	chk		0.0015	| | |
11-DEC-2008 03:05	chk		0.0015	| | |
12-DEC-2008 04:09	chk		0.0015	| | |
13-DEC-2008 06:32	chk		0.0015	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5976.000000 Upper Bound : 6176.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		6075.8428	| | |
17-NOV-2008 06:36	chk		6075.7412	| | |
18-NOV-2008 03:39	chk		6075.7686	| | |
19-NOV-2008 01:23	chk		6075.7817	| | |
20-NOV-2008 01:32	chk		6075.8159	| | |

21-NOV-2008 03:49	chk	6075.8530		
24-NOV-2008 04:43	chk	6075.5762		
25-NOV-2008 04:38	chk	6075.7007		
26-NOV-2008 03:17	chk	6075.7896		
1-DEC-2008 03:22	chk	6075.7744		
2-DEC-2008 01:27	chk	6075.8027		
3-DEC-2008 02:40	chk	6075.8594		
4-DEC-2008 01:53	chk	6075.8979		
5-DEC-2008 02:36	chk	6075.6958		
6-DEC-2008 04:57	chk	6075.7178		
8-DEC-2008 00:53	chk	6075.6572		
9-DEC-2008 00:27	chk	6075.7363		
10-DEC-2008 05:37	chk	6075.8042		
11-DEC-2008 03:05	chk	6075.8740		
12-DEC-2008 04:09	chk	6075.9634		
13-DEC-2008 06:32	chk	6075.4434		

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.810724 Std Deviation : 0.081002

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.8797	
17-NOV-2008 06:36	chk		1.6788	
18-NOV-2008 03:39	chk		1.7247	
19-NOV-2008 01:23	chk		1.8929	
20-NOV-2008 01:32	chk		1.7853	
21-NOV-2008 03:49	chk		1.7431	
24-NOV-2008 04:43	chk		1.6355	In
25-NOV-2008 04:38	chk		1.6750	
26-NOV-2008 03:17	chk		1.7310	

1-DEC-2008 03:22	chk	1.7950		
2-DEC-2008 01:27	chk	1.8870		
3-DEC-2008 02:40	chk	1.8074		
4-DEC-2008 01:53	chk	1.8022		
5-DEC-2008 02:36	chk	1.8865		
6-DEC-2008 04:57	chk	1.8315		
8-DEC-2008 00:53	chk	1.7622		
9-DEC-2008 00:27	chk	1.8425		
10-DEC-2008 05:37	chk	1.8298		
11-DEC-2008 03:05	chk	1.7605		
12-DEC-2008 04:09	chk	1.7653		
13-DEC-2008 06:32	chk	1.6407	In	

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.002200 Upper Bound : 0.002530

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.002383 Std Deviation : 0.000057

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0024				
17-NOV-2008 06:36	chk		0.0023				
18-NOV-2008 03:39	chk		0.0023				
19-NOV-2008 01:23	chk		0.0024				
20-NOV-2008 01:32	chk		0.0024				
21-NOV-2008 03:49	chk		0.0024				
24-NOV-2008 04:43	chk		0.0023				
25-NOV-2008 04:38	chk		0.0023				
26-NOV-2008 03:17	chk		0.0023				
1-DEC-2008 03:22	chk		0.0024				
2-DEC-2008 01:27	chk		0.0023				
3-DEC-2008 02:40	chk		0.0024				
4-DEC-2008 01:53	chk		0.0023				
5-DEC-2008 02:36	chk		0.0024				

6-DEC-2008 04:57	chk	0.0025	| | |
8-DEC-2008 00:53	chk	0.0025	| | |
9-DEC-2008 00:27	chk	0.0024	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-DEC-2008 05:37	chk		0.0024	| | |
11-DEC-2008 03:05	chk		0.0025	|In| |
12-DEC-2008 04:09	chk		0.0024	| | |
13-DEC-2008 06:32	chk		0.0024	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3265.000000 Upper Bound : 3465.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3364.4839	| | |
17-NOV-2008 06:36	chk		3364.3784	| | |
18-NOV-2008 03:39	chk		3364.3752	| | |
19-NOV-2008 01:23	chk		3364.4592	| | |
20-NOV-2008 01:32	chk		3364.6218	| | |
21-NOV-2008 03:49	chk		3364.4871	| | |
24-NOV-2008 04:43	chk		3364.2952	| | |
25-NOV-2008 04:38	chk		3364.2861	| | |
26-NOV-2008 03:17	chk		3364.1965	| | |
1-DEC-2008 03:22	chk		3364.4973	| | |
2-DEC-2008 01:27	chk		3364.6057	| | |
3-DEC-2008 02:40	chk		3364.5544	| | |
4-DEC-2008 01:53	chk		3364.2871	| | |
5-DEC-2008 02:36	chk		3364.4502	| | |
6-DEC-2008 04:57	chk		3364.3250	| | |
8-DEC-2008 00:53	chk		3364.4614	| | |
9-DEC-2008 00:27	chk		3364.3965	| | |
10-DEC-2008 05:37	chk		3364.5081	| | |
11-DEC-2008 03:05	chk		3364.3926	| | |
12-DEC-2008 04:09	chk		3364.6494	| | |
13-DEC-2008 06:32	chk		3364.1943	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.299247 Std Deviation : 0.054484

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.2681	| | |
17-NOV-2008 06:36	chk		1.2743	| | |
18-NOV-2008 03:39	chk		1.3575	| | |
19-NOV-2008 01:23	chk		1.2175	| | |
20-NOV-2008 01:32	chk		1.2247	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
21-NOV-2008 03:49	chk		1.2726	| | |
24-NOV-2008 04:43	chk		1.3844	| | |
25-NOV-2008 04:38	chk		1.2759	| | |
26-NOV-2008 03:17	chk		1.3694	| | |
1-DEC-2008 03:22	chk		1.2183	| | |
2-DEC-2008 01:27	chk		1.3129	| | |
3-DEC-2008 02:40	chk		1.2995	| | |
4-DEC-2008 01:53	chk		1.3381	| | |
5-DEC-2008 02:36	chk		1.3224	| | |
6-DEC-2008 04:57	chk		1.2775	| | |
8-DEC-2008 00:53	chk		1.3350	| | |
9-DEC-2008 00:27	chk		1.3373	| | |
10-DEC-2008 05:37	chk		1.3267	| | |
11-DEC-2008 03:05	chk		1.2776	| | |
12-DEC-2008 04:09	chk		1.3723	| | |
13-DEC-2008 06:32	chk		1.3190	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:14.38

QA Filename : RDND07$DKA100:[GER11.QA]BKG.QAF;3

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.100777 Std Deviation : 0.001928

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0985	| | |
17-NOV-2008 07:17	bkg		0.0957	|In| |
18-NOV-2008 04:52	bkg		0.0943	|Ac| |
19-NOV-2008 03:22	bkg		0.0972	| | |
20-NOV-2008 03:15	bkg		0.0960	|In| |
21-NOV-2008 10:18	bkg		0.0977	| | |
22-NOV-2008 06:23	bkg		0.0956	|In| |
23-NOV-2008 05:01	bkg		0.0941	|Ac| |
24-NOV-2008 05:22	bkg		0.1035	| | |
26-NOV-2008 04:25	bkg		0.1020	| | |
27-NOV-2008 06:33	bkg		0.3569	|Ac| |
28-NOV-2008 14:06	bkg		0.0972	| | |
30-NOV-2008 05:54	bkg		0.0959	|In| |
1-DEC-2008 05:18	bkg		0.0961	|In| |
7-DEC-2008 04:34	bkg		0.0986	| | |
8-DEC-2008 04:10	bkg		0.0981	| | |
14-DEC-2008 06:39	bkg		0.0965	|In| |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.078173 Std Deviation : 0.001703

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0774	| | |
17-NOV-2008 07:17	bkg		0.0760	| | |
18-NOV-2008 04:52	bkg		0.0782	| | |
19-NOV-2008 03:22	bkg		0.0806	| | |
20-NOV-2008 03:15	bkg		0.0808	| | |
21-NOV-2008 10:18	bkg		0.0783	| | |
22-NOV-2008 06:23	bkg		0.0817	|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-NOV-2008 05:01	bkg		0.0763	| | |
24-NOV-2008 05:22	bkg		0.0809	| | |
26-NOV-2008 04:25	bkg		0.0799	| | |
27-NOV-2008 06:33	bkg		0.7963	|Ac| |
28-NOV-2008 14:06	bkg		0.0763	| | |
30-NOV-2008 05:54	bkg		0.0779	| | |
1-DEC-2008 05:18	bkg		0.0772	| | |
7-DEC-2008 04:34	bkg		0.0764	| | |
8-DEC-2008 04:10	bkg		0.0781	| | |
14-DEC-2008 06:39	bkg		0.0787	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.043418 Std Deviation : 0.002012

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0440	| | |
17-NOV-2008 07:17	bkg		0.0425	| | |

18-NOV-2008 04:52	bkg	0.0448	| | |
19-NOV-2008 03:22	bkg	0.0424	| | |
20-NOV-2008 03:15	bkg	0.0447	| | |
21-NOV-2008 10:18	bkg	0.0409	| | |
22-NOV-2008 06:23	bkg	0.0442	| | |
23-NOV-2008 05:01	bkg	0.0414	| | |
24-NOV-2008 05:22	bkg	0.0410	| | |
26-NOV-2008 04:25	bkg	0.0419	| | |
27-NOV-2008 06:33	bkg	0.0411	| | |
28-NOV-2008 14:06	bkg	0.0447	| | |
30-NOV-2008 05:54	bkg	0.0404	| | |
1-DEC-2008 05:18	bkg	0.0455	| | |
7-DEC-2008 04:34	bkg	0.0445	| | |
8-DEC-2008 04:10	bkg	0.0431	| | |
14-DEC-2008 06:39	bkg	0.0422	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.050578 Std Deviation : 0.001723

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0521	| | |
17-NOV-2008 07:17	bkg		0.0481	| | |
18-NOV-2008 04:52	bkg		0.0450	|Ac| |
19-NOV-2008 03:22	bkg		0.0510	| | |
20-NOV-2008 03:15	bkg		0.0496	| | |
21-NOV-2008 10:18	bkg		0.0496	| | |
22-NOV-2008 06:23	bkg		0.0478	| | |
23-NOV-2008 05:01	bkg		0.0539	| | |
24-NOV-2008 05:22	bkg		0.0527	| | |
26-NOV-2008 04:25	bkg		0.0531	| | |

27-NOV-2008 06:33	bkg	0.0995 |Ac| |
28-NOV-2008 14:06	bkg	0.0498 | | |
30-NOV-2008 05:54	bkg	0.0506 | | |
1-DEC-2008 05:18	bkg	0.0529 | | |
7-DEC-2008 04:34	bkg	0.0513 | | |
8-DEC-2008 04:10	bkg	0.0534 | | |
14-DEC-2008 06:39	bkg	0.0480 | | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.064188 Std Deviation : 0.002256

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0622	| | |
17-NOV-2008 07:17	bkg		0.0607	| | |
18-NOV-2008 04:52	bkg		0.0675	| | |
19-NOV-2008 03:22	bkg		0.0637	| | |
20-NOV-2008 03:15	bkg		0.0628	| | |
21-NOV-2008 10:18	bkg		0.0646	| | |
22-NOV-2008 06:23	bkg		0.0633	| | |
23-NOV-2008 05:01	bkg		0.0646	| | |
24-NOV-2008 05:22	bkg		0.0669	| | |
26-NOV-2008 04:25	bkg		0.0610	| | |
27-NOV-2008 06:33	bkg		0.6568	|Ac| |
28-NOV-2008 14:06	bkg		0.0625	| | |
30-NOV-2008 05:54	bkg		0.0661	| | |
1-DEC-2008 05:18	bkg		0.0684	| | |
7-DEC-2008 04:34	bkg		0.0613	| | |
8-DEC-2008 04:10	bkg		0.0589	|In| |
14-DEC-2008 06:39	bkg		0.0622	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.072554 Std Deviation : 0.002299

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0740	| | |
17-NOV-2008 07:17	bkg		0.0690	| | |
18-NOV-2008 04:52	bkg		0.0743	| | |
19-NOV-2008 03:22	bkg		0.0723	| | |
20-NOV-2008 03:15	bkg		0.0759	| | |
21-NOV-2008 10:18	bkg		0.0713	| | |
22-NOV-2008 06:23	bkg		0.0717	| | |
23-NOV-2008 05:01	bkg		0.0727	| | |
24-NOV-2008 05:22	bkg		0.0739	| | |
26-NOV-2008 04:25	bkg		0.0681	| | |
27-NOV-2008 06:33	bkg		0.0640	|Ac| |
28-NOV-2008 14:06	bkg		0.0695	| | |
30-NOV-2008 05:54	bkg		0.0734	| | |
1-DEC-2008 05:18	bkg		0.0728	| | |
7-DEC-2008 04:34	bkg		0.0693	| | |
8-DEC-2008 04:10	bkg		0.0724	| | |
14-DEC-2008 06:39	bkg		0.0714	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.069468 Std Deviation : 0.001731

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg	0.0682	| | |
17-NOV-2008 07:17 bkg	0.0676	| | |
18-NOV-2008 04:52 bkg	0.0693	| | |
19-NOV-2008 03:22 bkg	0.0681	| | |
20-NOV-2008 03:15 bkg	0.0672	| | |
21-NOV-2008 10:18 bkg	0.0655	|In| |
22-NOV-2008 06:23 bkg	0.0699	| | |
23-NOV-2008 05:01 bkg	0.0666	| | |
24-NOV-2008 05:22 bkg	0.0704	| | |
26-NOV-2008 04:25 bkg	0.0683	| | |
27-NOV-2008 06:33 bkg	0.0780	|Ac| |
28-NOV-2008 14:06 bkg	0.0678	| | |
30-NOV-2008 05:54 bkg	0.0693	| | |
1-DEC-2008 05:18 bkg	0.0719	| | |
7-DEC-2008 04:34 bkg	0.0715	| | |
8-DEC-2008 04:10 bkg	0.0696	| | |
14-DEC-2008 06:39 bkg	0.0676	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.084528 Std Deviation : 0.002222

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08 bkg			0.0844	| | |
17-NOV-2008 07:17 bkg			0.0901	|In| |
18-NOV-2008 04:52 bkg			0.0891	|In| |
19-NOV-2008 03:22 bkg			0.0870	| | |
20-NOV-2008 03:15 bkg			0.0875	| | |
21-NOV-2008 10:18 bkg			0.0908	|In| |
22-NOV-2008 06:23 bkg			0.0871	| | |

23-NOV-2008 05:01	bkg	0.0900 |In| |
24-NOV-2008 05:22	bkg	0.0893 |In| |
26-NOV-2008 04:25	bkg	0.0910 |In| |
27-NOV-2008 06:33	bkg	0.1920 |Ac| |
28-NOV-2008 14:06	bkg	0.0852 | | |
30-NOV-2008 05:54	bkg	0.0909 |In| |
1-DEC-2008 05:18	bkg	0.0863 | | |
7-DEC-2008 04:34	bkg	0.0902 |In| |
8-DEC-2008 04:10	bkg	0.0872 | | |
14-DEC-2008 06:39	bkg	0.0863 | | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.083465 Std Deviation : 0.003569

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0988	|Ac| |
17-NOV-2008 07:17	bkg		0.0971	|Ac| |
18-NOV-2008 04:52	bkg		0.1118	|Ac| |
19-NOV-2008 03:22	bkg		0.0916	|In| |
20-NOV-2008 03:15	bkg		0.1017	|Ac| |
21-NOV-2008 10:18	bkg		0.0974	|Ac| |
22-NOV-2008 06:23	bkg		0.0961	|Ac| |
23-NOV-2008 05:01	bkg		0.0988	|Ac| |
24-NOV-2008 05:22	bkg		0.1084	|Ac| |
26-NOV-2008 04:25	bkg		0.1038	|Ac| |
27-NOV-2008 06:33	bkg		0.1458	|Ac| |
28-NOV-2008 14:06	bkg		0.1078	|Ac| |
30-NOV-2008 05:54	bkg		0.0922	|In| |
1-DEC-2008 05:18	bkg		0.0882	| | |
7-DEC-2008 04:34	bkg		0.1003	|Ac| |
8-DEC-2008 04:10	bkg		0.0889	| | |
14-DEC-2008 06:39	bkg		0.0849	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.058390 Std Deviation : 0.001546

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
16-NOV-2008 10:08	bkg		0.0564				
17-NOV-2008 07:17	bkg		0.0570				
18-NOV-2008 04:52	bkg		0.0575				
19-NOV-2008 03:22	bkg		0.0518	Ac			
20-NOV-2008 03:15	bkg		0.0576				
21-NOV-2008 10:18	bkg		0.0558				
22-NOV-2008 06:23	bkg		0.0551	In			
23-NOV-2008 05:01	bkg		0.0603				
24-NOV-2008 05:22	bkg		0.0559				
26-NOV-2008 04:25	bkg		0.0535	Ac			
27-NOV-2008 06:33	bkg		0.2024	Ac			
28-NOV-2008 14:06	bkg		0.0575				
30-NOV-2008 05:54	bkg		0.0556				
1-DEC-2008 05:18	bkg		0.0558				
7-DEC-2008 04:34	bkg		0.0597				
8-DEC-2008 04:10	bkg		0.0551	In			
14-DEC-2008 06:39	bkg		0.0571				

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.079745 Std Deviation : 0.001542

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0782	| | |
17-NOV-2008 07:17	bkg		0.0800	| | |
18-NOV-2008 04:52	bkg		0.0778	| | |
19-NOV-2008 03:22	bkg		0.0825	| | |
20-NOV-2008 03:15	bkg		0.0829	|In| |
21-NOV-2008 10:18	bkg		0.0822	| | |
22-NOV-2008 06:23	bkg		0.0858	|Ac| |
23-NOV-2008 05:01	bkg		0.0807	| | |
24-NOV-2008 05:22	bkg		0.0853	|Ac| |
26-NOV-2008 04:25	bkg		0.0784	| | |
27-NOV-2008 06:33	bkg		No Value	| | |
28-NOV-2008 14:06	bkg		0.0812	| | |
30-NOV-2008 05:54	bkg		0.0846	|Ac| |
1-DEC-2008 05:18	bkg		0.0772	| | |
7-DEC-2008 04:34	bkg		0.0807	| | |
8-DEC-2008 04:10	bkg		0.0817	| | |
14-DEC-2008 06:39	bkg		0.0798	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.626021 Std Deviation : 0.016480

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.6107	| | |
17-NOV-2008 07:17	bkg		0.6012	| | |
18-NOV-2008 04:52	bkg		0.6279	| | |
19-NOV-2008 03:22	bkg		0.6158	| | |

20-NOV-2008 03:15 bkg	0.6402	| | |
21-NOV-2008 10:18 bkg	0.6242	| | |
22-NOV-2008 06:23 bkg	0.6348	| | |
23-NOV-2008 05:01 bkg	0.6240	| | |
24-NOV-2008 05:22 bkg	0.6511	| | |
26-NOV-2008 04:25 bkg	0.6097	| | |
27-NOV-2008 06:33 bkg	0.6109	| | |
28-NOV-2008 14:06 bkg	0.6366	| | |
30-NOV-2008 05:54 bkg	0.6207	| | |
1-DEC-2008 05:18 bkg	0.6302	| | |
7-DEC-2008 04:34 bkg	0.6215	| | |
8-DEC-2008 04:10 bkg	0.6248	| | |
14-DEC-2008 06:39 bkg	0.6336	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:47:58.80

QA Filename : RDND07$DKA100:[GER13.QA]CHECK.QAF;6

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

analysis 12/2/08

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.004500 Upper Bound : 0.004800

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.004629 Std Deviation : 0.000055

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0047	| | |
15-NOV-2008 06:48	chk		0.0047	| | |
17-NOV-2008 06:31	chk		0.0047	| | |
18-NOV-2008 00:55	chk		0.0047	| | |
19-NOV-2008 01:23	chk		0.0046	| | |
20-NOV-2008 01:32	chk		0.0047	| | |
21-NOV-2008 03:49	chk		0.0046	| | |
24-NOV-2008 04:43	chk		0.0047	| | |
25-NOV-2008 08:40	chk		0.0047	| | |
26-NOV-2008 03:17	chk		0.0046	| | |
27-NOV-2008 06:34	chk		0.0046	| | |
28-NOV-2008 06:48	chk		0.0047	| | |
29-NOV-2008 07:10	chk		0.0047	|In| |
1-DEC-2008 03:22	chk		0.0046	| | |
1-DEC-2008 23:35	chk		0.0046	| | |
2-DEC-2008 04:12	chk		0.0047	| | |
3-DEC-2008 02:08	chk		0.0047	| | |
4-DEC-2008 03:16	chk		0.0046	| | |
5-DEC-2008 01:31	chk		0.0046	| | |
6-DEC-2008 05:05	chk		0.0046	| | |
8-DEC-2008 00:53	chk		0.0047	| | |

9-DEC-2008 02:29	chk	0.0046	| | |
10-DEC-2008 05:37	chk	0.0046	| | |
11-DEC-2008 05:52	chk	0.0046	| | |
12-DEC-2008 05:54	chk	0.0045	| | |
13-DEC-2008 06:32	chk	0.0046	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 388.000000 Upper Bound : 588.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		488.8423	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:48	chk		488.8034	| | |
17-NOV-2008 06:31	chk		488.8122	| | |
18-NOV-2008 00:55	chk		488.8568	| | |
19-NOV-2008 01:23	chk		488.8559	| | |
20-NOV-2008 01:32	chk		488.7582	| | |
21-NOV-2008 03:49	chk		488.8306	| | |
24-NOV-2008 04:43	chk		488.7612	| | |
25-NOV-2008 08:40	chk		488.7292	| | |
26-NOV-2008 03:17	chk		488.7793	| | |
27-NOV-2008 06:34	chk		488.7016	| | |
28-NOV-2008 06:48	chk		488.7145	| | |
29-NOV-2008 07:10	chk		488.6658	| | |
1-DEC-2008 03:22	chk		488.6941	| | |
1-DEC-2008 23:35	chk		488.7690	| | |
2-DEC-2008 04:12	chk		488.5867	| | |
3-DEC-2008 02:08	chk		488.7772	| | |
4-DEC-2008 03:16	chk		488.7381	| | |
5-DEC-2008 01:31	chk		488.7118	| | |
6-DEC-2008 05:05	chk		488.7339	| | |
8-DEC-2008 00:53	chk		488.7346	| | |
9-DEC-2008 02:29	chk		488.7041	| | |
10-DEC-2008 05:37	chk		488.6696	| | |

11-DEC-2008 05:52	chk	488.6965	| |	|
12-DEC-2008 05:54	chk	488.6807	| |	|
13-DEC-2008 06:32	chk	488.6314	| |	|

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.956896 Std Deviation : 0.017042

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.9178	|In| |
15-NOV-2008 06:48	chk		0.9700	| | |
17-NOV-2008 06:31	chk		0.9610	| | |
18-NOV-2008 00:55	chk		0.9614	| | |
19-NOV-2008 01:23	chk		0.9584	| | |
20-NOV-2008 01:32	chk		0.9317	| | |
21-NOV-2008 03:49	chk		0.9546	| | |
24-NOV-2008 04:43	chk		0.9488	| | |
25-NOV-2008 08:40	chk		0.9426	| | |
26-NOV-2008 03:17	chk		0.9552	| | |
27-NOV-2008 06:34	chk		0.9715	| | |
28-NOV-2008 06:48	chk		0.9646	| | |
29-NOV-2008 07:10	chk		0.9725	| | |
1-DEC-2008 03:22	chk		0.9173	|In| |
1-DEC-2008 23:35	chk		0.9602	| | |
2-DEC-2008 04:12	chk		0.9677	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-DEC-2008 02:08	chk		0.9602	| | |
4-DEC-2008 03:16	chk		0.9722	| | |
5-DEC-2008 01:31	chk		0.9676	| | |
6-DEC-2008 05:05	chk		0.9905	| | |
8-DEC-2008 00:53	chk		0.9894	| | |
9-DEC-2008 02:29	chk		0.9526	| | |

10-DEC-2008 05:37	chk	0.9873		
11-DEC-2008 05:52	chk	0.9401		
12-DEC-2008 05:54	chk	0.9599		
13-DEC-2008 06:32	chk	0.9486		

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000857 Upper Bound : 0.001100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000971 Std Deviation : 0.000035

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0008	Be|Ac|
15-NOV-2008 06:48	chk		0.0010	
17-NOV-2008 06:31	chk		0.0010	
18-NOV-2008 00:55	chk		0.0010	
19-NOV-2008 01:23	chk		0.0010	
20-NOV-2008 01:32	chk		0.0009	|In|
21-NOV-2008 03:49	chk		0.0010	
24-NOV-2008 04:43	chk		0.0010	
25-NOV-2008 08:40	chk		0.0010	
26-NOV-2008 03:17	chk		0.0010	
27-NOV-2008 06:34	chk		0.0010	
28-NOV-2008 06:48	chk		0.0009	
29-NOV-2008 07:10	chk		0.0010	
1-DEC-2008 03:22	chk		0.0010	
1-DEC-2008 23:35	chk		0.0010	
2-DEC-2008 04:12	chk		0.0010	
3-DEC-2008 02:08	chk		0.0009	
4-DEC-2008 03:16	chk		0.0010	
5-DEC-2008 01:31	chk		0.0010	
6-DEC-2008 05:05	chk		0.0010	
8-DEC-2008 00:53	chk		0.0010	
9-DEC-2008 02:29	chk		0.0010	

10-DEC-2008 05:37	chk	0.0010		
11-DEC-2008 05:52	chk	0.0010		
12-DEC-2008 05:54	chk	0.0010		
13-DEC-2008 06:32	chk	0.0009		

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5526.000000 Upper Bound : 5726.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5629.7607	
15-NOV-2008 06:48	chk		5628.8735	
17-NOV-2008 06:31	chk		5628.8501	
18-NOV-2008 00:55	chk		5628.8276	
19-NOV-2008 01:23	chk		5628.5884	
20-NOV-2008 01:32	chk		5629.2744	
21-NOV-2008 03:49	chk		5628.6616	
24-NOV-2008 04:43	chk		5628.2837	
25-NOV-2008 08:40	chk		5628.0479	
26-NOV-2008 03:17	chk		5628.3081	
27-NOV-2008 06:34	chk		5628.3589	
28-NOV-2008 06:48	chk		5628.2520	
29-NOV-2008 07:10	chk		5628.2861	
1-DEC-2008 03:22	chk		5628.0835	
1-DEC-2008 23:35	chk		5628.1650	
2-DEC-2008 04:12	chk		5627.5547	
3-DEC-2008 02:08	chk		5628.3394	
4-DEC-2008 03:16	chk		5628.1514	
5-DEC-2008 01:31	chk		5627.9126	
6-DEC-2008 05:05	chk		5628.0645	
8-DEC-2008 00:53	chk		5627.9712	
9-DEC-2008 02:29	chk		5628.0933	
10-DEC-2008 05:37	chk		5627.9087	
11-DEC-2008 05:52	chk		5627.9756	

12-DEC-2008 05:54 chk 5627.5698 | | |
13-DEC-2008 06:32 chk 5627.8833 | | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 2.023201 Std Deviation : 0.112675

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.8973	| | |
15-NOV-2008 06:48	chk		2.0238	| | |
17-NOV-2008 06:31	chk		1.9543	| | |
18-NOV-2008 00:55	chk		1.9929	| | |
19-NOV-2008 01:23	chk		1.9851	| | |
20-NOV-2008 01:32	chk		2.0737	| | |
21-NOV-2008 03:49	chk		2.2613	|In| |
24-NOV-2008 04:43	chk		2.0007	| | |
25-NOV-2008 08:40	chk		2.0358	| | |
26-NOV-2008 03:17	chk		2.2717	|In| |
27-NOV-2008 06:34	chk		1.8844	| | |
28-NOV-2008 06:48	chk		2.0918	| | |
29-NOV-2008 07:10	chk		2.0045	| | |
1-DEC-2008 03:22	chk		2.0645	| | |
1-DEC-2008 23:35	chk		1.9691	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-DEC-2008 04:12	chk		2.2189	| | |
3-DEC-2008 02:08	chk		1.9772	| | |
4-DEC-2008 03:16	chk		1.9677	| | |
5-DEC-2008 01:31	chk		1.9826	| | |
6-DEC-2008 05:05	chk		2.1932	| | |
8-DEC-2008 00:53	chk		2.0048	| | |
9-DEC-2008 02:29	chk		2.2075	| | |
10-DEC-2008 05:37	chk		2.0035	| | |

11-DEC-2008 05:52	chk	2.1306	| | |
12-DEC-2008 05:54	chk	1.9151	| | |
13-DEC-2008 06:32	chk	2.2156	| | |

-- Multi-Test Full Report --

Description : 778.87 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001447 Upper Bound : 0.001693

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001573 Std Deviation : 0.000050

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0016	| | |
15-NOV-2008 06:48	chk		0.0016	| | |
17-NOV-2008 06:31	chk		0.0015	| | |
18-NOV-2008 00:55	chk		0.0016	| | |
19-NOV-2008 01:23	chk		0.0016	| | |
20-NOV-2008 01:32	chk		0.0017	| | |
21-NOV-2008 03:49	chk		0.0016	| | |
24-NOV-2008 04:43	chk		0.0016	| | |
25-NOV-2008 08:40	chk		0.0015	| | |
26-NOV-2008 03:17	chk		0.0016	| | |
27-NOV-2008 06:34	chk		0.0017	|In| |
28-NOV-2008 06:48	chk		0.0015	| | |
29-NOV-2008 07:10	chk		0.0016	| | |
1-DEC-2008 03:22	chk		0.0015	| | |
1-DEC-2008 23:35	chk		0.0015	| | |
2-DEC-2008 04:12	chk		0.0015	| | |
3-DEC-2008 02:08	chk		0.0016	| | |
4-DEC-2008 03:16	chk		0.0016	| | |
5-DEC-2008 01:31	chk		0.0017	| | |
6-DEC-2008 05:05	chk		0.0016	| | |
8-DEC-2008 00:53	chk		0.0016	| | |
9-DEC-2008 02:29	chk		0.0015	| | |
10-DEC-2008 05:37	chk		0.0016	| | |

11-DEC-2008 05:52	chk	0.0016	| | |
12-DEC-2008 05:54	chk	0.0016	| | |
13-DEC-2008 06:32	chk	0.0016	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channles Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3010.000000 Upper Bound : 3210.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3112.0757	| | |
15-NOV-2008 06:48	chk		3111.6716	| | |
17-NOV-2008 06:31	chk		3111.7090	| | |
18-NOV-2008 00:55	chk		3111.8857	| | |
19-NOV-2008 01:23	chk		3111.8694	| | |
20-NOV-2008 01:32	chk		3111.8372	| | |
21-NOV-2008 03:49	chk		3111.8428	| | |
24-NOV-2008 04:43	chk		3111.3708	| | |
25-NOV-2008 08:40	chk		3111.1428	| | |
26-NOV-2008 03:17	chk		3111.5359	| | |
27-NOV-2008 06:34	chk		3111.6653	| | |
28-NOV-2008 06:48	chk		3111.5654	| | |
29-NOV-2008 07:10	chk		3111.3416	| | |
1-DEC-2008 03:22	chk		3111.6523	| | |
1-DEC-2008 23:35	chk		3111.5815	| | |
2-DEC-2008 04:12	chk		3111.2339	| | |
3-DEC-2008 02:08	chk		3111.4558	| | |
4-DEC-2008 03:16	chk		3111.7329	| | |
5-DEC-2008 01:31	chk		3111.2034	| | |
6-DEC-2008 05:05	chk		3111.2029	| | |
8-DEC-2008 00:53	chk		3111.3586	| | |
9-DEC-2008 02:29	chk		3111.1897	| | |
10-DEC-2008 05:37	chk		3111.4429	| | |
11-DEC-2008 05:52	chk		3111.3247	| | |
12-DEC-2008 05:54	chk		3111.4241	| | |

13-DEC-2008 06:32 chk 3111.1174 | | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.588585 Std Deviation : 0.085447

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.6445	| | |
15-NOV-2008 06:48	chk		1.5788	| | |
17-NOV-2008 06:31	chk		1.6284	| | |
18-NOV-2008 00:55	chk		1.5742	| | |
19-NOV-2008 01:23	chk		1.6319	| | |
20-NOV-2008 01:32	chk		1.5294	| | |
21-NOV-2008 03:49	chk		1.4572	| | |
24-NOV-2008 04:43	chk		1.6931	| | |
25-NOV-2008 08:40	chk		1.6825	| | |
26-NOV-2008 03:17	chk		1.5294	| | |
27-NOV-2008 06:34	chk		1.5387	| | |
28-NOV-2008 06:48	chk		1.4599	| | |
29-NOV-2008 07:10	chk		1.5008	| | |
1-DEC-2008 03:22	chk		1.6249	| | |
1-DEC-2008 23:35	chk		1.5188	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-DEC-2008 04:12	chk		1.7300	| | |
3-DEC-2008 02:08	chk		1.4662	| | |
4-DEC-2008 03:16	chk		1.6283	| | |
5-DEC-2008 01:31	chk		1.5995	| | |
6-DEC-2008 05:05	chk		1.5465	| | |
8-DEC-2008 00:53	chk		1.5058	| | |
9-DEC-2008 02:29	chk		1.6693	| | |
10-DEC-2008 05:37	chk		1.5666	| | |
11-DEC-2008 05:52	chk		1.6360	| | |

12-DEC-2008 05:54 chk 1.5861 | | |
13-DEC-2008 06:32 chk 1.5729 | | |

Quality Assurance Report. Generated 16-DEC-2008 14:47:59.49

QA Filename : RDND07$DKA100:[GER13.QA]BKG.QAF;4

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0000	| | |
23-NOV-2008 05:01	bkg		0.0000	| | |
30-NOV-2008 05:54	bkg		0.0000	| | |
7-DEC-2008 04:34	bkg		0.0000	| | |
14-DEC-2008 06:39	bkg		0.0000	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.372843 Std Deviation : 27.325249

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		15.5376	| | |
23-NOV-2008 05:01	bkg		14.5093	| | |
30-NOV-2008 05:54	bkg		14.7199	| | |
7-DEC-2008 04:34	bkg		15.5581	| | |
14-DEC-2008 06:39	bkg		15.2306	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM

Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 26.118835 Std Deviation : 2.859923

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		26.9349	| | |
23-NOV-2008 05:01	bkg		28.2509	| | |
30-NOV-2008 05:54	bkg		27.3549	| | |
7-DEC-2008 04:34	bkg		27.7783	| | |
14-DEC-2008 06:39	bkg		27.6134	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 28.905891 Std Deviation : 6.634084

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		29.4196	| | |
23-NOV-2008 05:01	bkg		30.0088	| | |
30-NOV-2008 05:54	bkg		30.3100	| | |
7-DEC-2008 04:34	bkg		30.4983	| | |
14-DEC-2008 06:39	bkg		31.2196	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 26.626293 Std Deviation : 36.723110

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		19.5217	| | |
23-NOV-2008 05:01	bkg		20.6844	| | |
30-NOV-2008 05:54	bkg		20.9239	| | |
7-DEC-2008 04:34	bkg		20.5890	| | |
14-DEC-2008 06:39	bkg		21.0389	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.243238 Std Deviation : 2.668736

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		22.9619	| | |
23-NOV-2008 05:01	bkg		21.8710	| | |
30-NOV-2008 05:54	bkg		21.6360	| | |
7-DEC-2008 04:34	bkg		22.5120	| | |
14-DEC-2008 06:39	bkg		22.2061	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 20.426060 Std Deviation : 2.385175

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		21.3837	| | |
23-NOV-2008 05:01	bkg		21.5183	| | |
30-NOV-2008 05:54	bkg		21.1782	| | |
7-DEC-2008 04:34	bkg		22.5668	| | |
14-DEC-2008 06:39	bkg		21.6227	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 15.257144 Std Deviation : 3.584542

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		15.3618	| | |
23-NOV-2008 05:01	bkg		15.2240	| | |
30-NOV-2008 05:54	bkg		15.1999	| | |
7-DEC-2008 04:34	bkg		15.4997	| | |
14-DEC-2008 06:39	bkg		15.5781	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 30.413147 Std Deviation : 7.479958

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		32.3121	| | |
23-NOV-2008 05:01	bkg		31.4255	| | |
30-NOV-2008 05:54	bkg		30.4259	| | |
7-DEC-2008 04:34	bkg		32.7663	| | |
14-DEC-2008 06:39	bkg		30.6143	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 35.730511 Std Deviation : 18.326689

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		33.0868	| | |
23-NOV-2008 05:01	bkg		34.1473	| | |
30-NOV-2008 05:54	bkg		34.3822	| | |
7-DEC-2008 04:34	bkg		33.0139	| | |
14-DEC-2008 06:39	bkg		32.8403	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 9.082126 Std Deviation : 0.911474

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		9.4654	| | |
23-NOV-2008 05:01	bkg		9.2777	| | |
30-NOV-2008 05:54	bkg		9.4952	| | |
7-DEC-2008 04:34	bkg		9.5759	| | |
14-DEC-2008 06:39	bkg		9.5015	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 124.494995 Std Deviation : 12.733738

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		130.8738	| | |
23-NOV-2008 05:01	bkg		127.9690	| | |
30-NOV-2008 05:54	bkg		132.7927	| | |
7-DEC-2008 04:34	bkg		131.2757	| | |
14-DEC-2008 06:39	bkg		132.0774	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:46:38.00

QA Filename : RDND06::RDND06$DKA100:[GER15.QA]CHECK.QAF;3

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.007300 Upper Bound : 0.007800

analysis 12/2/08

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 0.007621 Std Deviation : 0.000060

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0076	| | |
17-NOV-2008 06:31	CHK		0.0076	| | |
18-NOV-2008 00:55	CHK		0.0076	| | |
19-NOV-2008 01:23	CHK		0.0077	| | |
20-NOV-2008 01:33	CHK		0.0077	| | |
20-NOV-2008 01:48	CHK		0.0076	| | |
20-NOV-2008 02:00	CHK		0.0076	| | |
20-NOV-2008 02:12	CHK		0.0076	| | |
21-NOV-2008 03:50	CHK		0.0077	| | |
21-NOV-2008 04:03	CHK		0.0077	| | |
24-NOV-2008 04:46	CHK		0.0076	| | |
25-NOV-2008 04:38	CHK		0.0077	| | |
26-NOV-2008 03:24	CHK		0.0077	| | |
26-NOV-2008 03:36	CHK		0.0076	| | |
27-NOV-2008 06:34	CHK		0.0076	| | |
28-NOV-2008 06:47	CHK		0.0076	| | |
29-NOV-2008 07:10	CHK		0.0076	| | |
1-DEC-2008 03:22	CHK		0.0077	| | |
1-DEC-2008 23:35	CHK		0.0077	| | |
2-DEC-2008 04:13	CHK		0.0076	| | |
2-DEC-2008 04:25	CHK		0.0076	| | |

3-DEC-2008 01:56	CHK	0.0076		
4-DEC-2008 03:16	CHK	0.0075		
5-DEC-2008 01:32	CHK	0.0076		
5-DEC-2008 01:45	CHK	0.0076		
5-DEC-2008 01:58	CHK	0.0077		
6-DEC-2008 04:52	CHK	0.0075		
8-DEC-2008 00:53	CHK	0.0076		
9-DEC-2008 02:42	CHK	0.0077		
9-DEC-2008 02:53	CHK	0.0077		
10-DEC-2008 05:37	CHK	0.0076		
11-DEC-2008 03:05	CHK	0.0076		
12-DEC-2008 06:50	CHK	0.0076		
13-DEC-2008 06:32	CHK	0.0076		

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 356.000000 Upper Bound : 556.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		460.6427		
17-NOV-2008 06:31	CHK		460.6124		
18-NOV-2008 00:55	CHK		460.6707		
19-NOV-2008 01:23	CHK		460.6540		
20-NOV-2008 01:33	CHK		460.6734		
20-NOV-2008 01:48	CHK		460.6587		
20-NOV-2008 02:00	CHK		460.6515		
20-NOV-2008 02:12	CHK		460.6600		
21-NOV-2008 03:50	CHK		460.6939		
21-NOV-2008 04:03	CHK		460.6803		
24-NOV-2008 04:46	CHK		460.7424		
25-NOV-2008 04:38	CHK		460.6333		
26-NOV-2008 03:24	CHK		460.6462		
26-NOV-2008 03:36	CHK		460.6848		
27-NOV-2008 06:34	CHK		460.6401		

28-NOV-2008 06:47	CHK		460.6435	| | |
29-NOV-2008 07:10	CHK		460.7457	| | |
1-DEC-2008 03:22	CHK		460.8061	| | |
1-DEC-2008 23:35	CHK		460.7727	| | |
2-DEC-2008 04:13	CHK		460.7667	| | |
2-DEC-2008 04:25	CHK		460.8331	| | |
3-DEC-2008 01:56	CHK		460.7324	| | |
4-DEC-2008 03:16	CHK		460.7471	| | |
5-DEC-2008 01:32	CHK		460.7555	| | |
5-DEC-2008 01:45	CHK		460.7193	| | |
5-DEC-2008 01:58	CHK		460.7510	| | |
6-DEC-2008 04:52	CHK		460.7072	| | |
8-DEC-2008 00:53	CHK		460.6494	| | |
9-DEC-2008 02:42	CHK		460.5637	| | |
9-DEC-2008 02:53	CHK		460.6182	| | |
10-DEC-2008 05:37	CHK		460.6854	| | |
11-DEC-2008 03:05	CHK		460.6872	| | |
12-DEC-2008 06:50	CHK		460.7586	| | |
13-DEC-2008 06:32	CHK		460.6786	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 1.034049 Std Deviation : 0.013323

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.0332	| | |
17-NOV-2008 06:31	CHK		1.0645	|In| |
18-NOV-2008 00:55	CHK		1.0249	| | |
19-NOV-2008 01:23	CHK		1.0604	| | |
20-NOV-2008 01:33	CHK		1.0829	|Ac| |
20-NOV-2008 01:48	CHK		1.0883	|Ac| |
20-NOV-2008 02:00	CHK		1.0609	|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

20-NOV-2008 02:12	CHK	1.0686	|In| |
21-NOV-2008 03:50	CHK	1.0780	|Ac| |
21-NOV-2008 04:03	CHK	1.0546	| | |
24-NOV-2008 04:46	CHK	1.0524	| | |
25-NOV-2008 04:38	CHK	1.0682	|In| |
26-NOV-2008 03:24	CHK	1.0467	| | |
26-NOV-2008 03:36	CHK	1.0531	| | |
27-NOV-2008 06:34	CHK	1.0204	| | |
28-NOV-2008 06:47	CHK	1.0340	| | |
29-NOV-2008 07:10	CHK	1.0269	| | |
1-DEC-2008 03:22	CHK	1.0011	|In| |
1-DEC-2008 23:35	CHK	1.0191	| | |
2-DEC-2008 04:13	CHK	1.0360	| | |
2-DEC-2008 04:25	CHK	1.0398	| | |
3-DEC-2008 01:56	CHK	1.0328	| | |
4-DEC-2008 03:16	CHK	1.0265	| | |
5-DEC-2008 01:32	CHK	1.1039	|Ac| |
5-DEC-2008 01:45	CHK	1.0754	|Ac| |
5-DEC-2008 01:58	CHK	1.0893	|Ac| |
6-DEC-2008 04:52	CHK	1.0309	| | |
8-DEC-2008 00:53	CHK	1.0035	|In| |
9-DEC-2008 02:42	CHK	1.0273	| | |
9-DEC-2008 02:53	CHK	1.0456	| | |
10-DEC-2008 05:37	CHK	1.0341	| | |
11-DEC-2008 03:05	CHK	1.0568	| | |
12-DEC-2008 06:50	CHK	1.0218	| | |
13-DEC-2008 06:32	CHK	1.0337	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000000 Upper Bound : 0.002320

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 0.001237 Std Deviation : 0.000025

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0012	| | |
17-NOV-2008 06:31	CHK		0.0012	| | |
18-NOV-2008 00:55	CHK		0.0012	| | |
19-NOV-2008 01:23	CHK		0.0013	| | |
20-NOV-2008 01:33	CHK		0.0013	| | |
20-NOV-2008 01:48	CHK		0.0012	| | |
20-NOV-2008 02:00	CHK		0.0013	| | |
20-NOV-2008 02:12	CHK		0.0013	|In| |
21-NOV-2008 03:50	CHK		0.0013	| | |
21-NOV-2008 04:03	CHK		0.0012	| | |
24-NOV-2008 04:46	CHK		0.0012	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-NOV-2008 04:38	CHK		0.0013	| | |
26-NOV-2008 03:24	CHK		0.0012	| | |
26-NOV-2008 03:36	CHK		0.0012	| | |
27-NOV-2008 06:34	CHK		0.0012	| | |
28-NOV-2008 06:47	CHK		0.0012	| | |
29-NOV-2008 07:10	CHK		0.0012	| | |
1-DEC-2008 03:22	CHK		0.0013	| | |
1-DEC-2008 23:35	CHK		0.0012	| | |
2-DEC-2008 04:13	CHK		0.0011	|Ac| |
2-DEC-2008 04:25	CHK		0.0012	| | |
3-DEC-2008 01:56	CHK		0.0012	| | |
4-DEC-2008 03:16	CHK		0.0012	| | |
5-DEC-2008 01:32	CHK		0.0012	| | |
5-DEC-2008 01:45	CHK		0.0012	| | |
5-DEC-2008 01:58	CHK		0.0012	| | |
6-DEC-2008 04:52	CHK		0.0012	| | |
8-DEC-2008 00:53	CHK		0.0013	| | |
9-DEC-2008 02:42	CHK		0.0012	| | |
9-DEC-2008 02:53	CHK		0.0012	| | |
10-DEC-2008 05:37	CHK		0.0012	| | |
11-DEC-2008 03:05	CHK		0.0013	|In| |
12-DEC-2008 06:50	CHK		0.0012	| | |
13-DEC-2008 06:32	CHK		0.0012	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5681.000000 Upper Bound : 5881.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		5829.9434	| | |
17-NOV-2008 06:31	CHK		5829.8911	| | |
18-NOV-2008 00:55	CHK		5829.8413	| | |
19-NOV-2008 01:23	CHK		5830.0811	| | |
20-NOV-2008 01:33	CHK		5829.9580	| | |
20-NOV-2008 01:48	CHK		5829.9258	| | |
20-NOV-2008 02:00	CHK		5829.9614	| | |
20-NOV-2008 02:12	CHK		5829.8291	| | |
21-NOV-2008 03:50	CHK		5830.0625	| | |
21-NOV-2008 04:03	CHK		5830.0513	| | |
24-NOV-2008 04:46	CHK		5830.1177	| | |
25-NOV-2008 04:38	CHK		5829.9346	| | |
26-NOV-2008 03:24	CHK		5830.4189	| | |
26-NOV-2008 03:36	CHK		5830.3218	| | |
27-NOV-2008 06:34	CHK		5830.1948	| | |
28-NOV-2008 06:47	CHK		5830.2827	| | |
29-NOV-2008 07:10	CHK		5830.2261	| | |
1-DEC-2008 03:22	CHK		5830.4468	| | |
1-DEC-2008 23:35	CHK		5830.4126	| | |
2-DEC-2008 04:13	CHK		5830.3535	| | |
2-DEC-2008 04:25	CHK		5830.3433	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-DEC-2008 01:56	CHK		5830.5200	| | |
4-DEC-2008 03:16	CHK		5830.4541	| | |
5-DEC-2008 01:32	CHK		5830.5679	| | |
5-DEC-2008 01:45	CHK		5830.3550	| | |
5-DEC-2008 01:58	CHK		5830.3838	| | |
6-DEC-2008 04:52	CHK		5830.2705	| | |
8-DEC-2008 00:53	CHK		5829.5269	| | |
9-DEC-2008 02:42	CHK		5829.6748	| | |
9-DEC-2008 02:53	CHK		5829.9463	| | |
10-DEC-2008 05:37	CHK		5829.9854	| | |

11-DEC-2008 03:05	CHK	5830.2114		
12-DEC-2008 06:50	CHK	5829.9990		
13-DEC-2008 06:32	CHK	5829.9360		

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.511000 Upper Bound : 2.222000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 1.858572 Std Deviation : 0.087566

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	CHK		1.8471				
17-NOV-2008 06:31	CHK		1.8290				
18-NOV-2008 00:55	CHK		1.7947				
19-NOV-2008 01:23	CHK		1.9115				
20-NOV-2008 01:33	CHK		1.8106				
20-NOV-2008 01:48	CHK		1.9206				
20-NOV-2008 02:00	CHK		1.9505				
20-NOV-2008 02:12	CHK		2.0611	In			
21-NOV-2008 03:50	CHK		2.0310				
21-NOV-2008 04:03	CHK		1.9410				
24-NOV-2008 04:46	CHK		1.8549				
25-NOV-2008 04:38	CHK		1.7751				
26-NOV-2008 03:24	CHK		1.7305				
26-NOV-2008 03:36	CHK		1.6267	In			
27-NOV-2008 06:34	CHK		1.8523				
28-NOV-2008 06:47	CHK		1.9417				
29-NOV-2008 07:10	CHK		1.9551				
1-DEC-2008 03:22	CHK		1.7322				
1-DEC-2008 23:35	CHK		1.9330				
2-DEC-2008 04:13	CHK		1.7964				
2-DEC-2008 04:25	CHK		1.8619				
3-DEC-2008 01:56	CHK		1.9538				
4-DEC-2008 03:16	CHK		1.9623				

5-DEC-2008 01:32 CHK	1.8276	| | |
5-DEC-2008 01:45 CHK	1.7209	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
5-DEC-2008 01:58	CHK		2.0550	|In| |
6-DEC-2008 04:52	CHK		1.8192	| | |
8-DEC-2008 00:53	CHK		1.8708	| | |
9-DEC-2008 02:42	CHK		2.0353	|In| |
9-DEC-2008 02:53	CHK		1.6899	| | |
10-DEC-2008 05:37	CHK		1.8474	| | |
11-DEC-2008 03:05	CHK		1.8056	| | |
12-DEC-2008 06:50	CHK		1.9218	| | |
13-DEC-2008 06:32	CHK		1.9323	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001800 Upper Bound : 0.002100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 0.002007 Std Deviation : 0.000053

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0020	| | |
17-NOV-2008 06:31	CHK		0.0020	| | |
18-NOV-2008 00:55	CHK		0.0020	| | |
19-NOV-2008 01:23	CHK		0.0020	| | |
20-NOV-2008 01:33	CHK		0.0020	| | |
20-NOV-2008 01:48	CHK		0.0019	|In| |
20-NOV-2008 02:00	CHK		0.0021	Ab|In| |
20-NOV-2008 02:12	CHK		0.0019	| | |
21-NOV-2008 03:50	CHK		0.0021	| | |
21-NOV-2008 04:03	CHK		0.0020	| | |
24-NOV-2008 04:46	CHK		0.0019	| | |

25-NOV-2008 04:38	CHK	0.0020		
26-NOV-2008 03:24	CHK	0.0021	Ab	
26-NOV-2008 03:36	CHK	0.0021		
27-NOV-2008 06:34	CHK	0.0020		
28-NOV-2008 06:47	CHK	0.0020		
29-NOV-2008 07:10	CHK	0.0021		
1-DEC-2008 03:22	CHK	0.0020		
1-DEC-2008 23:35	CHK	0.0020		
2-DEC-2008 04:13	CHK	0.0020		
2-DEC-2008 04:25	CHK	0.0020		
3-DEC-2008 01:56	CHK	0.0020		
4-DEC-2008 03:16	CHK	0.0020		
5-DEC-2008 01:32	CHK	0.0019		
5-DEC-2008 01:45	CHK	0.0020		
5-DEC-2008 01:58	CHK	0.0020		
6-DEC-2008 04:52	CHK	0.0020		
8-DEC-2008 00:53	CHK	0.0020		
9-DEC-2008 02:42	CHK	0.0021	Ab|In	

Quality Assurance Multi-Test Full Report (continued) Page : 7

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
9-DEC-2008 02:53	CHK		0.0020	
10-DEC-2008 05:37	CHK		0.0021	
11-DEC-2008 03:05	CHK		0.0020	
12-DEC-2008 06:50	CHK		0.0020	
13-DEC-2008 06:32	CHK		0.0020	

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3077.000000 Upper Bound : 3277.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		3203.9651	
17-NOV-2008 06:31	CHK		3204.1499	
18-NOV-2008 00:55	CHK		3203.9844	
19-NOV-2008 01:23	CHK		3203.9951	
20-NOV-2008 01:33	CHK		3204.0493	

20-NOV-2008 01:48	CHK	3204.1208	|	|
20-NOV-2008 02:00	CHK	3204.0273	|	|
20-NOV-2008 02:12	CHK	3203.8848	|	|
21-NOV-2008 03:50	CHK	3204.1873	|	|
21-NOV-2008 04:03	CHK	3204.1565	|	|
24-NOV-2008 04:46	CHK	3204.1121	|	|
25-NOV-2008 04:38	CHK	3204.0923	|	|
26-NOV-2008 03:24	CHK	3204.4861	|	|
26-NOV-2008 03:36	CHK	3204.3752	|	|
27-NOV-2008 06:34	CHK	3204.2375	|	|
28-NOV-2008 06:47	CHK	3204.3198	|	|
29-NOV-2008 07:10	CHK	3204.1519	|	|
1-DEC-2008 03:22	CHK	3204.4583	|	|
1-DEC-2008 23:35	CHK	3204.3962	|	|
2-DEC-2008 04:13	CHK	3204.2034	|	|
2-DEC-2008 04:25	CHK	3204.2295	|	|
3-DEC-2008 01:56	CHK	3204.4043	|	|
4-DEC-2008 03:16	CHK	3204.1287	|	|
5-DEC-2008 01:32	CHK	3204.3018	|	|
5-DEC-2008 01:45	CHK	3204.4106	|	|
5-DEC-2008 01:58	CHK	3204.4731	|	|
6-DEC-2008 04:52	CHK	3204.2615	|	|
8-DEC-2008 00:53	CHK	3203.9050	|	|
9-DEC-2008 02:42	CHK	3204.1016	|	|
9-DEC-2008 02:53	CHK	3204.0789	|	|
10-DEC-2008 05:37	CHK	3204.1492	|	|
11-DEC-2008 03:05	CHK	3204.1582	|	|
12-DEC-2008 06:50	CHK	3204.1641	|	|
13-DEC-2008 06:32	CHK	3203.9673	|	|

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.280000 Upper Bound : 1.720000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 1.520886 Std Deviation : 0.067022

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 8

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.4670	| | |
17-NOV-2008 06:31	CHK		1.5848	| | |
18-NOV-2008 00:55	CHK		1.5261	| | |
19-NOV-2008 01:23	CHK		1.4746	| | |
20-NOV-2008 01:33	CHK		1.5076	| | |
20-NOV-2008 01:48	CHK		1.4852	| | |
20-NOV-2008 02:00	CHK		1.5296	| | |
20-NOV-2008 02:12	CHK		1.4482	| | |
21-NOV-2008 03:50	CHK		1.5021	| | |
21-NOV-2008 04:03	CHK		1.5299	| | |
24-NOV-2008 04:46	CHK		1.5556	| | |
25-NOV-2008 04:38	CHK		1.4921	| | |
26-NOV-2008 03:24	CHK		1.5182	| | |
26-NOV-2008 03:36	CHK		1.5021	| | |
27-NOV-2008 06:34	CHK		1.4010	| | |
28-NOV-2008 06:47	CHK		1.4454	| | |
29-NOV-2008 07:10	CHK		1.6450	| | |
1-DEC-2008 03:22	CHK		1.5173	| | |
1-DEC-2008 23:35	CHK		1.5810	| | |
2-DEC-2008 04:13	CHK		1.5131	| | |
2-DEC-2008 04:25	CHK		1.4599	| | |
3-DEC-2008 01:56	CHK		1.4435	| | |
4-DEC-2008 03:16	CHK		1.5117	| | |
5-DEC-2008 01:32	CHK		1.5138	| | |
5-DEC-2008 01:45	CHK		1.4140	| | |
5-DEC-2008 01:58	CHK		1.5684	| | |
6-DEC-2008 04:52	CHK		1.4332	| | |
8-DEC-2008 00:53	CHK		1.4765	| | |
9-DEC-2008 02:42	CHK		1.5340	| | |
9-DEC-2008 02:53	CHK		1.4550	| | |
10-DEC-2008 05:37	CHK		1.5117	| | |
11-DEC-2008 03:05	CHK		1.5746	| | |
12-DEC-2008 06:50	CHK		1.5446	| | |
13-DEC-2008 06:32	CHK		1.4958	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:46:39.78

QA Filename : RDND06::RDND06$DKA100:[GER15.QA]BKG.QAF;3

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000000 Std Deviation : 0.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0000	| | |
23-NOV-2008 05:01	bkg		0.0000	| | |
30-NOV-2008 05:53	bkg		0.0000	| | |
7-DEC-2008 04:34	bkg		0.0000	| | |
14-DEC-2008 06:39	bkg		0.0000	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 14.154800 Std Deviation : 6.137027

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		18.3460	| | |
23-NOV-2008 05:01	bkg		18.2698	| | |
30-NOV-2008 05:53	bkg		17.9412	| | |
7-DEC-2008 04:34	bkg		17.6240	| | |

14-DEC-2008 06:39 bkg 17.5725 | | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.502625 Std Deviation : 9.073804

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		27.5690	| | |
23-NOV-2008 05:01	bkg		25.5222	| | |
30-NOV-2008 05:53	bkg		25.9775	| | |
7-DEC-2008 04:34	bkg		24.0173	| | |
14-DEC-2008 06:39	bkg		26.2200	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.819336 Std Deviation : 9.302514

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		25.6638	| | |
23-NOV-2008 05:01	bkg		24.6228	| | |
30-NOV-2008 05:53	bkg		28.2138	| | |
7-DEC-2008 04:34	bkg		26.8494	| | |
14-DEC-2008 06:39	bkg		26.7233	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 17.865231 Std Deviation : 7.676323

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		22.2417	| | |
23-NOV-2008 05:01	bkg		22.0143	| | |
30-NOV-2008 05:53	bkg		22.2817	| | |
7-DEC-2008 04:34	bkg		21.0047	| | |
14-DEC-2008 06:39	bkg		22.4379	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.359049 Std Deviation : 8.339755

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		23.4833	| | |
23-NOV-2008 05:01	bkg		22.3451	| | |
30-NOV-2008 05:53	bkg		23.1159	| | |
7-DEC-2008 04:34	bkg		23.4133	| | |
14-DEC-2008 06:39	bkg		23.1876	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 17.756477 Std Deviation : 7.600770

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		23.0455	| | |
23-NOV-2008 05:01	bkg		21.1840	| | |
30-NOV-2008 05:53	bkg		21.5680	| | |
7-DEC-2008 04:34	bkg		19.8521	| | |
14-DEC-2008 06:39	bkg		21.1999	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 13.797050 Std Deviation : 6.065282

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		17.8390	| | |
23-NOV-2008 05:01	bkg		18.8634	| | |
30-NOV-2008 05:53	bkg		18.4900	| | |
7-DEC-2008 04:34	bkg		17.5633	| | |
14-DEC-2008 06:39	bkg		18.2712	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 23.296396 Std Deviation : 10.160569

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		30.0833	| | |
23-NOV-2008 05:01	bkg		30.3358	| | |
30-NOV-2008 05:53	bkg		30.8255	| | |
7-DEC-2008 04:34	bkg		31.8532	| | |
14-DEC-2008 06:39	bkg		30.1260	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 24.167795 Std Deviation : 10.396915

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		33.2409	| | |
23-NOV-2008 05:01	bkg		29.8762	| | |
30-NOV-2008 05:53	bkg		31.0345	| | |
7-DEC-2008 04:34	bkg		29.6084	| | |
14-DEC-2008 06:39	bkg		30.3995	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 10.280385 Std Deviation : 4.499244

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		13.9279	| | |
23-NOV-2008 05:01	bkg		13.9377	| | |
30-NOV-2008 05:53	bkg		13.7004	| | |
7-DEC-2008 04:34	bkg		13.4112	| | |
14-DEC-2008 06:39	bkg		13.2093	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 119.516228 Std Deviation : 51.932072

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		152.9629	| | |
23-NOV-2008 05:01	bkg		155.5463	| | |
30-NOV-2008 05:53	bkg		148.5043	| | |
7-DEC-2008 04:34	bkg		149.6189	| | |
14-DEC-2008 06:39	bkg		152.2688	| | |

Analytical Data Package Prepared For

Brown and Caldwell

OU4 Phase 1 136259

Level 4

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TALR

Data Package Contains 41 *Pages*

Report No.: 40397

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
38657		OU4-UEP-19A-SC	J8J240197-17	K1JKX1AA	9K1JKX10	8301479
		OU4-UEP-19A-SC	J8J240197-17	K1JKX1AC	9K1JKX10	8311393
		OU4-UEP-19A-SC	J8J240197-17	K1JKX1AD	9K1JKX10	8311393
		OU4-UEP-19A-SC	J8J240197-17	K1JKX1AG	9K1JKX10	8340481
		OU4-UEP-19B-SC	J8J240197-18	K1JK11AA	9K1JK110	8301479
		OU4-UEP-19B-SC	J8J240197-18	K1JK11AC	9K1JK110	8311393
		OU4-UEP-19B-SC	J8J240197-18	K1JK11AD	9K1JK110	8311393
		OU4-UEP-19B-SC	J8J240197-18	K1JK11AG	9K1JK110	8340481
		OU4-UEP-26A-SC	J8J240197-15	K1JKT1AA	9K1JKT10	8301479
		OU4-UEP-26A-SC	J8J240197-15	K1JKT1AC	9K1JKT10	8311393
		OU4-UEP-26A-SC	J8J240197-15	K1JKT1AD	9K1JKT10	8311393
		OU4-UEP-26A-SC	J8J240197-15	K1JKT1AG	9K1JKT10	8340481
		OU4-UEP-26B-SC	J8J240197-16	K1JKW1AA	9K1JKW10	8301479
		OU4-UEP-26B-SC	J8J240197-16	K1JKW1AC	9K1JKW10	8311393
		OU4-UEP-26B-SC	J8J240197-16	K1JKW1AD	9K1JKW10	8311393
		OU4-UEP-26B-SC	J8J240197-16	K1JKW1AG	9K1JKW10	8340481
		OU4-UEP-36A-SC	J8J240197-9	K1JKF1AA	9K1JKF10	8301479
		OU4-UEP-36A-SC	J8J240197-9	K1JKF1AC	9K1JKF10	8311393
		OU4-UEP-36A-SC	J8J240197-9	K1JKF1AD	9K1JKF10	8311393
		OU4-UEP-36A-SC	J8J240197-9	K1JKF1AG	9K1JKF10	8340481
		OU4-UEP-36B-SC	J8J240197-10	K1JKG1AA	9K1JKG10	8301479
		OU4-UEP-36B-SC	J8J240197-10	K1JKG1AC	9K1JKG10	8311393
		OU4-UEP-36B-SC	J8J240197-10	K1JKG1AD	9K1JKG10	8311393
		OU4-UEP-36B-SC	J8J240197-10	K1JKG1AG	9K1JKG10	8340481
		OU4-UEP-37A-SC	J8J240197-11	K1JKH1AA	9K1JKH10	8301479
		OU4-UEP-37A-SC	J8J240197-11	K1JKH1AC	9K1JKH10	8311393

Report No.: 40397

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
38657		OU4-UEP-37A-SC	J8J240197-11	K1JKH1AD	9K1JKH10	8311393
		OU4-UEP-37A-SC	J8J240197-11	K1JKH1AG	9K1JKH10	8340481
		OU4-UEP-37B-SC	J8J240197-12	K1JKJ1AA	9K1JKJ10	8301479
		OU4-UEP-37B-SC	J8J240197-12	K1JKJ1AC	9K1JKJ10	8311393
		OU4-UEP-37B-SC	J8J240197-12	K1JKJ1AD	9K1JKJ10	8311393
		OU4-UEP-37B-SC	J8J240197-12	K1JKJ1AG	9K1JKJ10	8340481
		OU4-UEP-38A-SC	J8J240197-1	K1JJM1AA	9K1JJM10	8301479
		OU4-UEP-38A-SC	J8J240197-1	K1JJM1AC	9K1JJM10	8311393
		OU4-UEP-38A-SC	J8J240197-1	K1JJM1AD	9K1JJM10	8311393
		OU4-UEP-38A-SC	J8J240197-1	K1JJM1AM	9K1JJM10	8340481
		OU4-UEP-38A-SC-FD	J8J240197-3	K1JJV1AA	9K1JJV10	8301479
		OU4-UEP-38A-SC-FD	J8J240197-3	K1JJV1AC	9K1JJV10	8311393
		OU4-UEP-38A-SC-FD	J8J240197-3	K1JJV1AD	9K1JJV10	8311393
		OU4-UEP-38A-SC-FD	J8J240197-3	K1JJV1AG	9K1JJV10	8340481
		OU4-UEP-38B-SC	J8J240197-2	K1JJT1AA	9K1JJT10	8301479
		OU4-UEP-38B-SC	J8J240197-2	K1JJT1AC	9K1JJT10	8311393
		OU4-UEP-38B-SC	J8J240197-2	K1JJT1AD	9K1JJT10	8311393
		OU4-UEP-38B-SC	J8J240197-2	K1JJT1AQ	9K1JJT10	8340481
		OU4-UEP-38B-SC-FD	J8J240197-4	K1JJ31AA	9K1JJ310	8301479
		OU4-UEP-38B-SC-FD	J8J240197-4	K1JJ31AC	9K1JJ310	8311393
		OU4-UEP-38B-SC-FD	J8J240197-4	K1JJ31AD	9K1JJ310	8311393
		OU4-UEP-38B-SC-FD	J8J240197-4	K1JJ31AG	9K1JJ310	8340481
		OU4-UEP-39A-SC	J8J240197-5	K1JJ71AA	9K1JJ710	8301479
		OU4-UEP-39A-SC	J8J240197-5	K1JJ71AC	9K1JJ710	8311393
		OU4-UEP-39A-SC	J8J240197-5	K1JJ71AD	9K1JJ710	8311393
		OU4-UEP-39A-SC	J8J240197-5	K1JJ71AG	9K1JJ710	8340481
		OU4-UEP-39B-SC	J8J240197-6	K1JKC1AA	9K1JKC10	8301479
		OU4-UEP-39B-SC	J8J240197-6	K1JKC1AC	9K1JKC10	8311393
		OU4-UEP-39B-SC	J8J240197-6	K1JKC1AD	9K1JKC10	8311393
		OU4-UEP-39B-SC	J8J240197-6	K1JKC1AG	9K1JKC10	8340481
		OU4-UEP-40A-SC	J8J240197-13	K1JKL1AA	9K1JKL10	8301479
		OU4-UEP-40A-SC	J8J240197-13	K1JKL1AC	9K1JKL10	8311393
		OU4-UEP-40A-SC	J8J240197-13	K1JKL1AD	9K1JKL10	8311393
		OU4-UEP-40A-SC	J8J240197-13	K1JKL1AG	9K1JKL10	8340481
		OU4-UEP-40B-SC	J8J240197-14	K1JKN1AA	9K1JKN10	8301479
		OU4-UEP-40B-SC	J8J240197-14	K1JKN1AC	9K1JKN10	8311393
		OU4-UEP-40B-SC	J8J240197-14	K1JKN1AD	9K1JKN10	8311393
		OU4-UEP-40B-SC	J8J240197-14	K1JKN1AG	9K1JKN10	8340481

Report No.: 40397

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
38657		OU4-UEP-43A-SC	J8J240197-7	K1JKD1AA	9K1JKD10	8301479
		OU4-UEP-43A-SC	J8J240197-7	K1JKD1AC	9K1JKD10	8311393
		OU4-UEP-43A-SC	J8J240197-7	K1JKD1AD	9K1JKD10	8311393
		OU4-UEP-43A-SC	J8J240197-7	K1JKD1AG	9K1JKD10	8340481
		OU4-UEP-43B-SC	J8J240197-8	K1JKE1AA	9K1JKE10	8301479
		OU4-UEP-43B-SC	J8J240197-8	K1JKE1AC	9K1JKE10	8311393
		OU4-UEP-43B-SC	J8J240197-8	K1JKE1AD	9K1JKE10	8311393
		OU4-UEP-43B-SC	J8J240197-8	K1JKE1AG	9K1JKE10	8340481

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

December 17, 2008

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

Attention: Penny Bassett

Date Received at Lab	:	October 21, 2008
Project Name	:	OU4 Phase 1
Project Number	:	136259
Sample Type	:	Eighteen (18) Soil Samples
SDG Number	:	38657

CASE NARRATIVE

I. Introduction

On October 21, 2008, eighteen soil samples were received at TestAmerica's Richland laboratory for radiochemical analysis. Upon receipt, the samples were assigned TestAmerica identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Number J8J240197

II. Sample Receipt

The samples were received in good condition, the custody seals were in tact, signed and dated. No anomalies were noted during check-in.

III. Analytical Results/Methodology

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

The analysis requested was:

ICP-MS
Total Thorium and Total Uranium by method RL-MT-004
Gamma Spectrometry
Gamma by method RL-GAM-001 (RICH-RC-5017)

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

ICP-MS

Total Uranium:

The interference check was not performed because the isotopes reported are not within the range of the A and B solutions. The QC sections in the raw data are not applicable due to the software error identified. Thus, the results were hand calculated. Due to the elevated activity of the samples the LLCCV is not applicable.

The recovery yields of the matrix spike and matrix spike duplicate were outside limits due to the elevated sample activity that overwhelmed the spiked levels. Except as noted, the LCS, batch blank, matrix spike, matrix spike duplicate, sample and sample duplicate results are within analytical requirements.

Gamma

Gamma:

The LCS, batch blank, samples and sample duplicate results are within analytical acceptance limits.

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:

Erika Jordan
Customer Service Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica 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/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
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 TestAmerica "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 TestAmerica 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.

RADIOLOGICAL FIELD DUPLICATE EVALUATION

REPLICATE ERROR RATIO (RER) LIMIT < 1.96

RER = ABS (SAMPLE ACT - DUPLICATE ACT) / SQRT [(TPU SAMPLE)2 + (TPU DUPLICATE)2]

J8K240197

Sample No. OU4-UEP-38B-SC & OU4-UEP-38B-SC-FD

Analyte	Sample Act	Sample TPU	Duplicate Act	Duplicate TPU	RER 1-sigma	RER
Ra-226	1.69	0.253	1.23	0.247	2.602	0.92

↑ out

EVALUATION OF INORGANIC DUPLICATE ANALYSIS PRECISION

Units %; pci/gm; mg/kg	PRECISION OBJECTIVES*	
	Analyte > or = 5 X RL	RPD < or = 40
	Analyte < 5 X RL	Difference < or = RL Times 2

* Enter the project-specific or default acceptance criteria

ANALYTE	OU4-UEP-38B-SC Analyte Concentration	Qual	RL	OU4-UEP-38B-SC-FD Analyte Concentration	Qual	RL	Difference	RPD	Notes
Moisture	20.6			21.6			NA	4.74%	IN
Radium-226	1.69			1.23			NA	31.51%	IN
Radium-228	2.18			1.95			NA	11.14%	IN
Thorium	17.7			19			NA	7.08%	IN
Uranium, Total	7.08			6.6			NA	7.02%	IN

NOTES:

Qual) Column to enter J, U, U*, or B

RPD) Relative Percent Difference

RL) Reporting Limit

J) The analyte concentration should be considered estimated.

U) The analyte was not-detected in the sample. The numerical value will be used for comparison purposes.

U* or B) The result was blank qualified. The numerical value will be used for comparison purposes.

NA) The RPD or Difference is not applicable.

1) Both results are > or = 5 X RL and RPD over acceptance limit, flag positive results "J".

2) At least one of the results is < 5 X RL and difference is over acceptance limit, flag positive results "J" and "not-detected" results "UJ".

Comments:

EVALUATION OF INORGANIC DUPLICATE ANALYSIS PRECISION

Units %; pci/gm; mg/kg	PRECISION OBJECTIVES*	
	Analyte > or = 5 X RL	RPD < or = 40
	Analyte < 5 X RL	Difference < or = RL Times 2

* Enter the project-specific or default acceptance criteria

ANALYTE	OU4-UEP-38A-SC Analyte Concentration	Qual	RL	OU4-UEP-38A-SC-FD Analyte Concentration	Qual	RL	Difference	RPD	Notes
Moisture	19.8			20.5			NA	3.47%	IN
Radium-226	1.59			1.61			NA	1.25%	IN
Radium-228	5.09			5.29			NA	3.85%	IN
Thorium	48.2			45			NA	6.87%	IN
Uranium, Total	5.57			5.01			NA	10.59%	IN

NOTES:

Qual) Column to enter J, U, U*, or B

RPD) Relative Percent Difference

RL) Reporting Limit

J) The analyte concentration should be considered estimated.

U) The analyte was not-detected in the sample. The numerical value will be used for comparison purposes.

U* or B) The result was blank qualified. The numerical value will be used for comparison purposes.

NA) The RPD or Difference is not applicable.

1) Both results are > or = 5 X RL and RPD over acceptance limit, flag positive results "J".

2) At least one of the results is < 5 X RL and difference is over acceptance limit, flag positive results "J" and "not-detected" results "UJ".

Comments:

Sample Results Summary

Date: 17-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40397 **SDG No:** 38657

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8311393	HKQV								
	OU4-UEP-19A-SC								
	K1JKX1AC	THORIUM	8.01 +- 0.00000	=	mg/kg	101%			
	K1JKX1AD	TOTAL-URANIUM	26.4 +- 0.00000	=	mg/kg	101%		0.8	
	OU4-UEP-19B-SC								
	K1JK11AC	THORIUM	11.7 +- 0.00000	=	mg/kg	102%			
	K1JK11AD	TOTAL-URANIUM	17.9 +- 0.00000	=	mg/kg	102%		0.8	
	OU4-UEP-26A-SC								
	K1JKT1AC	THORIUM	34.3 +- 0.00000	=	mg/kg	101%			
	K1JKT1AD	TOTAL-URANIUM	4.43 +- 0.00000	=	mg/kg	101%		0.8	
	OU4-UEP-26B-SC								
	K1JKW1AC	THORIUM	11.8 +- 0.00000	=	mg/kg	95%			
	K1JKW1AD	TOTAL-URANIUM	4.63 +- 0.00000	=	mg/kg	95%		0.8	
	OU4-UEP-36A-SC								
	K1JKF1AC	THORIUM	88.5 +- 0.00000	=	mg/kg	101%			
	K1JKF1AD	TOTAL-URANIUM	16.6 +- 0.00000	=	mg/kg	101%		0.8	
	OU4-UEP-36B-SC								
	K1JKG1AC	THORIUM	17.8 +- 0.00000	=	mg/kg	102%			
	K1JKG1AD	TOTAL-URANIUM	6.36 +- 0.00000	=	mg/kg	102%		0.8	
	OU4-UEP-37A-SC								
	K1JKH1AC	THORIUM	64.8 +- 0.00000	=	mg/kg	100%			
	K1JKH1AD	TOTAL-URANIUM	9.70 +- 0.00000	=	mg/kg	100%		0.8	
	OU4-UEP-37B-SC								
	K1JKJ1AC	THORIUM	31.8 +- 0.00000	=	mg/kg	103%			
	K1JKJ1AD	TOTAL-URANIUM	11.3 +- 0.00000	=	mg/kg	103%		0.8	
	OU4-UEP-38A-SC								
	K1JJM1AC	THORIUM	48.2 +- 0.00000	=	mg/kg	99%			
	K1JJM1AD	TOTAL-URANIUM	5.57 +- 0.00000	=	mg/kg	99%		0.8	
	OU4-UEP-38A-SC DUP								
	K1JJM1AH	THORIUM	53.4 +- 0.00000	=	mg/kg	90%			
	K1JJM1AJ	TOTAL-URANIUM	6.39 +- 0.00000	=	mg/kg	90%		0.8	
	OU4-UEP-38A-SC-FD								
	K1JJV1AC	THORIUM	45.0 +- 0.00000	=	mg/kg	100%			
	K1JJV1AD	TOTAL-URANIUM	5.01 +- 0.00000	=	mg/kg	100%		0.8	
	OU4-UEP-38B-SC								
	K1JJT1AC	THORIUM	17.7 +- 0.00000	=	mg/kg	98%			
	K1JJT1AD	TOTAL-URANIUM	7.08 +- 0.00000	=	mg/kg	98%		0.8	
	OU4-UEP-38B-SC-FD								
	K1JJ31AC	THORIUM	19.0 +- 0.00000	=	mg/kg	103%			

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

= ERPIMS - Equal To, Analyte Detected

Sample Results Summary

Date: 17-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40397 **SDG No:** 38657

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8311393 HKQV									
OU4-UEP-38B-SC-FD									
	K1JJ31AD	TOTAL-URANIUM	6.60 +- 0.00000	=	mg/kg	103%		0.8	
OU4-UEP-39A-SC									
	K1JJ71AC	THORIUM	55.8 +- 0.00000	=	mg/kg	102%			
	K1JJ71AD	TOTAL-URANIUM	4.28 +- 0.00000	=	mg/kg	102%		0.8	
OU4-UEP-39B-SC									
	K1JKC1AC	THORIUM	15.7 +- 0.00000	=	mg/kg	103%			
	K1JKC1AD	TOTAL-URANIUM	4.32 +- 0.00000	=	mg/kg	103%		0.8	
OU4-UEP-40A-SC									
	K1JKL1AC	THORIUM	42.6 +- 0.00000	=	mg/kg	101%			
	K1JKL1AD	TOTAL-URANIUM	4.96 +- 0.00000	=	mg/kg	101%		0.8	
OU4-UEP-40B-SC									
	K1JKN1AC	THORIUM	20.8 +- 0.00000	=	mg/kg	99%			
	K1JKN1AD	TOTAL-URANIUM	10.1 +- 0.00000	=	mg/kg	99%		0.8	
OU4-UEP-43A-SC									
	K1JKD1AC	THORIUM	55.3 +- 0.00000	=	mg/kg	100%			
	K1JKD1AD	TOTAL-URANIUM	6.71 +- 0.00000	=	mg/kg	100%		0.8	
OU4-UEP-43B-SC									
	K1JKE1AC	THORIUM	23.5 +- 0.00000	=	mg/kg	101%			
	K1JKE1AD	TOTAL-URANIUM	11.6 +- 0.00000	=	mg/kg	101%		0.8	
8301479 EPA 901.1									
OU4-UEP-19A-SC									
	K1JKX1AA	RA-226	0.916 +- 0.207	=	pCi/g		0.123		
		RA-228	1.35 +- 0.384	=	pCi/g		0.228	1.0	
OU4-UEP-19B-SC									
	K1JK11AA	RA-226	1.18 +- 0.249	=	pCi/g		0.125		
		RA-228	1.31 +- 0.351	=	pCi/g		0.225	1.0	
OU4-UEP-26A-SC									
	K1JKT1AA	RA-226	0.705 +- 0.175	ND	pCi/g		0.215		
		RA-228	3.92 +- 0.574	=	pCi/g		0.203	1.0	
OU4-UEP-26B-SC									
	K1JKW1AA	RA-226	1.27 +- 0.186	=	pCi/g		0.0816		
		RA-228	1.43 +- 0.271	=	pCi/g		0.141	1.0	
OU4-UEP-36A-SC									
	K1JKF1AA	RA-226	2.01 +- 0.325	=	pCi/g		0.193		
		RA-228	12.1 +- 1.64	=	pCi/g		0.272	1.0	
OU4-UEP-36B-SC									
	K1JKG1AA	RA-226	1.55 +- 0.246	=	pCi/g		0.0946		

TestAmerica
rptSTLRchSaSummary2 V5.2 A2002

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
= ERPIMS - Equal To, Analyte Detected
D Qual - Result is greater than 3 times 1s Total Uncertainty

Sample Results Summary

Date: 17-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40397

SDG No: 38657

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8301479	EPA 901.1								
	OU4-UEP-36B-SC								
	K1JKG1AA	RA-228	2.71 +- 0.459	=	pCi/g		0.174	1.0	
	OU4-UEP-37A-SC								
	K1JKH1AA	RA-226	1.88 +- 0.372	=	pCi/g		0.206		
		RA-228	7.01 +- 1.20	=	pCi/g		0.397	1.0	
	OU4-UEP-37B-SC								
	K1JKJ1AA	RA-226	1.47 +- 0.290	=	pCi/g		0.154		
		RA-228	3.68 +- 0.687	=	pCi/g		0.341	1.0	
	OU4-UEP-38A-SC								
	K1JJM1AA	RA-226	1.59 +- 0.273	=	pCi/g		0.125		
		RA-228	5.09 +- 0.734	=	pCi/g		0.209	1.0	
	OU4-UEP-38A-SC DUP								
	K1JJM1AG	RA-226	1.77 +- 0.277	=	pCi/g		0.122		
		RA-228	5.39 +- 0.767	=	pCi/g		0.228		
	OU4-UEP-38A-SC-FD								
	K1JJV1AA	RA-226	1.61 +- 0.236	=	pCi/g		0.0868		
		RA-228	5.29 +- 0.792	=	pCi/g		0.156	1.0	
	OU4-UEP-38B-SC								
	K1JJT1AA	RA-226	1.69 +- 0.253	=	pCi/g		0.0927		
		RA-228	2.18 +- 0.378	=	pCi/g		0.161	1.0	
	OU4-UEP-38B-SC-FD								
	K1JJ31AA	RA-226	1.23 +- 0.247	=	pCi/g		0.149		
		RA-228	1.95 +- 0.434	=	pCi/g		0.274	1.0	
	OU4-UEP-39A-SC								
	K1JJ71AA	RA-226	1.00 +- 0.194	=	pCi/g		0.13		
		RA-228	5.88 +- 0.848	=	pCi/g		0.213	1.0	
	OU4-UEP-39B-SC								
	K1JKC1AA	RA-226	1.70 +- 0.241	=	pCi/g		0.0947		
		RA-228	2.27 +- 0.371	=	pCi/g		0.164	1.0	
	OU4-UEP-40A-SC								
	K1JKL1AA	RA-226	1.27 +- 0.220	=	pCi/g		0.111		
		RA-228	5.72 +- 0.804	=	pCi/g		0.198	1.0	
	OU4-UEP-40B-SC								
	K1JKN1AA	RA-226	1.63 +- 0.224	=	pCi/g		0.0678		
		RA-228	2.79 +- 0.455	=	pCi/g		0.129	1.0	
	OU4-UEP-43A-SC								
	K1JKD1AA	RA-226	1.60 +- 0.265	=	pCi/g		0.152		
		RA-228	7.65 +- 1.10	=	pCi/g		0.279	1.0	

TestAmerica rptSTLRchSaSummary2 V5.2 A2002

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

= ERPIMS - Equal To, Analyte Detected

Sample Results Summary

Date: 17-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40397 **SDG No:** 38657

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8301479	EPA 901.1								
	OU4-UEP-43B-SC								
	K1JKE1AA	RA-226	1.14 +- 0.171	=	pCi/g		0.0662		
		RA-228	1.63 +- 0.316	=	pCi/g		0.14	1.0	
8340481	88OV								
	OU4-UEP-19A-SC								
	K1JKX1AG	Moisture	19.3 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-19B-SC								
	K1JK11AG	Moisture	19.0 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-26A-SC								
	K1JKT1AG	Moisture	7.30 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-26B-SC								
	K1JKW1AG	Moisture	15.1 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-36A-SC								
	K1JKF1AG	Moisture	22.3 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-36B-SC								
	K1JKG1AG	Moisture	21.1 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-37A-SC								
	K1JKH1AG	Moisture	7.90 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-37B-SC								
	K1JKJ1AG	Moisture	25.7 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-38A-SC								
	K1JJM1AM	Moisture	19.8 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-38A-SC-FD								
	K1JJV1AG	Moisture	20.5 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-38B-SC								
	K1JJT1AQ	Moisture	20.6 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-38B-SC-FD								
	K1JJ31AG	Moisture	21.6 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-39A-SC								
	K1JJ71AG	Moisture	18.2 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-39B-SC								
	K1JKC1AG	Moisture	20.6 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-40A-SC								
	K1JKL1AG	Moisture	20.4 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-40B-SC								
	K1JKN1AG	Moisture	25.2 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-43A-SC								
	K1JKD1AG	Moisture	18.5 +- 0.00000	=	PERCENT	N/A			
	OU4-UEP-43B-SC								

TestAmerica rptSTLRchSaSummary2 V5.2 A2002

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

= ERPIMS - Equal To, Analyte Detected

Sample Results Summary

Date: 17-Dec-08

TestAmerica TALR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 40397 **SDG No:** 38657

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
8340481	88OV								
	OU4-UEP-43B-SC								
	K1JKE1AG	Moisture	12.9 +- 0.00000	=	PERCENT	N/A			

No. of Results: 94

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

TestAmerica
rptSTLRchSaSummary2 V5.2 A2002

QC Results Summary

TestAmerica TALR

Ordered by Method, Batch No, QC Type,.

Date: 17-Dec-08

Report No. : 40397 **SDG No.:** 11788

Batch / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
HKQV								
8311393 BLANK QC,								
K2DTC1AA	THORIUM	0.00000328 +-	=N	mg/kg	101%			
8311393 BLANK QC,								
K2DTC1AB	TOTAL-URANIUM	0.0000021 +- 0.00000	=N	mg/kg	101%			
8311393 LCS,								
K2DTC1AC	THORIUM	0.000184 +- 0.00000	=	mg/kg	92%	92%	-0.1	
K2DTC1AD	TOTAL-URANIUM	0.000194 +- 0.00000	=	mg/kg	92%	98%	0.0	
8311393 MATRIX SPIKE, OU4-UEP-38B-SC								
K1JJT1AF	THORIUM	0.00300 +- 0.00000	=	mg/kg	98%	0%	-1.0	
K1JJT1AG	TOTAL-URANIUM	0.764 +- 0.00000	=	mg/kg	98%	79%	-0.2	
K1JJT1AH	THORIUM	1.18 +- 0.00000	=	mg/kg	99%	122%	0.2	
K1JJT1AJ	TOTAL-URANIUM	0.973 +- 0.00000	=	mg/kg	99%	101%	0.0	
RICHRC5004								
11788H3 MATRIX SPIKE, 19990223G00281								
JCR4G51W	Tritium	5.30 +- 0.449	=	dpm/ml	91%	88%	-0.1	0.373
EPA 901.1								
8301479 BLANK QC,								
K1PGA1AA	RA-226	0.185 +- 0.0531	N	pCi/g				0.0862
	RA-228	0.0787 +- 0.0546	N	pCi/g				0.108
8301479 LCS,								
K1PGA1AC	RA-226	1.17 +- 0.205	=	pCi/g		102%	0.0	0.1
	RA-228	2.09 +- 0.391	=	pCi/g		111%	0.1	0.186

No. of Results: 13

TestAmerica

rptSTLRchQcSummary V5.2 A2002

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.

D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/15/2008 4:05:00 PM

Lot-Sample No.: J8J240197-17 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-19A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JKX1AA			Report DB ID: 9K1JKX10					
RA-226	***0.916***	=	0.21	0.21	0.123	pCi/g		*(7.4)*	12/6/08 12:15 p		38.0	GER13$1
								(8.8)			g	
RA-228	***1.35***	=	0.38	0.38	0.228	pCi/g		*(5.9)*	12/6/08 12:15 p		38.0	GER13$1
							1.0	*(7.)*			g	
Batch: 8311393	HKQV			Work Order: K1JKX1AC			Report DB ID: 9K1JKX10					
THORIUM	***8.01***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5286	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JKX1AD			Report DB ID: 9K1JKX10					
TOTAL-URANIUM	***26.4***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5286	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JKX1AG			Report DB ID: 9K1JKX10					
Moisture	***19.3***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/15/2008 4:05:00 PM

Lot-Sample No.: J8J240197-18 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-19B-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order:	K1JK11AA		Report DB ID:	9K1JK110				
RA-226	***1.18***	=	0.25	0.25	0.125	pCi/g		*(9.5)*	12/6/08 12:16 p		42.0	GER15$1
								(9.5)			g	
RA-228	***1.31***	=	0.35	0.35	0.225	pCi/g		*(5.8)*	12/6/08 12:16 p		42.0	GER15$1
							1.0	*(7.5)*			g	
Batch: 8311393	HKQV			Work Order:	K1JK11AC		Report DB ID:	9K1JK110				
THORIUM	***11.7***	=		0.0000		mg/kg	102%	*N/A*	12/15/08		0.5082	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order:	K1JK11AD		Report DB ID:	9K1JK110				
TOTAL-URANIUM	***17.9***	=		0.0000		mg/kg	102%	*N/A*	12/15/08		0.5082	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order:	K1JK11AG		Report DB ID:	9K1JK110				
Moisture	***19.0***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/15/2008 3:15:00 PM

Lot-Sample No.: J8J240197-15 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-26A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			**Work Order:** K1JKT1AA			**Report DB ID:** 9K1JKT10					
RA-226	***0.705***	ND	0.17	0.17	0.215	pCi/g		*(3.3)*	12/6/08 08:44 a		249.0	GER14$1
								(8.1)			g	
RA-228	***3.92***	=	0.57	0.57	0.203	pCi/g		*(19.3)*	12/6/08 08:44 a		249.0	GER14$1
							1.0	*(13.6)*			g	
Batch: 8311393	HKQV			**Work Order:** K1JKT1AC			**Report DB ID:** 9K1JKT10					
THORIUM	***34.3***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5176	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			**Work Order:** K1JKT1AD			**Report DB ID:** 9K1JKT10					
TOTAL-URANIUM	***4.43***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5176	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			**Work Order:** K1JKT1AG			**Report DB ID:** 9K1JKT10					
Moisture	***7.30***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/15/2008 3:15:00 PM

Lot-Sample No.: J8J240197-16 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-26B-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JKW1AA			Report DB ID: 9K1JKW10					
RA-226	***1.27***	=	0.19	0.19	0.0816	pCi/g		*(15.6)*	12/6/08 08:45 a		269.8	GER10$1
								(13.7)			g	
RA-228	***1.43***	=	0.27	0.27	0.141	pCi/g		*(10.2)*	12/6/08 08:45 a		269.8	GER10$1
							1.0	*(10.6)*			g	
Batch: 8311393	HKQV			Work Order: K1JKW1AC			Report DB ID: 9K1JKW10					
THORIUM	***11.8***	=		0.0000		mg/kg	95%	*N/A*	12/15/08		0.5155	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JKW1AD			Report DB ID: 9K1JKW10					
TOTAL-URANIUM	***4.63***	=		0.0000		mg/kg	95%	*N/A*	12/15/08		0.5155	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JKW1AG			Report DB ID: 9K1JKW10					
Moisture	***15.1***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/15/2008 1:20:00 PM

Lot-Sample No.: J8J240197-9 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-36A-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order:	K1JKF1AA		Report DB ID:	9K1JKF10				
RA-226	***2.01***	=	0.33	0.33	0.193	pCi/g		*(10.4)*	12/6/08 05:28 a		176.2	GER8$1
								(12.4)			g	
RA-228	***12.1***	=	1.6	1.6	0.272	pCi/g		*(44.5)*	12/6/08 05:28 a		176.2	GER8$1
							1.0	*(14.8)*			g	
Batch: 8311393	HKQV			Work Order:	K1JKF1AC		Report DB ID:	9K1JKF10				
THORIUM	***88.5***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5128	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order:	K1JKF1AD		Report DB ID:	9K1JKF10				
TOTAL-URANIUM	***16.6***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5128	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order:	K1JKF1AG		Report DB ID:	9K1JKF10				
Moisture	***22.3***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica | SDG: 38657 | Collection Date: 10/15/2008 1:20:00 PM

Lot-Sample No.: J8J240197-10 | Report No. : 40397 | Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-36B-SC | COC No. : | Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479	EPA 901.1			**Work Order:** K1JKG1AA			**Report DB ID:** 9K1JKG10					
RA-226	***1.55***	=	0.25	0.25	0.0946	pCi/g		*(16.4)*	12/6/08 08:44 a		306.2	GER5$1
								(12.6)			g	
RA-228	***2.71***	=	0.46	0.46	0.174	pCi/g		*(15.6)*	12/6/08 08:44 a		306.2	GER5$1
							1.0	*(11.8)*			g	
Batch: 8311393	HKQV			**Work Order:** K1JKG1AC			**Report DB ID:** 9K1JKG10					
THORIUM	***17.8***	=		0.0000		mg/kg	102%	*N/A*	12/15/08		0.5131	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			**Work Order:** K1JKG1AD			**Report DB ID:** 9K1JKG10					
TOTAL-URANIUM	***6.36***	=		0.0000		mg/kg	102%	*N/A*	12/15/08		0.5131	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			**Work Order:** K1JKG1AG			**Report DB ID:** 9K1JKG10					
Moisture	***21.1***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/15/2008 2:05:00 PM

Lot-Sample No.: J8J240197-11 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-37A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			**Work Order:** K1JKH1AA			**Report DB ID:** 9K1JKH10					
RA-226	***1.88***	=	0.37	0.37	0.206	pCi/g		*(9.1)*	12/6/08 12:15 p		22.1	GER8$1
								(10.1)			g	
RA-228	***7.01***	=	1.2	1.2	0.397	pCi/g		*(17.7)*	12/6/08 12:15 p		22.1	GER8$1
							1.0	*(11.7)*			g	
Batch: 8311393	HKQV			**Work Order:** K1JKH1AC			**Report DB ID:** 9K1JKH10					
THORIUM	***64.8***	=		0.0000		mg/kg	100%	*N/A*	12/15/08		0.5109	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			**Work Order:** K1JKH1AD			**Report DB ID:** 9K1JKH10					
TOTAL-URANIUM	***9.70***	=		0.0000		mg/kg	100%	*N/A*	12/15/08		0.5109	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			**Work Order:** K1JKH1AG			**Report DB ID:** 9K1JKH10					
Moisture	***7.90***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/15/2008 2:05:00 PM

Lot-Sample No.: J8J240197-12 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-37B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479	EPA 901.1			**Work Order:** K1JKJ1AA		**Report DB ID:** 9K1JKJ10						
RA-226	***1.47***	=	0.29	0.29	0.154	pCi/g		*(9.5)*	12/6/08 12:15 p		34.9	GER6$1
								(10.1)			g	
RA-228	***3.68***	=	0.69	0.69	0.341	pCi/g		*(10.8)*	12/6/08 12:15 p		34.9	GER6$1
							1.0	*(10.7)*			g	
Batch: 8311393	HKQV			**Work Order:** K1JKJ1AC		**Report DB ID:** 9K1JKJ10						
THORIUM	***31.8***	=		0.0000		mg/kg	103%	*N/A*	12/15/08		0.5162	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			**Work Order:** K1JKJ1AD		**Report DB ID:** 9K1JKJ10						
TOTAL-URANIUM	***11.3***	=		0.0000		mg/kg	103%	*N/A*	12/15/08		0.5162	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			**Work Order:** K1JKJ1AG		**Report DB ID:** 9K1JKJ10						
Moisture	***25.7***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica | SDG: 38657 | Collection Date: 10/16/2008 8:12:00 AM

Lot-Sample No.: J8J240197-1 | Report No. : 40397 | Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-38A-SC | COC No. : | Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479 EPA 901.1				Work Order: K1JJM1AA			Report DB ID: 9K1JJM10					
RA-226	***1.59***	=	0.27	0.27	0.125	pCi/g		*(12.7)*	12/6/08 05:19 a		237.2	GER5$1
								(11.6)			g	
RA-228	***5.09***	=	0.73	0.73	0.209	pCi/g		*(24.4)*	12/6/08 05:19 a		237.2	GER5$1
							1.0	*(13.9)*			g	
Batch: 8311393 HKQV				Work Order: K1JJM1AC			Report DB ID: 9K1JJM10					
THORIUM	***48.2***	=		0.0000		mg/kg	99%	*N/A*	12/15/08		0.5033	ICP/MS1
								N/A			G	
Batch: 8311393 HKQV				Work Order: K1JJM1AD			Report DB ID: 9K1JJM10					
TOTAL-URANIUM	***5.57***	=		0.0000		mg/kg	99%	*N/A*	12/15/08		0.5033	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481 88OV				Work Order: K1JJM1AM			Report DB ID: 9K1JJM10					
Moisture	***19.8***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/16/2008 8:12:00 AM

Lot-Sample No.: J8J240197-3 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-38A-SC-FD COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JJV1AA		Report DB ID: 9K1JJV10						
RA-226	***1.61***	=	0.24	0.24	0.0868	pCi/g		*(18.5)*	12/6/08 05:19 a		229.5	GER11$1
								(13.6)			g	
RA-228	***5.29***	=	0.79	0.79	0.156	pCi/g		*(33.9)*	12/6/08 05:19 a		229.5	GER11$1
							1.0	*(13.4)*			g	
Batch: 8311393	HKQV			Work Order: K1JJV1AC		Report DB ID: 9K1JJV10						
THORIUM	***45.0***	=		0.0000		mg/kg	100%	*N/A*	12/15/08		0.4982	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JJV1AD		Report DB ID: 9K1JJV10						
TOTAL-URANIUM	***5.01***	=		0.0000		mg/kg	100%	*N/A*	12/15/08		0.4982	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JJV1AG		Report DB ID: 9K1JJV10						
Moisture	***20.5***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/16/2008 8:12:00 AM

Lot-Sample No.: J8J240197-2 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-38B-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JJT1AA			Report DB ID: 9K1JJT10					
RA-226	***1.69***	=	0.25	0.25	0.0927	pCi/g		*(18.3)*	12/6/08 05:19 a		274.1	GER15$1
								(13.4)			g	
RA-228	***2.18***	=	0.38	0.38	0.161	pCi/g		*(13.6)*	12/6/08 05:19 a		274.1	GER15$1
							1.0	*(11.5)*			g	
Batch: 8311393	HKQV			Work Order: K1JJT1AC			Report DB ID: 9K1JJT10					
THORIUM	***17.7***	=		0.0000		mg/kg	98%	*N/A*	12/15/08		0.5091	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JJT1AD			Report DB ID: 9K1JJT10					
TOTAL-URANIUM	***7.08***	=		0.0000		mg/kg	98%	*N/A*	12/15/08		0.5091	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JJT1AQ			Report DB ID: 9K1JJT10					
Moisture	***20.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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
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D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/16/2008 8:12:00 AM

Lot-Sample No.: J8J240197-4 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-38B-SC-FD COC No. : Matrix: SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479 EPA 901.1				Work Order: K1JJ31AA			Report DB ID: 9K1JJ310					
RA-226	***1.23***	=	0.25	0.25	0.149	pCi/g		*(8.3)*	12/6/08 12:14 p		34.8	GER5$1
								(10.)			g	
RA-228	***1.95***	=	0.43	0.43	0.274	pCi/g		*(7.1)*	12/6/08 12:14 p		34.8	GER5$1
							1.0	*(9.)*			g	
Batch: 8311393 HKQV				Work Order: K1JJ31AC			Report DB ID: 9K1JJ310					
THORIUM	***19.0***	=		0.0000		mg/kg	103%	*N/A*	12/15/08		0.5058	ICP/MS1
								N/A			G	
Batch: 8311393 HKQV				Work Order: K1JJ31AD			Report DB ID: 9K1JJ310					
TOTAL-URANIUM	***6.60***	=		0.0000		mg/kg	103%	*N/A*	12/15/08		0.5058	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481 88OV				Work Order: K1JJ31AG			Report DB ID: 9K1JJ310					
Moisture	***21.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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
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D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/16/2008 8:50:00 AM

Lot-Sample No.: J8J240197-5 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-39A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			**Work Order:** K1JJ71AA			**Report DB ID:** 9K1JJ710					
RA-226	***1.00***	=	0.19	0.19	0.13	pCi/g		*(7.7)*	12/6/08 05:20 a		275.5	GER14$1
								(10.3)			g	
RA-228	***5.88***	=	0.85	0.85	0.213	pCi/g		*(27.6)*	12/6/08 05:20 a		275.5	GER14$1
							1.0	*(13.9)*			g	
Batch: 8311393	HK			**Work Order:** K1JJ71AC			**Report DB ID:** 9K1JJ710					
THORIUM	***55.8***	=		0.0000		mg/kg	102%	*N/A*	12/15/08		0.5012	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			**Work Order:** K1JJ71AD			**Report DB ID:** 9K1JJ710					
TOTAL-URANIUM	***4.28***	=		0.0000		mg/kg	102%	*N/A*	12/15/08		0.5012	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			**Work Order:** K1JJ71AG			**Report DB ID:** 9K1JJ710					
Moisture	***18.2***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

TestAmerica Laboratories, Inc.

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/16/2008 8:50:00 AM

Lot-Sample No.: J8J240197-6 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-39B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order:	K1JKC1AA		Report DB ID:	9K1JKC10				
RA-226	***1.70***	=	0.24	0.24	0.0947	pCi/g		*(17.9)*	12/6/08 05:20 a		240.6	GER10$1
								(14.1)			g	
RA-228	***2.27***	=	0.37	0.37	0.164	pCi/g		*(13.8)*	12/6/08 05:20 a		240.6	GER10$1
							1.0	*(12.3)*			g	
Batch: 8311393	HKQV			Work Order:	K1JKC1AC		Report DB ID:	9K1JKC10				
THORIUM	***15.7***	=		0.0000		mg/kg	103%	*N/A*	12/15/08		0.5001	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order:	K1JKC1AD		Report DB ID:	9K1JKC10				
TOTAL-URANIUM	***4.32***	=		0.0000		mg/kg	103%	*N/A*	12/15/08		0.5001	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order:	K1JKC1AG		Report DB ID:	9K1JKC10				
Moisture	***20.6***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/15/2008 2:30:00 PM

Lot-Sample No.: J8J240197-13 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-40A-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			**Work Order:** K1JKL1AA			**Report DB ID:** 9K1JKL10					
RA-226	***1.27***	=	0.22	0.22	0.111	pCi/g		*(11.5)*	12/6/08 08:44 a		239.7	GER15$1
								(11.5)			g	
RA-228	***5.72***	=	0.80	0.80	0.198	pCi/g		*(28.9)*	12/6/08 08:44 a		239.7	GER15$1
							1.0	*(14.2)*			g	
Batch: 8311393	HKQV			**Work Order:** K1JKL1AC			**Report DB ID:** 9K1JKL10					
THORIUM	***42.6***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5194	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			**Work Order:** K1JKL1AD			**Report DB ID:** 9K1JKL10					
TOTAL-URANIUM	***4.96***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5194	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			**Work Order:** K1JKL1AG			**Report DB ID:** 9K1JKL10					
Moisture	***20.4***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/15/2008 2:30:00 PM

Lot-Sample No.: J8J240197-14 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-40B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JKN1AA			Report DB ID: 9K1JKN10					
RA-226	***1.63***	=	0.22	0.22	0.0678	pCi/g		*(24.)*	12/6/08 08:44 a		266.5	GER11$1
								(14.5)			g	
RA-228	***2.79***	=	0.46	0.46	0.129	pCi/g		*(21.6)*	12/6/08 08:44 a		266.5	GER11$1
							1.0	*(12.2)*			g	
Batch: 8311393	HKQV			Work Order: K1JKN1AC			Report DB ID: 9K1JKN10					
THORIUM	***20.8***	=		0.0000		mg/kg	99%	*N/A*	12/15/08		0.512	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JKN1AD			Report DB ID: 9K1JKN10					
TOTAL-URANIUM	***10.1***	=		0.0000		mg/kg	99%	*N/A*	12/15/08		0.512	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JKN1AG			Report DB ID: 9K1JKN10					
Moisture	***25.2***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica SDG: 38657 Collection Date: 10/16/2008 9:10:00 AM

Lot-Sample No.: J8J240197-7 Report No. : 40397 Received Date: 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-43A-SC COC No. : Matrix: SOIL SO

OU4 Phase 1 136259 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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JKD1AA			Report DB ID: 9K1JKD10					
RA-226	***1.60***	=	0.27	0.27	0.152	pCi/g		*(10.5)*	12/6/08 05:21 a		220.4	GER6$1
								(12.)			g	
RA-228	***7.65***	=	1.1	1.1	0.279	pCi/g		*(27.4)*	12/6/08 05:21 a		220.4	GER6$1
							1.0	*(14.)*			g	
Batch: 8311393	HKQV			Work Order: K1JKD1AC			Report DB ID: 9K1JKD10					
THORIUM	***55.3***	=		0.0000		mg/kg	100%	*N/A*	12/15/08		0.5062	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JKD1AD			Report DB ID: 9K1JKD10					
TOTAL-URANIUM	***6.71***	=		0.0000		mg/kg	100%	*N/A*	12/15/08		0.5062	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JKD1AG			Report DB ID: 9K1JKD10					
Moisture	***18.5***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 Comments:

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM I

SAMPLE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/16/2008 9:10:00 AM

Lot-Sample No.: J8J240197-8 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-43B-SC **COC No. :** **Matrix:** SOIL SO

OU4 Phase 1 136259

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	Primary Detector
Batch: 8301479	EPA 901.1			Work Order: K1JKE1AA		Report DB ID: 9K1JKE10						
RA-226	***1.14***	=	0.17	0.17	0.0662	pCi/g		*(17.2)*	12/6/08 05:21 a		356.7	GER13$1
								(13.3)			g	
RA-228	***1.63***	=	0.32	0.32	0.14	pCi/g		*(11.6)*	12/6/08 05:21 a		356.7	GER13$1
							1.0	*(10.3)*			g	
Batch: 8311393	HKQV			Work Order: K1JKE1AC		Report DB ID: 9K1JKE10						
THORIUM	***23.5***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5254	ICP/MS1
								N/A			G	
Batch: 8311393	HKQV			Work Order: K1JKE1AD		Report DB ID: 9K1JKE10						
TOTAL-URANIUM	***11.6***	=		0.0000		mg/kg	101%	*N/A*	12/15/08		0.5254	ICP/MS1
							0.8	*N/A*			G	
Batch: 8340481	88OV			Work Order: K1JKE1AG		Report DB ID: 9K1JKE10						
Moisture	***12.9***	=	0.0000	0.0000		PERCENT	N/A	*N/A*	12/8/08			
								N/A			PERCENT	

No. of Results: 5 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

TestAmerica Laboratories, Inc.

FORM II

Date: 17-Dec-08

DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** 38657 **Collection Date:** 10/16/2008 8:12:00 AM

Lot-Sample No.: J8J240197-1 **Report No. :** 40397 **Received Date:** 10/21/2008 1:00:00 PM

Client Sample ID: OU4-UEP-38A-SC DUP **COC No. :** **Matrix:** SOIL SO

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8301479 EPA 901.1				Work Order: K1JJM1AG		Report DB ID: K1JJM1GR			Orig Sa DB ID: 9K1JJM10			
RA-226	1.77	=	0.28	0.28	0.122	pCi/g		(14.5)	12/6/08 08:43 a		237.2	GER7$1
	1.59	=	RER2 0.9					(12.8)			g	
RA-228	5.39	=	0.77	0.77	0.228	pCi/g		(23.6)	12/6/08 08:43 a		237.2	GER7$1
	5.09	=	RER2 0.6					(14.1)			g	
Batch: 8311393 HKQV				Work Order: K1JJM1AH		Report DB ID: K1JJM1GR			Orig Sa DB ID: 9K1JJM10			
THORIUM	53.4	=		0.0000		mg/kg	90%	N/A	12/15/08		0.5086	ICP/MS1
	48.2	=	RER2					N/A			G	
Batch: 8311393 HKQV				Work Order: K1JJM1AJ		Report DB ID: K1JJM1GR			Orig Sa DB ID: 9K1JJM10			
TOTAL-URANIUM	6.39	=		0.0000		mg/kg	90%	N/A	12/15/08		0.5086	ICP/MS1
	5.57	=	RER2			0.8		N/A			G	

No. of Results: 4 Comments:

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

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: 17-Dec-08

Lab Name: TestAmerica SDG: 11788

Matrix: SILICA GEL Report No. : 40397

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8311393	HKQV			Work Order: K2DTC1AA		Report DB ID: JCR4G51W						
THORIUM	0.00000328	=ND		0.0000		mg/kg	101%	N/A	12/15/08			ICP/MS1
								N/A			G	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchBlank
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM II

BLANK RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657

Matrix: SOIL **Report No. :** 40397

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC | MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8311393	HKQV			**Work Order:** K2DTC1AB		**Report DB ID:** K2DTC1AB						
TOTAL-URANIUM	0.0000021	=ND		0.0000		mg/kg	101%	N/A	12/15/08			ICP/MS1
								N/A			G	
Batch: 8301479	EPA 901.1			**Work Order:** K1PGA1AA		**Report DB ID:** K1PGA1AB						
RA-226	0.185	ND	0.053	0.053	0.0862	pCi/g		(2.2)	12/6/08 08:45 a		348.0	GER6$1
								(7.)			g	
RA-228	0.0787	ND	0.055	0.055	0.108	pCi/g		0.73	12/6/08 08:45 a		348.0	GER6$1
								(2.9)			g	

No. of Results: 3 **Comments:**

TestAmerica
rptSTLRchBlank
V5.2 A2002

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.
D Qual - Result is greater than 3 times 1s Total Uncertainty

FORM II

LCS RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657

Matrix: SOIL **Report No. :** 40397

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	Primary Detector
Batch: 8311393	HKQV			**Work Order:**	K2DTC1AC		**Report DB ID:**	K2DTC1AC					
THORIUM	0.000184	=		0.0000		mg/kg	92%	0.00020		92%	12/15/08		ICP/MS1
							Rec Limits:			-0.1		G	
Batch: 8311393	TBD			**Work Order:**	K2DTC1AD		**Report DB ID:**	K2DTC1AC					
TOTAL-URANIUM	0.000194	=		0.0000		mg/kg	92%	0.000198		98%	12/15/08		ICP/MS1
							Rec Limits:			0.0		G	
Batch: 8301479	EPA 901.1			**Work Order:**	K1PGA1AC		**Report DB ID:**	K1PGA1CS					
RA-226	1.17	=	0.20	0.20	0.1	pCi/g		1.15	0.052	102%	12/6/08 08:45 a	200.01	GER13$1
							Rec Limits:	70	130	0.0		g	
RA-228	2.09	=	0.39	0.39	0.186	pCi/g		1.87	0.096	111%	12/6/08 08:45 a	200.01	GER13$1
							Rec Limits:	70	130	0.1		g	

No. of Results: 4 **Comments:**

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

= ERPIMS - Equal To, Analyte Detected

FORM II

MATRIX SPIKE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica SDG: 11788

Lot-Sample No.: #Error Report No. : 40397 Matrix: SILICA GEL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 11788H3	Work Order:			Report DB ID: JCR4G51W			Orig Sa DB ID:	9CR4G510				
Tritium	5.30	=	0.49	0.90	0.373	dpm/ml	91%	87.53%	6.06	3/24/99 12:00 p	5.0	RICHRC5004
	0.0287										ML	LSC

Number of Results: 1

Comments:

TestAmerica rptSTLRchMs V5.2 A2002

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

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

= ERPIMS - Equal To, Analyte Detected

FORM II

MATRIX SPIKE RESULTS

Date: 17-Dec-08

Lab Name: TestAmerica **SDG:** 38657

Lot-Sample No.: J8J240197-2, OU4-UEP-38B-SC **Report No. :** 40397 **Matrix:** SOIL SO

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 8311393	**Work Order:** K1JJT1AF			**Report DB ID:** K1JJT1AW			**Orig Sa DB ID:**	9K1JJT10				
THORIUM	0.00300	=		0.0000		mg/kg	98%	0.31%	0.971	12/15/08	0.5153	HKQV
	17.7										G	ICP/MS1
Batch: 8311393	**Work Order:** K1JJT1AG			**Report DB ID:** K1JJT1AW			**Orig Sa DB ID:**	9K1JJT10				
TOTAL-URANIUM	0.764	=		0.0000		mg/kg	98%	79.42%	0.962	12/15/08	0.5153	HKQV
	7.08										G	ICP/MS1
Batch: 8311393	**Work Order:** K1JJT1AH			**Report DB ID:** K1JJT1WD			**Orig Sa DB ID:**	K1JJT1AW				
THORIUM	1.18	=		0.0000		mg/kg	99%	121.52%	0.971	12/15/08	0.5159	HKQV
	0.003										G	ICP/MS1
Batch: 8311393	**Work Order:** K1JJT1AJ			**Report DB ID:** K1JJT1WD			**Orig Sa DB ID:**	K1JJT1AW				
TOTAL-URANIUM	0.973	=		0.0000		mg/kg	99%	101.21%	0.961	12/15/08	0.5159	HKQV
	0.764										G	ICP/MS1

Number of Results: 4

Comments:

TestAmerica rptSTLRchMs V5.2 A2002

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

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

= ERPIMS - Equal To, Analyte Detected

FORM II

Date: 17-Dec-08

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** 38657

Lot-Sample No.: J8J240197-2, OU4-UEP-38B-SC **Report No. :** 40397 **Matrix:** SOIL SO

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 8311393 HKQV				**Work Order:** K1JJT1AF		**Report DB ID:** K1JJT1AW			**Orig Sa DB ID:** K1JJT1WD			
THORIUM	0.00300	=		0.0000		mg/kg	98%	0.31%	0.971	12/15/08	0.5153	ICP/MS1
	1.18	***RER2***									G	
Batch: 8311393 HKQV				**Work Order:** K1JJT1AG		**Report DB ID:** K1JJT1AW			**Orig Sa DB ID:** K1JJT1WD			
TOTAL-URANIUM	0.764	=		0.0000		mg/kg	98%	79.42%	0.962	12/15/08	0.5153	ICP/MS1
	0.973	***RER2***									G	
Batch: 8311393 HKQV				**Work Order:** K1JJT1AH		**Report DB ID:** K1JJT1WD			**Orig Sa DB ID:** K1JJT1AW			
THORIUM	1.18	=		0.0000		mg/kg	99%	121.52%	0.971	12/15/08	0.5159	ICP/MS1
	0.003	***RER2***									G	
Batch: 8311393 HKQV				**Work Order:** K1JJT1AJ		**Report DB ID:** K1JJT1WD			**Orig Sa DB ID:** K1JJT1AW			
TOTAL-URANIUM	0.973	=		0.0000		mg/kg	99%	101.21%	0.961	12/15/08	0.5159	ICP/MS1
	0.764	***RER2***									G	

No. of Results: 4 **Comments:**

RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
Bias - (Result/Expected)-1 as defined by ANSI N13.30.
= ERPIMS - Equal To, Analyte Detected

TestAmerica Laboratories, Inc.

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Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

SDG 381657
JBJ240197
Due 11/11/08

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

RICHLAND Soil Geochemical

COC # YER 2032_D

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	LEVEL 2 (4)
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: U, Th (6020)	Requested Analysis	Sample Point Lat/Long and Comments
1	OU4-UEP-38A-SC	0812	10/16	X				1	X					X	X	K1 JJM	0-6"
2	OU4-UEP-38B-SC	↓	↓	↓				↓	↓					↓	↓	K1 JJT	6"-3'
3	OU4-UEP-38A-SC-FD															K1 JJV	0-6"
4	OU4-UEP-38B-SC-FD	↓														K1 JJ3	6"-3'
5	OU4-UEP-39A-SC	0850														K1 JJ7	0-1'
6	OU4-UEP-39B-SC	↓														K1 JKC	1-3'
7	OU4-UEP-43A-SC	0910														K1 JKD	0-1'
8	OU4-UEP-43B-SC	↓	↓	↓				↓	↓					↓	↓	K1 JK8	1-3'
9																	
10																	

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Chad Haley		10/16	1700		10/16	1700
Sampler's Company:	Brown & Caldwell	Penny Bassett	10/17	0900		10/17/08	1310
Shipment Date:	10/17/08						
Shipment Method:	FedEx Ground						
Shipment Tracking No:	8009402 00004069						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

TestAmerica Laboratories, Inc.

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SPG 580657
JBS 240197
Due 11/11/08

Atlantic Richfield Company

bp A BP affiliated company

Chain of Custody Record

RICHLAND Soil Geochemical

COC # YER 203/ D

Project Name: OU4 Phase I
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: EPA Region 9
Requested Due Date (mm/dd/yy): NA

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Test America-Richland	BP/AR Facility No.:		Consultant/Contractor:	Brown and Caldwell
Address:	2800 George Washington Way	BP/AR Facility Address:	Yerington, NV	Address:	3264 Goni Rd
	Richland, WA. 99354	Site Lat/Long:	NA		Carson City, NV 89706
Lab PM:	Erika Jordan	California Global ID No.	NA	Consultant/Contractor Project No.:	136259
Tele/Fax:	509-375-3131 (x160)	Enfos Project No.:	001KF-0193	Consultant/Contractor PM:	Penny Bassett
BP/AR EBM:	Roy Thun	Provision or OOC (circle one)		Tele/Fax:	775-315-4343
Address:	6 Centerpoint Avenue	Phase/WBS:	32	Report Type & QC Level:	LEVEL 4
	La Palma, CA 90623	Sub Phase/Task:	03	E-mail EDD To:	skocsis@brwncald.com
Tele/Fax:	661-287-3855	Cost Element:	05	Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: Ra-226/228 (903/904)	Requested Analysis: U, Th (6020)	Requested Analysis	Sample Point Lat/Long and Comments
1	OU4-UEP-36A-SC	1320	10/15	X				1	X					X	X	KI J KE	0-1'
2	OU4-UEP-36B-SC	↓														KI J KG	1-3'
3	OU4-UEP-37A-SC	1405														KI J KH	0-1.5'
4	OU4-UEP-37B-SC	↓														KI J KJ	1.5-3'
5	OU4-UEP-40A-SC	1430														KI J KL	0-1'
6	OU4-UEP-40B-SC	↓														KI J KN	1-3'
7	OU4-LEP-26A-SC	1515														KI J KT	0-0.25'
8	OU4-LEP-26B-SC	↓														KI J KW	1-3'
9	OU4-LEP-19A-SC	1605														KI J KX	0-1'
10	OU4-LEP-19B-SC	↓	↓	↓				↓	↓					↓	↓	KI J KI	1'8" -3'

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Chad Haley	Chad Haley	10/16	1700	Penny Bassett	10/16	1700
Sampler's Company:	Brown & Caldwell	Penny Bassett	10/17	0900	[signature]	10/17/08	1300
Shipment Date:	10/17/08						
Shipment Method:	FedEx Ground						
Shipment Tracking No:	800940z 0004069						

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10-21-08 13:00 GM Screen Result 0.10 mR/hr

Client: ATLANTIC SDG #: 38657 NA[ ] SAF #: _____ NA[X]

Work Order Number: J8J240197 Chain of Custody # YEN 2032 0, 2310

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [ ] Yes [X] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [X] No [ ]
3. Chain of Custody record present? NA [ ] Yes [X] No [ ]
4. Cooler Temperature: _____ NA [X] 5. Vermiculite/packing materials is NA [X] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 18
7. Sample holding times exceeded? NA [X] Yes [ ] No [ ]
8. Samples have:
   _____ Tape
   _____ Custody Seals
   _____ Hazard Lables
   X Appropriate Sample Lables
9. Samples are:
   X In Good Condition
   _____ Broken
   _____ Leaking
   _____ Have Air Bubbles
   (Only for samples requiring no head space.)
10. Sample pH taken? NA [X] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? * Soil
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [X]
13. Description of anomalies (include sample numbers): _____

Sample Custodian _____ Date: 10-21-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10-21-08 13:00 GM Screen Result 0.10 mR/hr

Client: ATLANTIC SDG #: 38657 NA[ ] SAF #: _____ NA[X]

Work Order Number: J8J240197 Chain of Custody # YEN 2032 D, 231 D

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? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 18
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   _____ Tape
   _____ Custody Seals
   _____ Hazard Lables
   ✓ Appropriate Sample Lables
9. Samples are:
   ✓ In Good Condition
   _____ Broken
   _____ Leaking
   _____ Have Air Bubbles
   (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? * Soil
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: _____ Date: 10-21-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TOTAL THORIUM / URANIUM SAMPLE AND QC DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Metals

Batch Number(s): 8311393

Lab Sample Numbers or SDG:

Method/Test/Parameter: **Metals, ICP/MS**

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

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other 1. Are all nonconformances included and noted?	✓			
2. Is the correct date and time of analysis shown?	✓			
3. Did the analyst sign and date the front page of the analytical run?	✓			
4. Correct methodology used?	✓			
5. Transcriptions checked?	✓			
6. Calculations checked at minimum frequency?	✓			
7. Units checked?	✓			

Comments on any "No" response:

See NCM's

Analyst: _____ Date: 11/5/2008 12/17/8 ~~12/16/08~~ 12/17/8 12/4/08

Second-Level Review: _____ Date: 12/17/8

TestAmerica Laboratories, Inc.

12/10/2008 11:02:14 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #: _____

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 8301482 AXTA, 8301483 AXTA, 8311393 HKQV, 8311401 HKQV, 8340482 88OV, 8340484 88OV,

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:

1 K1HE6-1-AC

J8J230374-1-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

2 K1HE6-1-AD

J8J230374-1-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

3 K1HE6-1-AE

J8J230374-1-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

4 K1HE6-1-AF

J8J230374-1-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

5 K1HE7-1-AC

J8J230374-2-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

6 K1HE7-1-AD

J8J230374-2-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

7 K1HE7-1-AE

J8J230374-2-SAMP

10/16/2008 09:40 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

12/10/2008 11:02:21 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/10/2008

Batch: 8311393 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:
8 K1HE7-1-AF J8J230374-2-SAMP 10/16/2008 09:40		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
9 K1JJM-1-AC J8J240197-1-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
10 K1JJM-1-AD J8J240197-1-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
11 K1JJM-1-AE J8J240197-1-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
12 K1JJM-1-AF J8J240197-1-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
13 K1JJM-1-AH-X J8J240197-1-DUP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
14 K1JJM-1-AJ-X J8J240197-1-DUP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

12/10/2008 11:02:21 AM

Sample Preparation/Analysis

536403, Brown and Caldwell and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/10/2008

Batch: 8311393 **SOIL** ppt **PM, Quote: EJ , 73181**
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:
15 K1JJM-1-AK-X J8J240197-1-DUP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
16 K1JJM-1-AL-X J8J240197-1-DUP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
17 K1JJT-1-AC J8J240197-2-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
18 K1JJT-1-AD J8J240197-2-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
19 K1JJT-1-AE J8J240197-2-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
20 K1JJT-1-AF J8J240197-2-SAMP 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
21 K1JJT-1-AG-S J8J240197-2-MS 10/16/2008 08:12		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

12/10/2008 11:02:21 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #: _____

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:

22 K1JJT-1-AH-D

J8J240197-2-MSD

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

23 K1JJT-1-AJ-S

J8J240197-2-MS

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

24 K1JJT-1-AK-D

J8J240197-2-MSD

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

25 K1JJT-1-AL-S

J8J240197-2-MS

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

26 K1JJT-1-AM-D

J8J240197-2-MSD

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

27 K1JJT-1-AN-S

J8J240197-2-MS

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

28 K1JJT-1-AP-D

J8J240197-2-MSD

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

12/10/2008 11:02:22 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #:

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:

29 K1JJV-1-AC

J8J240197-3-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

30 K1JJV-1-AD

J8J240197-3-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

31 K1JJV-1-AE

J8J240197-3-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

32 K1JJV-1-AF

J8J240197-3-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

33 K1JJ3-1-AC

J8J240197-4-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

34 K1JJ3-1-AD

J8J240197-4-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

35 K1JJ3-1-AE

J8J240197-4-SAMP

10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

12/10/2008 11:02:22 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/10/2008

Batch: 8311393 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Allquot 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:

36 K1JJ3-1-AF
J8J240197-4-SAMP
10/16/2008 08:12 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

37 K1JJ7-1-AC
J8J240197-5-SAMP
10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

38 K1JJ7-1-AD
J8J240197-5-SAMP
10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

39 K1JJ7-1-AE
J8J240197-5-SAMP
10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

40 K1JJ7-1-AF
J8J240197-5-SAMP
10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

41 K1JKC-1-AC
J8J240197-6-SAMP
10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

42 K1JKC-1-AD
J8J240197-6-SAMP
10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

12/10/2008 11:02:22 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown

and Caldwell

AnalyDueDate: 11/10/2008

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Batch: 8311393 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:

43 K1JKC-1-AE

J8J240197-6-SAMP

10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

44 K1JKC-1-AF

J8J240197-6-SAMP

10/16/2008 08:50 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

45 K1JKD-1-AC

J8J240197-7-SAMP

10/16/2008 09:10 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

46 K1JKD-1-AD

J8J240197-7-SAMP

10/16/2008 09:10 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

47 K1JKD-1-AE

J8J240197-7-SAMP

10/16/2008 09:10 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

48 K1JKD-1-AF

J8J240197-7-SAMP

10/16/2008 09:10 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

49 K1JKE-1-AC

J8J240197-8-SAMP

10/16/2008 09:10 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

12/10/2008 11:02:22 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #: _____

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:
50 K1JKE-1-AD J8J240197-8-SAMP 10/16/2008 09:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
51 K1JKE-1-AE J8J240197-8-SAMP 10/16/2008 09:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
52 K1JKE-1-AF J8J240197-8-SAMP 10/16/2008 09:10		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
53 K1JKF-1-AC J8J240197-9-SAMP 10/15/2008 13:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
54 K1JKF-1-AD J8J240197-9-SAMP 10/15/2008 13:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
55 K1JKF-1-AE J8J240197-9-SAMP 10/15/2008 13:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
56 K1JKF-1-AF J8J240197-9-SAMP 10/15/2008 13:20		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

12/10/2008 11:02:23 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown and Caldwell

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 11/10/2008

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:

57 K1JKG-1-AC

J8J240197-10-SAMP

10/15/2008 13:20 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

58 K1JKG-1-AD

J8J240197-10-SAMP

10/15/2008 13:20 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

59 K1JKG-1-AE

J8J240197-10-SAMP

10/15/2008 13:20 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

60 K1JKG-1-AF

J8J240197-10-SAMP

10/15/2008 13:20 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

61 K1JKH-1-AC

J8J240197-11-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

62 K1JKH-1-AD

J8J240197-11-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

63 K1JKH-1-AE

J8J240197-11-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

12/10/2008 11:02:23 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #: _____

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:

64 K1JKH-1-AF

J8J240197-11-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

65 K1JKJ-1-AC

J8J240197-12-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

66 K1JKJ-1-AD

J8J240197-12-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

67 K1JKJ-1-AE

J8J240197-12-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

68 K1JKJ-1-AF

J8J240197-12-SAMP

10/15/2008 14:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

69 K1JKL-1-AC

J8J240197-13-SAMP

10/15/2008 14:30 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

70 K1JKL-1-AD

J8J240197-13-SAMP

10/15/2008 14:30 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

12/10/2008 11:02:23 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #: _____

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:
71 K1JKL-1-AE J8J240197-13-SAMP 10/15/2008 14:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
72 K1JKL-1-AF J8J240197-13-SAMP 10/15/2008 14:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
73 K1JKN-1-AC J8J240197-14-SAMP 10/15/2008 14:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
74 K1JKN-1-AD J8J240197-14-SAMP 10/15/2008 14:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
75 K1JKN-1-AE J8J240197-14-SAMP 10/15/2008 14:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
76 K1JKN-1-AF J8J240197-14-SAMP 10/15/2008 14:30		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:
77 K1JKT-1-AC J8J240197-15-SAMP 10/15/2008 15:15		AmtRec: BAG	#Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

12/10/2008 11:02:23 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown

and Caldwell

AnalyDueDate: 11/10/2008

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Batch: 8311393 SOIL ppt
SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:

78 K1JKT-1-AD
J8J240197-15-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

79 K1JKT-1-AE
J8J240197-15-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

80 K1JKT-1-AF
J8J240197-15-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

81 K1JKW-1-AC
J8J240197-16-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

82 K1JKW-1-AD
J8J240197-16-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

83 K1JKW-1-AE
J8J240197-16-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

84 K1JKW-1-AF
J8J240197-16-SAMP
10/15/2008 15:15 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

50

TestAmerica Laboratories, Inc.

12/10/2008 11:02:23 AM

Sample Preparation/Analysis

Balance Id:

536403, Brown and Caldwell , Brown

HK Total Dissolution

Pipet #:

and Caldwell

QV ICP-Mass Spectrometry (200.8)

AnalyDueDate: 11/10/2008

01 STANDARD TEST SET

Sep1 DT/Tm Tech:

Batch: 8311393 SOIL ppt

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:

85 K1JKX-1-AC

J8J240197-17-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

86 K1JKX-1-AD

J8J240197-17-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

87 K1JKX-1-AE

J8J240197-17-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

88 K1JKX-1-AF

J8J240197-17-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

89 K1JK1-1-AC

J8J240197-18-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

90 K1JK1-1-AD

J8J240197-18-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

91 K1JK1-1-AE

J8J240197-18-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

12/10/2008 11:02:24 AM

Sample Preparation/Analysis

536403, Brown and Caldwell , Brown

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

AnalyDueDate: 11/10/2008

Batch: 8311393 SOIL ppt

SEQ Batch, Test: None

PM, Quote: EJ , 73181

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:

92 K1JK1-1-AF

J8J240197-18-SAMP

10/15/2008 16:05 AmtRec: BAG #Containers: 1 Scr: Alpha: Beta:

93 K2DTC-1-AA-B

J8K060000-393-BLK

10/16/2008 08:12 AmtRec: #Containers: 1 Scr: Alpha: Beta:

94 K2DTC-1-AC-B

J8K060000-393-BLK

10/16/2008 08:12 AmtRec: #Containers: 1 Scr: Alpha: Beta:

95 K2DTC-1-AD-C

J8K060000-393-LCS

10/16/2008 08:12 AmtRec: #Containers: 1 Scr: Alpha: Beta:

96 K2DTC-1-AE-C

J8K060000-393-LCS

10/16/2008 08:12 AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:

All Clients for Batch:
536403, Brown and Caldwell Brown and Caldwell , EJ , 73181

K1HE61AC-SAMP Constituent List:
Uranium RDL:0.8 ppt LCL: UCL: RPD:

12/10/2008 11:02:24 AM

Sample Preparation/Analysis

HK Total Dissolution
QV ICP-Mass Spectrometry (200.8)
01 STANDARD TEST SET

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 11/10/2008

Batch: 8311393 ppt
SEQ Batch, Test: None

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:

K1JJT1AG-MS:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K1JJT1AH-MSD:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K1JJT1AJ-MS:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K1JJT1AK-MSD:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K1JJT1AL-MS:

K1JJT1AM-MSD:

K1JJT1AN-MS:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K1JJT1AP-MSD:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K2DTC1AA-BLK:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K2DTC1AC-BLK:

K2DTC1AD-LCS:
Uranium RDL:0.8 ppt LCL: UCL: RPD:
K2DTC1AE-LCS:

K1HE61AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AG-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AH-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AJ-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AK-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AL-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AM-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AN-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K1JJT1AP-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B
K2DTC1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: N ODRs: B

				Thorium:	Uranium:		Matrix Spike Conc.	ug				
			CCB (ng/L):	3.2602	2.1004		Thorium:	0.501				
Batch ID:			CCV (ng/L):	1001.2	993		Uranium:	0.498				
8311393			MDL (ng/L):	Thorium:	3.2802							
				Uranium:	2.1004			Control QC Yield	Internal Std QC Yield	Spike % Recovery	Dup Rel % Diff	see notes
Sample ID:	Client ID	Sample aliquot (g)	Analyte	Conc. Mean	Report Unit	dilution factor	Conc. RSD					
ICV 1125			Th	9.986E-04	mg/Kg		0.277	99.7%	98.0%			
			U	1.002E-03	mg/Kg		0.976	100.9%				
ICB 1125			Th	-3.902E-06	mg/Kg		39.766		100.8%			
			U	-1.319E-06	mg/Kg		19.991					
K1HE6	OU4-UEP-44A-SC	0.5041	Th	6.053E+01	mg/Kg	500	1.260		99.5%			
			U	6.734E+00	mg/Kg		1.193					
K1HE7	OU4-UEP-44B-SC	0.5163	Th	2.869E+01	mg/Kg	500	0.189		100.1%			
			U	8.831E+00	mg/Kg		2.193					
K1JJM	OU4-UEP-38A-SC	0.5033	Th	4.820E+01	mg/Kg	500	0.951		98.8%			
			U	5.567E+00	mg/Kg		0.695					
K1JJM-DUP	OU4-UEP-38A-SC	0.5066	Th	5.340E+01	mg/Kg	500	1.011		89.7%		10.2%	
			U	6.394E+00	mg/Kg		2.280				13.8%	
K1JJT	OU4-UEP-38B-SC	0.5091	Th	1.770E+01	mg/Kg	500	1.423		98.3%			
			U	7.081E+00	mg/Kg		2.580					
K1JJT-MS	OU4-UEP-38B-SC	0.5153	Th	1.773E+01	mg/Kg	500	1.345		98.2%	3.1%		
			U	7.845E+00	mg/Kg		1.601			79.4%		
K1JJT-MSD	OU4-UEP-38B-SC	0.5159	Th	1.886E+01	mg/Kg	500	1.545		98.5%	121.5%		
			U	8.054E+00	mg/Kg		1.592			101.2%		
K1JJV	OU4-UEP-38A-SC-FD	0.4982	Th	4.500E+01	mg/Kg	500	0.717		100.4%			
			U	5.007E+00	mg/Kg		2.574					
K1JJ3	OU4-UEP-38B-SC-FD	0.5058	Th	1.904E+01	mg/Kg	500	0.683		102.5%			
			U	6.602E+00	mg/Kg		1.063					
K1JJ7	OU4-UEP-39A-SC	0.5012	Th	5.581E+01	mg/Kg	500	0.771		101.7%			
			U	4.261E+00	mg/Kg		1.746					
CCV 1125			Th	9.972E-04	mg/Kg		0.724	99.6%	101.8%			
			U	9.861E-04	mg/Kg		0.703	99.3%				
CCB 1125			Th	-4.464E-06	mg/Kg		7.469		104.1%			
			U	-1.821E-06	mg/Kg		14.250					
K1JKC	OU4-UEP-39B-SC	0.5001	Th	1.589E+01	mg/Kg	500	0.329		102.6%			
			U	4.315E+00	mg/Kg		3.019					
K1JKD	OU4-UEP-43A-SC	0.5062	Th	5.525E+01	mg/Kg	500	0.737		100.3%			
			U	6.709E+00	mg/Kg		1.383					
K1JKE	OU4-UEP-43B-SC	0.5254	Th	2.362E+01	mg/Kg	500	1.163		100.8%			
			U	1.158E+01	mg/Kg		2.593					
K1JKF	OU4-UEP-36A-SC	0.5128	Th	8.850E+01	mg/Kg	500	0.664		100.6%			
			U	1.664E+01	mg/Kg		1.621					
K1JKG	OU4-UEP-36B-SC	0.5131	Th	1.779E+01	mg/Kg	500	1.063		101.8%			
			U	6.360E+00	mg/Kg		2.055					
K1JKH	OU4-UEP-37A-SC	0.5109	Th	6.481E+01	mg/Kg	500	1.089		99.6%			
			U	9.700E+00	mg/Kg		2.597					
K1JKJ	OU4-UEP-37B-SC	0.5162	Th	3.183E+01	mg/Kg	500	0.447		103.2%			
			U	1.128E+01	mg/Kg		1.716					
K1JKL	OU4-UEP-40A-SC	0.5194	Th	4.262E+01	mg/Kg	500	0.668		101.2%			
			U	4.961E+00	mg/Kg		0.963					
K1JKN	OU4-UEP-40B-SC	0.512	Th	2.083E+01	mg/Kg	500	0.821		99.3%			
			U	1.005E+01	mg/Kg		0.611					
K1JKT	OU4-LEP-26A-SC	0.5176	Th	3.425E+01	mg/Kg	500	0.497		101.0%			
			U	4.432E+00	mg/Kg		1.506					
CCV 1125			Th	9.775E-04	mg/Kg		0.715	97.6%	101.9%			
			U	9.902E-04	mg/Kg		0.625	99.7%				
CCB 1125			Th	-5.455E-06	mg/Kg		7.986		104.2%			
			U	-2.237E-06	mg/Kg		17.154					
K1JKW	OU4-LEP-26B-SC	0.5155	Th	1.177E+01	mg/Kg	500	1.766		94.5%			
			U	4.633E+00	mg/Kg		3.698					
K1JKX	OU4-LEP-19A-SC	0.5286	Th	8.010E+00	mg/Kg	500	0.782		101.1%			
			U	2.644E+01	mg/Kg		0.571					
K1JKI	OU4-LEP-19B-SC	0.5082	Th	1.165E+01	mg/Kg	500	0.919		102.1%			
			U	1.791E+01	mg/Kg		1.711					
K2DTC-BLK			Th	-8.179E-06	mg/Kg		4.354		101.1%			
			U	-2.127E-06	mg/Kg		10.175					
K2DTC-LCS			Th	1.837E-04	mg/Kg		0.653		101.3%	92.2%		
			U	1.940E-04	mg/Kg		0.524			97.2%		
CCV 1125			Th	9.647E-04	mg/Kg		0.356	96.4%	102.5%			
			U	9.848E-04	mg/Kg		0.088	99.2%				
CCB 1125			Th	-6.081E-06	mg/Kg		3.876		104.9%			
			U	-2.316E-06	mg/Kg		9.257					

Control Limits:
CCV: +/- 10%
Spike Recovery: +/- 30%
Duplicate Recovery: +/- 20%
LCS Recovery: +/- 15%

Sample data reported in mg/L, converted to mg/Kg using 1L (water) = 1KG (water)

12/17/2008
4:33 PM

Pg 1

TestAmerica

RICHLAND METALS DIGESTION LOG

Soil

Prep Date: 12-9-2008

Batch #: ~~8301479~~ 8311393 EB

Matrix: ~~1% HNO3~~ EB 12-10-08

SOP#: RICH-MT-0002 / RICH-MT-0003 (circle one)

	Spike Solution ID:	Volume Added	Comments
LCS	Master CCV	0.5ml	used Master CCV 1125
LCSD	N.A.		
MS	Master CCV	0.5ml	Master CCV 1125
MSD	" "	0.5ml	" " "

Digestion Acids		Standard #1		Digestion Temperature	95°C
HNO_3	conc.	Standard #2		Comments:	
HCl	conc.	Standard #3		Master CCV	
		Standard #4		(Th Lot # CCV-43TH) 1,000 mg/L	
H_2O_2	- 30%	Standard #5		Th-6347	
				(U - Lot J00389	
HNO_3	S-08-00151	ICV/CCV		U - C-08-00057) 1000 mg/ml	
HCl	S-08-00121	ICSA		Ho - 1000 mg/ml - Lot # 13-31HO	
H_2O_2	S-08-00155	ICSAB			

Beaker#	Laboratory ID	Client ID	Weight/Volume (g)	Dilution
Blank	K2DTC-BLK		N.A.	
LCS	K2DTC-LCS		0.5000 ml	
LCS-D	N.A.			
1	KIHE6		0.5041	
2	KIHE7		0.5163	
3	KIJJM		0.5033	
4	KIJJM-dup		0.5086	
5	KIJJT		0.5091	
6	KIJJT-ms		0.5153	
7	KIJJT-msd		0.5159	
8	KIJJV-		0.4982	
9	KIJJ3		0.5058	
10	KIJJ7		0.5012	
11	KIJKC		0.5001	
12	KIJKD		0.5062	

Analyst's Signature: Ernie F Brown Date: 12-10-08

Reviewer's Signature: _____ Date: _____

CG-206, 05/07, Rev 8

Pg 2

TestAmerica

RICHLAND METALS DIGESTION LOG

Prep Date: 12-9-08 Matrix: _____

Batch #: ~~830479~~ 583 8311393 SOP#: RICH-MT-0002 / RICH-MT-0003 (circle one)

	Spike Solution ID:	Volume Added	Comments
LCS			
LCSD			
MS			
MSD			

Digestion Acids	Standard #1		Digestion Temperature	
	Standard #2		Comments:	
	Standard #3			
	Standard #4			
	Standard #5			
	ICV/CCV			
	ICSA			
	ICSAB			

Beaker#	Laboratory ID	Client ID	Weight/Volume	Dilution
Blank				
LCS				
LCS-D				
1	KIJKE		0.5254	
2	KIJKF		0.5128	
3	KIJKG		0.5131	
4	KIJKH		0.5109	
5	KIJKJ		0.5162	
6	KIJKL		0.5194	
7	KIJKN		0.5120	
8	KIJKT		0.5176	
9	KIJKW		0.5155	
10	KIJKX		0.5286	
11	KIJK1		0.5082	
12				

Analyst's Signature: _____ Date: _____

Reviewer's Signature: _____ Date: _____

CG-206, 05/07, Rev 8

Sample/Batch Report

User Name: ICPMS
Computer Name: RCH-ICPMS1
Sample File: C:\Elandata\Sample\8311393_8311509.sam
Report Date/Time: Wednesday, December 17, 2008 14:53:51

A/S Loc.	Batch ID	Sample ID	Description	Sample Type	Init. Quant.	Prep. Vol.	Aliquot Vol.	Diluted Vol.	Solids Ratio
8	8311393	0	Soil Sample	Sample	504.100	50.000	0.100	50.000	
9	8311393	K1HE7	Soil Sample	Sample	516.300	50.000	0.100	50.000	
10	8311393	K1JJM	Soil Sample	Sample	503.300	50.000	0.100	50.000	
11	8311393	K1JJM-DUP	Soil Sample	Duplicate of 3	508.600	50.000	0.100	50.000	
12	8311393	K1JJT	Soil Sample	Sample	509.100	50.000	0.100	50.000	
13	8311393	K1JJT-MS	Soil Sample	Spike - 1 of 5	515.300	50.000	0.100	50.000	
	8311393	K1JJT-MSD	Soil Sample	Duplicate Spike of 6	515.900	50.000	0.100	50.000	
15	8311393	K1JJV	Soil Sample	Sample	498.200	50.000	0.100	50.000	
16	8311393	K1JJ3	Soil Sample	Sample	505.800	50.000	0.100	50.000	
17	8311393	K1JJ7	Soil Sample	Sample	501.200	50.000	0.100	50.000	
18	8311393	K1JKC	Soil Sample	Sample	500.100	50.000	0.100	50.000	
19	8311393	K1JKD	Soil Sample	Sample	506.200	50.000	0.100	50.000	
20	8311393	K1JKE	Soil Sample	Sample	525.400	50.000	0.100	50.000	
21	8311393	K1JKF	Soil Sample	Sample	512.800	50.000	0.100	50.000	
22	8311393	K1JKG	Soil Sample	Sample	813.100	50.000	0.100	50.000	
23	8311393	K1JKH	Soil Sample	Sample	510.900	50.000	0.100	50.000	
24	8311393	K1JKJ	Soil Sample	Sample	516.200	50.000	0.100	50.000	
25	8311393	K1JKL	Soil Sample	Sample	519.400	50.000	0.100	50.000	
26	8311393	K1JKN	Soil Sample	Sample	512.000	50.000	0.100	50.000	
27	8311393	K1JKT	Soil Sample	Sample	517.600	50.000	0.100	50.000	
28	8311393	K1JKW	Soil Sample	Sample	515.500	50.000	0.100	50.000	
29	8311393	K1JKX	Soil Sample	Sample	528.600	50.000	0.100	50.000	
30	8311393	K1JKI	Soil Sample	Sample	508.200	50.000	0.100	50.000	
31	8311393	K2DTC-BLK	Reagent Blank	Sample					
32	8311393	K2DTC-LCS	LCS	Spike - 1 of 24					
33	8311509	K1PNT	Soil Sample	Sample	506.200	50.000	0.100	50.000	
34	8311509	K1PNT-DUP	Soil Sample	Duplicate of 26	526.300	50.000	0.100	50.000	
35	8311509	K1PNV	Soil Sample	Sample	521.200	50.000	0.100	50.000	
36	8311509	K1PNV-MS	Soil Sample	Spike - 1 of 28	514.100	50.000	0.100	50.000	
37	8311509	K1PNV-MSD	Soil Sample	Duplicate Spike of 29	510.900	50.000	0.100	50.000	
38	8311509	K1PNW	Soil Sample	Sample	522.900	50.000	0.100	50.000	
39	8311509	K1PNX	Soil Sample	Sample	510.500	50.000	0.100	50.000	
40	8311509	K1PN0	Soil Sample	Sample	509.400	50.000	0.100	50.000	
41	8311509	K1PN1	Soil Sample	Sample	536.700	50.000	0.100	50.000	
42	8311509	K1PN2	Soil Sample	Sample	516.600	50.000	0.100	50.000	
43	8311509	K1PN4	Soil Sample	Sample	502.900	50.000	0.100	50.000	
44	8311509	K1PN5	Soil Sample	Sample	538.000	50.000	0.100	50.000	
45	8311509	K1PN6	Soil Sample	Sample	504.800	50.000	0.100	50.000	
46	8311509	K1PN7	Soil Sample	Sample	504.900	50.000	0.100	50.000	
47	8311509	K1PN8	Soil Sample	Sample	531.200	50.000	0.100	50.000	
48	8311509	K1PPA	Soil Sample	Sample	505.200	50.000	0.100	50.000	
49	8311509	K1PPC	Soil Sample	Sample	506.100	50.000	0.100	50.000	
50	8311509	K1PPD	Soil Sample	Sample	524.000	50.000	0.100	50.000	
51	8311509	K1PPE	Soil Sample	Sample	530.600	50.000	0.100	50.000	
52	8311509	K1PPF	Soil Sample	Sample	508.000	50.000	0.100	50.000	
53	8311509	K2EEA-BLK	Reagent Blank	Sample					
54	8311509	K2EEA-LCS	LCS	Spike - 1 of 46					

GAMMA

SAMPLE AND QC DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/8/2008 2:16:56 PM

Lot No., Due Date: J8J240197; 11/11/2008

Client, Site: 536403; BRC GW/SOIL Yerington Quarterly GW/Soil

QC Batch No., Method Test: 8301479; RGAMMA Gamma by GER

SDG, Matrix: 38657; SOIL

	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:

The sample was re-ccunted on a different detector in order to proved a duplicate.

First Level Review John Horton **Date** 12-8-8

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 8301479

Review Item	Yes (√)	No (√)	NA (√)
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 within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances 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: Erika Ford Date: 12/17/8

LS-038B, Rev. 10, 9/07

BRC

11/22/2008 12:01:10 PM

Sample Preparation/Analysis

Balance Id:1120421763

536403, Brown and Caldwell , Brown and Caldwell

AX Gamma PrpRC5013/5017

TA Gamma by HPGE 10 Day ingrowth ICB 11/22/08

01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/10/2008

Sep1 DT/Tm Tech:

Batch: 8301479 **SOIL** **pCi/g** **PM, Quote: EJ , 73181**

SEQ Batch, Test: None All Tests: 8301479 AXTA, 8311393 HKQV,

Sep2 DT/Tm Tech:

Prep Tech: ,BattlesK

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 K1JJM-1-AA J8J240197-1-SAMP 10/16/2008 08:12	237.20g,in	AmtRec: BAG #Containers: 1			200	200	C5 Scr:	0839 Alpha:	11/6/08 CS	Beta:
2 K1JJM-1-AG-X J8J240197-1-DUP 10/16/2008 08:12		AmtRec: BAG #Containers: 1					C7 Scr:	1203 Alpha:		Beta:
3 K1JJT-1-AA J8J240197-2-SAMP 10/16/2008 08:12	274.10g,in	AmtRec: BAG #Containers: 1			5200		C15 Scr:	0839 Alpha:	11/6/08	Beta:
4 K1JJV-1-AA J8J240197-3-SAMP 10/16/2008 08:12	229.50g,in	AmtRec: BAG #Containers: 1			200		C11 Scr:	0840 Alpha:		Beta:
5 K1JJ3-1-AA J8J240197-4-SAMP 10/16/2008 08:12	34.80g,in	AmtRec: BAG #Containers: 1			525	500	C5 Scr:	2034 Alpha:	11/6/08	Beta:
6 K1JJ7-1-AA J8J240197-5-SAMP 10/16/2008 08:50	275.50g,in	AmtRec: BAG #Containers: 1			5200	200	C14 Scr:	0840 Alpha:	11/6/08	Beta:
7 K1JKC-1-AA J8J240197-6-SAMP 10/16/2008 08:50	240.60g,in	AmtRec: BAG #Containers: 1			200		C10 Scr:	0840 Alpha:		Beta:

TestAmerica Laboratories, Inc.

11/22/2008 12:01:11 PM

Sample Preparation/Analysis

Balance Id:1120421763

536403, Brown and Caldwell , Brown and Caldwell

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/10/2008

Sep1 DT/Tm Tech:

Batch: 8301479 SOIL pCi/g
SEQ Batch, Test: None

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

Prep Tech: ,BattlesK

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 K1JKD-1-AA J8J240197-7-SAMP 10/16/2008 09:10		220.40g,in AmtRec: BAG #Containers: 1			200	200	66 Scr:	0841 Alpha:	10/6/08 Beta:	
9 K1JKE-1-AA J8J240197-8-SAMP 10/16/2008 09:10		356.70g,in AmtRec: BAG #Containers: 1			5200		613 Scr:	0841 Alpha:		Beta:
10 K1JKF-1-AA J8J240197-9-SAMP 10/15/2008 13:20		176.20g,in AmtRec: BAG #Containers: 1			200		GK Scr:	0841 Alpha:	10/6/08 Beta:	
11 K1JKG-1-AA J8J240197-10-SAMP 10/15/2008 13:20		306.20g,in AmtRec: BAG #Containers: 1			5200		GK Scr:	1204 Alpha:		Beta:
12 K1JKH-1-AA J8J240197-11-SAMP 10/15/2008 14:05		22.10g,in AmtRec: BAG #Containers: 1			25	500	GK Scr:	0835 Alpha:	10/6/08 Beta:	
13 K1JKJ-1-AA J8J240197-12-SAMP 10/15/2008 14:05		34.90g,in AmtRec: BAG #Containers: 1			525		66 Scr:	0835 Alpha:		Beta:
14 K1JKL-1-AA J8J240197-13-SAMP 10/15/2008 14:30		239.70g,in AmtRec: BAG #Containers: 1			200	200	GK Scr:	1204 Alpha:	10/6/08 Beta:	

11/22/2008 12:01:12 PM

Sample Preparation/Analysis

Balance Id:1120421763

536403, Brown and Caldwell and Caldwell , Brown

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/10/2008

Sep1 DT/Tm Tech:

Batch: 8301479 SOIL pCi/g

PM, Quote: EJ , 73181

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BattlesK

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
15 K1JKN-1-AA J8J240197-14-SAMP 10/15/2008 14:30	266.50g,in	AmtRec: BAG	#Containers: 1	S200		200	G11	1204 Scr: Alpha:	10/16/08 Beta:	
16 K1JKT-1-AA J8J240197-15-SAMP 10/15/2008 15:15	249.00g,in	AmtRec: BAG	#Containers: 1	200			G14	1204 Scr: Alpha:	Beta:	
17 K1JKW-1-AA J8J240197-16-SAMP 10/15/2008 15:15	269.80g,in	AmtRec: BAG	#Containers: 1	S200			G10	1205 Scr: Alpha:	Beta:	
18 K1JKX-1-AA J8J240197-17-SAMP 10/15/2008 16:05	38.00g,in	AmtRec: BAG	#Containers: 1	S25		500	G13	2035 Scr: Alpha:	10/16/08 Beta:	
19 K1JK1-1-AA J8J240197-18-SAMP 10/15/2008 16:05	42.00g,in	AmtRec: BAG	#Containers: 1				G15	2032 Scr: Alpha:	Beta:	
20 K1PGA-1-AA-B J8J270000-479-BLK 10/16/2008 08:12	348.00g,in	AmtRec:	#Containers: 1	S200		200	G6	1205 Scr: Alpha:	10/16/08 Beta:	
21 K1PGA-1-AC-C J8J270000-479-LCS 10/16/2008 08:12	200.01g,in	AmtRec:	cal491 01/01/03,pd 01/01/02 r #Containers: 1	200			G13	1205 Scr: Alpha:	Beta:	

11/22/2008 12:01:12 PM

Sample Preparation/Analysis

Balance Id:1120421763

AX Gamma PrpRC5013/5017
TA Gamma by HPGE
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 11/10/2008

Sep1 DT/Tm Tech:

Batch: 8301479 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BattlesK

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

Comments: 10 Day ingrowth Started 11/22/08 KB

Did not have enough for DoP please recount in another scanner

all Clients for Batch:
536403, Brown and Caldwell Brown and Caldwell , EJ , 73181

K1JJM1AA-SAMP Constituent List:

Cs-137	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35

K1PGA1AA-BLK:

Cs-137	RDL:0.2	pCi/g	LCL:	UCL:	RPD:	Cs-137DA	RDL:0.2	pCi/g	LCL:	UCL:	RPD:

K1PGA1AC-LCS:

Cs-137	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35

K1JJM1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

K1PGA1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

K1PGA1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/8/2008 2:15:49 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/9/2007, 12/13/2008, Batch: '8301479', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus		Accepting		Comments
8301479							
AC			Rev1C	BattlesK	11/22/2008 9:35:01		
SC				mcginnist	IsBatched	10/28/2008 12:35:15 PM	ICOC_RADCALC v4.8.34
SC				BattlesK	InPrep	11/22/2008 9:35:01 AM	RL-GAM-001 REVISION 0
SC				BattlesK	InPrep2	11/22/2008 12:00:35 PM	RL-GAM-001 REVISION 0
SC				BattlesK	Prep2C	11/22/2008 12:00:54 PM	RL-GAM-001 REVISION 0
SC				DAWKINSO	InCnt1	12/3/2008 6:36:25 PM	RL-CI-007 REVISION 0
SC				BlackCL	CalcC	12/7/2008 6:08:23 AM	RL-CI-007 REVISION 0
SC				nortonj	Rev1C	12/8/2008 2:15:35 PM	RL-DR-001 REV 0
AC				BattlesK	11/22/2008 12:00:35		
AC				BattlesK	11/22/2008 12:00:54		
AC				DAWKINSO	12/3/2008 6:36:25 PM		
AC				BlackCL	12/7/2008 6:08:23		
AC				nortonj	12/8/2008 2:15:35 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.35

12/8/2008 2:15:48 PM

Rpt DB Transfer log (Batch Results)

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
38657	9K1JJ310			J8J2401974	OU4-UEP-38B-SC-	SOIL		10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0		12/6/2008 12:14:36 PM	1.2296E+00	1.234E-01		1.234E-01	1.485E-01	PCI/GRAM			3.48E+1
RA-228DA	AXTA	0		12/6/2008 12:14:36 PM	1.945E+00	2.171E-01		2.171E-01	2.739E-01	PCI/GRAM			3.48E+1
38657	9K1JJ710			J8J2401975	OU4-UEP-39A-SC	SOIL		10/21/2008 1:00:00		10/16/2008 8:50:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:20:34 AM	1.001E+00	9.722E-02		9.722E-02	1.298E-01	PCI/GRAM			2.755E+2
RA-228DA	AXTA	0		12/6/2008 5:20:34 AM	5.8754E+00	4.24E-01		4.24E-01	2.13E-01	PCI/GRAM			2.755E+2
38657	9K1JJM10			J8J2401971	OU4-UEP-38A-SC	SOIL		10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:19:21 AM	1.5905E+00	1.366E-01		1.366E-01	1.248E-01	PCI/GRAM			2.372E+2
RA-228DA	AXTA	0		12/6/2008 5:19:21 AM	5.0928E+00	3.67E-01		3.67E-01	2.088E-01	PCI/GRAM			2.372E+2
38657	9K1JJT10			J8J2401972	OU4-UEP-38B-SC	SOIL		10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:19:33 AM	1.6921E+00	1.267E-01		1.267E-01	9.266E-02	PCI/GRAM			2.741E+2
RA-228DA	AXTA	0		12/6/2008 5:19:33 AM	2.1784E+00	1.891E-01		1.891E-01	1.605E-01	PCI/GRAM			2.741E+2
38657	9K1JJV10			J8J2401973	OU4-UEP-38A-SC-	SOIL		10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:19:52 AM	1.6088E+00	1.182E-01		1.182E-01	8.678E-02	PCI/GRAM			2.295E+2
RA-228DA	AXTA	0		12/6/2008 5:19:52 AM	5.2924E+00	3.962E-01		3.962E-01	1.563E-01	PCI/GRAM			2.295E+2
38657	9K1JK110			J8J24019718	OU4-UEP-19B-SC	SOIL		10/21/2008 1:00:00		10/15/2008 4:05:00 PM			
RA-226DA	AXTA	0		12/6/2008 12:16:36 PM	1.1839E+00	1.245E-01		1.245E-01	1.248E-01	PCI/GRAM			4.2E+1
RA-228DA	AXTA	0		12/6/2008 12:16:36 PM	1.3123E+00	1.757E-01		1.757E-01	2.25E-01	PCI/GRAM			4.2E+1
38657	9K1JKC10			J8J2401976	OU4-UEP-39B-SC	SOIL		10/21/2008 1:00:00		10/16/2008 8:50:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:20:54 AM	1.6988E+00	1.203E-01		1.203E-01	9.465E-02	PCI/GRAM			2.406E+2
RA-228DA	AXTA	0		12/6/2008 5:20:54 AM	2.272E+00	1.853E-01		1.853E-01	1.641E-01	PCI/GRAM			2.406E+2
38657	9K1JKD10			J8J2401977	OU4-UEP-43A-SC	SOIL		10/21/2008 1:00:00		10/16/2008 9:10:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:21:22 AM	1.5979E+00	1.327E-01		1.327E-01	1.524E-01	PCI/GRAM			2.204E+2
RA-228DA	AXTA	0		12/6/2008 5:21:22 AM	7.6535E+00	5.479E-01		5.479E-01	2.793E-01	PCI/GRAM			2.204E+2
38657	9K1JKE10			J8J2401978	OU4-UEP-43B-SC	SOIL		10/21/2008 1:00:00		10/16/2008 9:10:00 AM			
RA-226DA	AXTA	0		12/6/2008 5:21:33 AM	1.1417E+00	8.557E-02		8.557E-02	6.621E-02	PCI/GRAM			3.567E+2
RA-228DA	AXTA	0		12/6/2008 5:21:33 AM	1.6255E+00	1.58E-01		1.58E-01	1.397E-01	PCI/GRAM			3.567E+2
38657	9K1JKF10			J8J2401979	OU4-UEP-36A-SC	SOIL		10/21/2008 1:00:00		10/15/2008 1:20:00 PM			
RA-226DA	AXTA	0		12/6/2008 5:28:09 AM	2.0099E+00	1.626E-01		1.626E-01	1.929E-01	PCI/GRAM			1.762E+2
RA-228DA	AXTA	0		12/6/2008 5:28:09 AM	1.2084E+01	8.189E-01		8.189E-01	2.718E-01	PCI/GRAM			1.762E+2
38657	9K1JKG10			J8J24019710	OU4-UEP-36B-SC	SOIL		10/21/2008 1:00:00		10/15/2008 1:20:00 PM			
RA-226DA	AXTA	0		12/6/2008 8:44:14 AM	1.5479E+00	1.228E-01		1.228E-01	9.455E-02	PCI/GRAM			3.062E+2
RA-228DA	AXTA	0		12/6/2008 8:44:14 AM	2.7105E+00	2.294E-01		2.294E-01	1.741E-01	PCI/GRAM			3.062E+2
38657	9K1JKH10			J8J24019711	OU4-UEP-37A-SC	SOIL		10/21/2008 1:00:00		10/15/2008 2:05:00 PM			
RA-226DA	AXTA	0		12/6/2008 12:15:01 PM	1.878E+00	1.858E-01		1.858E-01	2.056E-01	PCI/GRAM			2.21E+1
RA-228DA	AXTA	0		12/6/2008 12:15:01 PM	7.0082E+00	6.003E-01		6.003E-01	3.97E-01	PCI/GRAM			2.21E+1
38657	9K1JKJ10			J8J24019712	OU4-UEP-37B-SC	SOIL		10/21/2008 1:00:00		10/15/2008 2:05:00 PM			
RA-226DA	AXTA	0		12/6/2008 12:15:21 PM	1.4674E+00	1.45E-01		1.45E-01	1.542E-01	PCI/GRAM			3.49E+1
RA-228DA	AXTA	0		12/6/2008 12:15:21 PM	3.6777E+00	3.436E-01		3.436E-01	3.407E-01	PCI/GRAM			3.49E+1
38657	9K1JKL10			J8J24019713	OU4-UEP-40A-SC	SOIL		10/21/2008 1:00:00		10/15/2008 2:30:00 PM			
RA-226DA	AXTA	0		12/6/2008 8:44:28 AM	1.2684E+00	1.099E-01		1.099E-01	1.106E-01	PCI/GRAM			2.397E+2
RA-228DA	AXTA	0		12/6/2008 8:44:28 AM	5.72E+00	4.018E-01		4.018E-01	1.982E-01	PCI/GRAM			2.397E+2
38657	9K1JKN10			J8J24019714	OU4-UEP-40B-SC	SOIL		10/21/2008 1:00:00		10/15/2008 2:30:00 PM			
RA-226DA	AXTA	0		12/6/2008 8:44:36 AM	1.627E+00	1.121E-01		1.121E-01	6.784E-02	PCI/GRAM			2.665E+2
RA-228DA	AXTA	0		12/6/2008 8:44:36 AM	2.7873E+00	2.277E-01		2.277E-01	1.292E-01	PCI/GRAM			2.665E+2
38657	9K1JKT10			J8J24019715	OU4-UEP-26A-SC	SOIL		10/21/2008 1:00:00		10/15/2008 3:15:00 PM			
RA-226DA	AXTA	0		12/6/2008 8:44:47 AM	7.0516E-01	8.749E-02		8.749E-02	2.15E-01	PCI/GRAM			2.49E+2
RA-228DA	AXTA	0		12/6/2008 8:44:47 AM	3.9153E+00	2.87E-01		2.87E-01	2.034E-01	PCI/GRAM			2.49E+2
38657	9K1JKW10			J8J24019716	OU4-UEP-26B-SC	SOIL		10/21/2008 1:00:00		10/15/2008 3:15:00 PM			
RA-226DA	AXTA	0		12/6/2008 8:45:03 AM	1.2709E+00	9.288E-02		9.288E-02	8.163E-02	PCI/GRAM			2.698E+2
RA-228DA	AXTA	0		12/6/2008 8:45:03 AM	1.4325E+00	1.355E-01		1.355E-01	1.411E-01	PCI/GRAM			2.698E+2

8301479,8301479, **Samples Inserted | Updated | NotUpdated => 21 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 42 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

TestAmerica Richland : Review v4.8.35

Page 1

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
38657	**9K1JKX10**			**J8J24019717**	OU4-UEP-19A-SC	SOIL	10/21/2008 1:00:00		10/15/2008 4:05:00 PM			
RA-226DA	AXTA	0		12/6/2008 12:15:44 PM	**9.1569E-01**	1.036E-01	1.036E-01	1.231E-01	PCI/GRAM			3.8E+1
RA-228DA	AXTA	0		12/6/2008 12:15:44 PM	**1.3456E+00**	1.919E-01	1.919E-01	2.279E-01	PCI/GRAM			3.8E+1
38657	**K1JJM1GR**			**J8J2401971**	OU4-UEP-38A-SC	SOIL	10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0	R	12/6/2008 8:43:34 AM	**1.7693E+00**	1.386E-01	1.386E-01	1.219E-01	PCI/GRAM			2.372E+2
RA-228DA	AXTA	0	R	12/6/2008 8:43:34 AM	**5.3931E+00**	3.835E-01	3.835E-01	2.283E-01	PCI/GRAM			2.372E+2
38657	**K1PGA1AB**			**J8J270000479**	INTRA-LAB BLANK	SOIL	10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0	B	12/6/2008 8:45:24 AM	**1.8546E-01**	2.657E-02	2.657E-02	8.619E-02	PCI/GRAM			3.48E+2
RA-228DA	AXTA	0	B	12/6/2008 8:45:24 AM	**7.8729E-02**	2.731E-02	2.731E-02	1.076E-01	PCI/GRAM			3.48E+2
38657	**K1PGA1CS**			**J8J270000479**	INTRA-LAB CHECK	SOIL	10/21/2008 1:00:00		10/16/2008 8:12:00 AM			
RA-226DA	AXTA	0	S	12/6/2008 8:45:34 AM	**1.1665E+00**	1.023E-01	1.023E-01	9.997E-02	PCI/GRAM	1.1482E+00		2.0E+2
RA-228DA	AXTA	0	S	12/6/2008 8:45:34 AM	**2.0854E+00**	1.957E-01	1.957E-01	1.858E-01	PCI/GRAM	1.873E+00		2.0E+2

8301479,8301479, **Samples Inserted | Updated | NotUpdated => 21 | 0 | 0,
**Results Inserted | ReTestInserted | Updated | NotInserted => 42 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

GAMMA

STANDARDS AND TRACEABILITY

INTERNATIONAL TECHNOLOGY CORPORATION

Q.C. VIAL TRANSMITTAL RECORD

PURPOSE: Issuance of:

- Spikes _____
- Yield Monitor(s) _____
- Quench Monitor(s) _____
- Carrier(s) _____
- Internal Audit Sample(s) _____
- Sealed Source(s) _____
- Other _____

If "Other," explain: LCS

DESCRIPTION OF ITEM:

ITAS #	Vial Code #	Quantity	Matrix
	CAL 491	1	Rocky Flats Soil

Prepared By: WG Reviewed By: DS

Date Prepared: 5/13/93 Date Reviewed: 5-21-93

Form: CC-002, 11/90, Rev 1

INTERNATIONAL TECHNOLOGY CORPORATION

SPIKE PREPARATION RECORD

1. Prepared By: WG
2. Date: 5/13/93
3. Source Identification: Rocky Flats Soil # 4353
4. Source Activity (dpm/g ± dpm/g) _____

Source Identification _____

Source Activity (dpm/g ± dpm/g) _____

5. Spike ID	6. Weight	7. Activity (4*6)	8. Comments
CAL 491	200.0 g		

CC Reviewer: DS Date: 5-21-93

Form CC-001, 11/90, Rev. 1

U. S. Department of Commerce
Malcolm Baldrige
Secretary

National Bureau of Standards
Ernest Ambler, Director

10 (ea) Recieved 5-18-82
~900 grams total

Betty;

cation:
Old Isotope
Calib. Met. Room
99

Lucite
Bottle (9m)

National Bureau of Standards

Certificate

Standard Reference Material 4353

Environmental Radioactivity

Source description: Rocky Flats Soil Number 1

Source identification: 4353-

Reference time: December 15, 1980

General Comments(1)*

This Standard Reference Material (SRM), which has been developed in cooperation with member laboratories of the International Committee for Radionuclide Metrology, consists of approximately 90 grams of air-dried, pulverized soil(2) in a polyethylene bottle. The sample was collected from Rocky Flats, Colorado. This SRM is intended for use in tests of measurements of environmental radioactivity contained in matrices similar to the sample(3,4,5).

Working samples of this SRM should be dried in air at 40°C for at least 24 hours prior to weighing. The material has been tested extensively for homogeneity and the results are summarized in(6). Based on over 70 plutonium measurements, the sample contains typically one or two "hot" particles in each bottle. As described in Note (5), by judicious handling of user data, the effect of the "hot" particles upon estimates of deduced user analytical error can be made negligible for most applications.

Concentrations and uncertainties, EXCLUDING HOT PARTICLES, are quoted in the following table.

When additional data become available, it is expected that other radioactivity concentrations will be certified and purchasers will be notified. To aid in these certifications, users are requested to send their measurement results for uncertified radioactivities together with the methods used to NBS(1).

* See notes

Notes

(1) For further information contact K.G.W. Inn (301) 921-2383 or J.M.R. Hutchinson (301) 921-2396, National Bureau of Standards, Room C114, Building 245, Washington, D.C., 20234.

(2) The soil was pulverized with a "pancake" style air jet mill. The average particle size for the resulting powder is 8 μm. More than 99 percent, by weight, of the particles are less than 20 μm in diameter (VFI80).

(3) Semi-quantitative mineralogical composition by x-ray diffraction measurements (performed by Dr. H. Tourtelot, U.S. Geological Survey, Denver, CO):

Mineral	Percent by Weight
Quartz	55 - 60
Clays	25 - 30
Alkali Feldspars	5 - 10
Plagioclase	5

(4) See attached sheets: Semi-quantitative emission spectrographic analysis and Gamma-ray spectrum for SRM 4353.

(5) Suggested handling of data to obtain estimate of user analytical error for plutonium 239+240 measurements.

A. For each sample measurement, consider the difference between it and the certified $^{239+240}Pu$ concentration of 8.03×10^{-3} Bq g^{-1}. Classify each measurement according to whether the difference is too negative to be attributed to measurement error (outside the sum of the user and NBS uncertainties at the 3s estimated standard deviation level), too positive to be attributed to measurement error, or in between. The user uncertainty for a single measurement should be taken to be larger than 10 percent (1s), the uncertainty of the certifying laboratories. This 10 percent may reflect some inhomogeneity in the material.

B. If all sample measurements are in between take no action.

If any sample measurement is too low, the user's measurements process is suspect.

If no measurements are too low but k out of a total of n sample measurements are too high, calculate the probability of k or more being caused by hot particles and decide accordingly. The probability of at least one hot particle in a sample is given by $p = 1 - e^{-\alpha w}$, where $\alpha = 0.02$ with a 95 percent confidence interval of $0.004 < \alpha < 0.047$, and w is the sample weight in grams. Thus, the probability of k or more samples with hot particles is given by

$$\sum_{i=k}^{n} \frac{n!}{(n-i)!\, i!} p^i (1-p)^{n-i}$$

This probability has been calculated for a few typical examples and is given on the next page.

(6) Summary of homogeneity measurements

A. Fourteen 100g bottled samples were examined for inhomogeneities in their gamma-ray-emission rates by counting them in a 5-in NaI(Tl) well detector coupled to a multichannel analyzer. The count rates from each bottle were compared over each of twelve selected energy regions and also over the total gamma-ray spectrum (0.04-2.05 MeV). The net sample-to-sample inhomogeneities in the gamma-ray-emission rates are summarized below:

Energy Region (MeV)	Standard deviation of the mean (%)
0.04 - 0.11	0.70
0.11 - 0.16	1.81
0.16 - 0.19	0.57
0.19 - 0.27	0.59
0.27 - 0.31	2.21
0.31 - 0.45	1.37
0.45 - 0.79	0.76
0.79 - 1.03	0.73
1.03 - 1.28	1.06
1.28 - 1.62	0.58
1.62 - 1.95	1.05
1.95 - 2.05	4.08
0.04 - 2.05	0.35

B. Inhomogeneities of ^{90}Sr and ^{137}Cs are less than 2 percent for 10g samples.

C. Inhomogeneities of alpha-particle emitting radionuclides, excluding "hot" particles, are less than 3 percent.

(7) Certified values are those measured by two or more methods and/or two or more laboratories.

(8) The random and systematic uncertainties have been combined in quadrature at a level corresponding to a standard deviation of the mean. The stated overall uncertainties are three times this value.

(9) Analytical Methods (References in parentheses)

1. $HF-HNO_3$ or $HF-HNO_3-HClO_4$ dissolution
2. KF-pyrosulfate fusion (BPH80, MAR79, SHA79)
3. HCl, HNO_3 or $HCl-HNO_3$ leaching # (HAR80, LMB75, WNB70)
4. HCl-NaOH leaching (HAR80)

continued next page

UNCERTIFIED VALUES

The following activities are uncertified because there are no corroborative measurements with which to compare them, or because, as is the case for $^{239}Pu+^{240}Pu$ the value has been measured directly by only one laboratory (EML). The quoted $^{239}Pu+^{240}Pu$ value, below, is deduced from measurements on smaller samples and agrees, within estimated uncertainties with the EML value. A 90 g sample contains an average of 1.8 hot particles, each with an average activity of about 0.04 Bq.

Radionuclide	Activity concentration (Bq g^{-1})	Laboratory	Method Code
^{55}Fe	2.49×10^{-3}	WHOI	3f
^{235}U	1.9×10^{-3}	RESL	2c
$^{239}Pu+^{240}Pu$ (total in a large sample)	8.8×10^{-3}	Refer to certification page	

REFERENCES

BPH 80 R.P. Bernabee, D.R. Percival and F.D. Hindman, Liquid-liquid extraction separation and determination of plutonium and americium, Analytical Chemistry, 52 (14), 2351 (1980).

HAR 80 Environmental Measurements Laboratory Procedures Manual, HASL 300 with 8 supplements, J.H. Harley, ed., New York (1980).

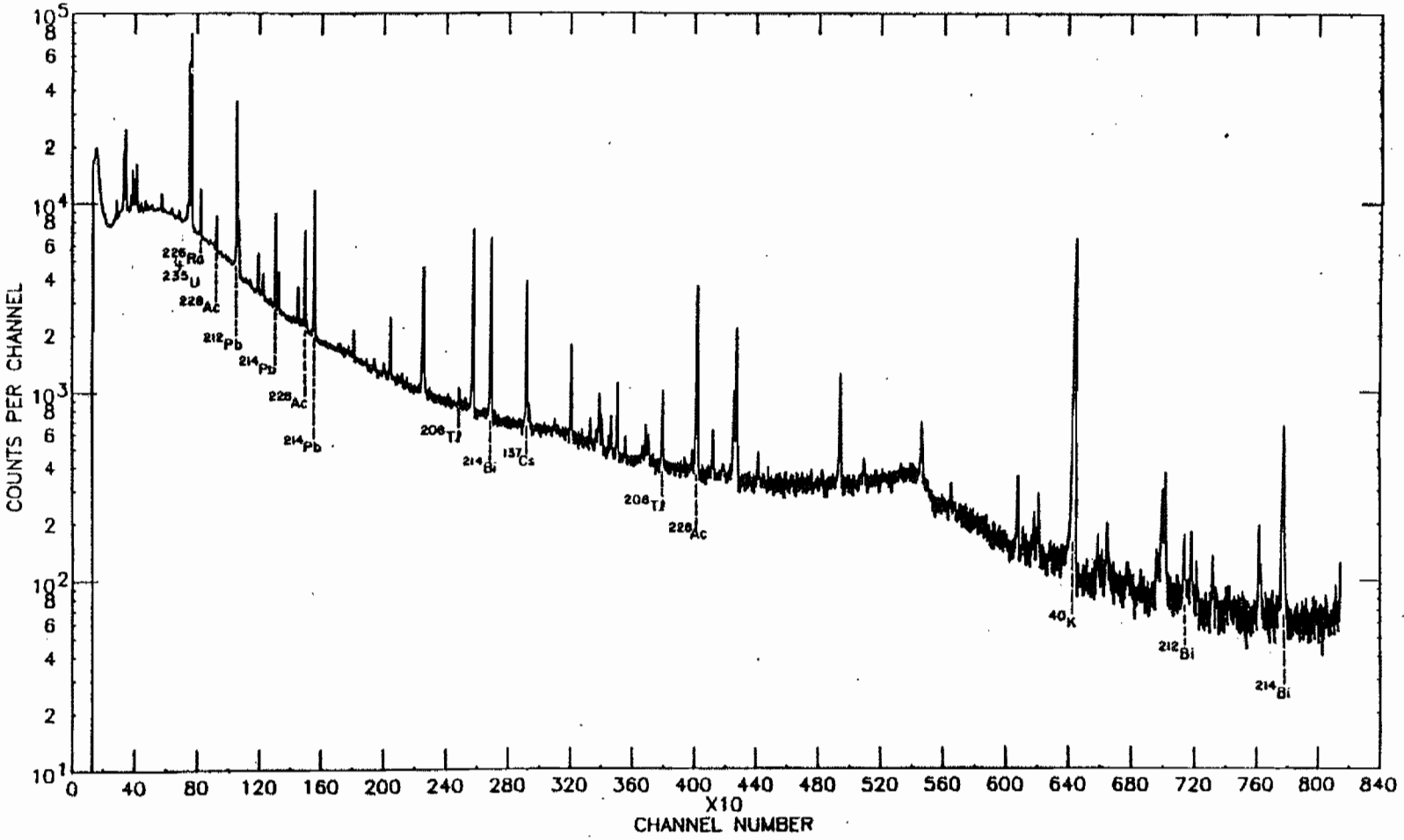
LMB 75 H.D. Livingston, D.R. Mann and V.T. Bowen, Analytical procedures for transuranic elements in seawater and marine sediments, Analytical Methods in Oceanography, Advances in Chemistry Series No. 147, T.R.P. Gibb, Jr., ed., American Chemical Society, New York, 124 (1975).

MAR 79 D.B. Martin, Determination of strontium-89 and -90 in soil with total sample decomposition, Analytical Chemistry, 51 (12), 1968 (1979).

SHA 79 C.W. Sill, F.D. Hindman and J.I. Anderson, Simultaneous determination of alpha-emitting nuclides of radium through californium in large environmental and biological samples, Analytical Chemistry, 51 (8), 1307 (1979).

VFI 80 H.L. Volchok, M.S. Feiner, K.G.W. Inn and J.F. McInroy, Development of some natural matrix standards - progress report, Environmental International, 3, 395 (1980).

WNB 70 K.M. Wong, V.E. Noshkin and V.T. Bowen, Radiochemical procedures for the analysis of strontium, antimony, rare earths, caesium, and plutonium in seawater samples, Reference Methods for Marine Radiochemistry Studies, International Atomic Energy Agency Technical Report Series No. 118, International Atomic Energy Agency, Vienna, 119 (1970).



Gamma-ray spectum of SRM 4353, with 60 cm^3 Ge(Li) detector. Background has not been subtracted and contributes typically 20 percent to the peaks for many natural radioelements.

GAMMA

CONTINUING CALIBRATION

Quality Assurance Report. Generated 16-DEC-2008 14:46:26.27

QA Filename : RDND06::RDND06$DKA100:[GER5.QA]CHECK.QAF;4

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

analysis 12/6/08

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.004930 Upper Bound : 0.005230

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 7 M Slope Samples: 7

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.005079 Std Deviation : 0.000053

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0052	| | |
17-NOV-2008 06:31	chk		0.0050	|In| |
18-NOV-2008 00:55	chk		0.0052	| | |
19-NOV-2008 01:23	chk		0.0050	| | |
20-NOV-2008 01:33	chk		0.0050	| | |
21-NOV-2008 03:50	chk		0.0051	| | |
24-NOV-2008 04:44	chk		0.0050	| | |
25-NOV-2008 04:38	chk		0.0050	| | |
26-NOV-2008 03:18	chk		0.0050	| | |
27-NOV-2008 06:34	chk		0.0052	| | |
28-NOV-2008 06:47	chk		0.0051	| | |
29-NOV-2008 07:09	chk		0.0051	| | |
1-DEC-2008 03:22	chk		0.0052	| | |
1-DEC-2008 23:35	chk		0.0051	| | |
2-DEC-2008 04:13	chk		0.0051	| | |
3-DEC-2008 01:56	chk		0.0051	| | |
4-DEC-2008 03:16	chk		0.0050	| | |
5-DEC-2008 01:32	chk		0.0051	| | |

6-DEC-2008 04:58 chk	0.0050	| | |
8-DEC-2008 00:53 chk	0.0050	| | |
9-DEC-2008 02:29 chk	0.0051	| | |
10-DEC-2008 05:37 chk	0.0051	| | |
11-DEC-2008 03:05 chk	0.0051	| | |
12-DEC-2008 06:50 chk	0.0050	| | |
13-DEC-2008 06:32 chk	0.0050	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 389.500000 Upper Bound : 590.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		489.7390	| | |
17-NOV-2008 06:31	chk		489.6794	| | |
18-NOV-2008 00:55	chk		489.6746	| | |
19-NOV-2008 01:23	chk		489.7210	| | |
20-NOV-2008 01:33	chk		489.7383	| | |
21-NOV-2008 03:50	chk		489.6931	| | |
24-NOV-2008 04:44	chk		489.8210	| | |
25-NOV-2008 04:38	chk		489.7655	| | |
26-NOV-2008 03:18	chk		489.7065	| | |
27-NOV-2008 06:34	chk		489.7241	| | |
28-NOV-2008 06:47	chk		489.6766	| | |
29-NOV-2008 07:09	chk		489.7155	| | |
1-DEC-2008 03:22	chk		489.6859	| | |
1-DEC-2008 23:35	chk		489.6988	| | |
2-DEC-2008 04:13	chk		489.8084	| | |
3-DEC-2008 01:56	chk		489.7712	| | |
4-DEC-2008 03:16	chk		489.7422	| | |
5-DEC-2008 01:32	chk		489.6913	| | |
6-DEC-2008 04:58	chk		489.6260	| | |
8-DEC-2008 00:53	chk		489.6528	| | |
9-DEC-2008 02:29	chk		489.6632	| | |

10-DEC-2008 05:37	chk	489.6837		
11-DEC-2008 03:05	chk	489.6739		
12-DEC-2008 06:50	chk	489.6421		
13-DEC-2008 06:32	chk	489.5469		

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.941771 Std Deviation : 0.015859

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.9564				
17-NOV-2008 06:31	chk		0.9766	In			
18-NOV-2008 00:55	chk		0.9556				
19-NOV-2008 01:23	chk		0.9360				
20-NOV-2008 01:33	chk		0.9239				
21-NOV-2008 03:50	chk		0.9667				
24-NOV-2008 04:44	chk		0.9584				
25-NOV-2008 04:38	chk		0.9305				
26-NOV-2008 03:18	chk		0.9670				
27-NOV-2008 06:34	chk		0.9349				
28-NOV-2008 06:47	chk		0.9488				
29-NOV-2008 07:09	chk		0.9308				
1-DEC-2008 03:22	chk		0.9638				
1-DEC-2008 23:35	chk		0.9603				
2-DEC-2008 04:13	chk		0.9377				
3-DEC-2008 01:56	chk		0.9356				

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
4-DEC-2008 03:16	chk		0.9370				
5-DEC-2008 01:32	chk		0.9392				
6-DEC-2008 04:58	chk		0.9499				
8-DEC-2008 00:53	chk		0.9474				
9-DEC-2008 02:29	chk		0.9716				

10-DEC-2008 05:37	chk	0.9448		
11-DEC-2008 03:05	chk	0.9572		
12-DEC-2008 06:50	chk	0.9728		
13-DEC-2008 06:32	chk	0.9389		

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000681 Upper Bound : 0.000781

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000728 Std Deviation : 0.000020

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0008				
17-NOV-2008 06:31	chk		0.0007				
18-NOV-2008 00:55	chk		0.0008				
19-NOV-2008 01:23	chk		0.0007				
20-NOV-2008 01:33	chk		0.0007				
21-NOV-2008 03:50	chk		0.0007				
24-NOV-2008 04:44	chk		0.0007				
25-NOV-2008 04:38	chk		0.0007				
26-NOV-2008 03:18	chk		0.0007				
27-NOV-2008 06:34	chk		0.0007				
28-NOV-2008 06:47	chk		0.0008	In			
29-NOV-2008 07:09	chk		0.0007				
1-DEC-2008 03:22	chk		0.0007				
1-DEC-2008 23:35	chk		0.0008	In			
2-DEC-2008 04:13	chk		0.0007				
3-DEC-2008 01:56	chk		0.0007				
4-DEC-2008 03:16	chk		0.0007				
5-DEC-2008 01:32	chk		0.0007				
6-DEC-2008 04:58	chk		0.0007				
8-DEC-2008 00:53	chk		0.0007				
9-DEC-2008 02:29	chk		0.0007				
10-DEC-2008 05:37	chk		0.0007				

11-DEC-2008 03:05	chk	0.0007	| | |
12-DEC-2008 06:50	chk	0.0007	| | |
13-DEC-2008 06:32	chk	0.0007	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5544.399902 Upper Bound : 5744.399902

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5647.6689	| | |
17-NOV-2008 06:31	chk		5647.3403	| | |
18-NOV-2008 00:55	chk		5647.1890	| | |
19-NOV-2008 01:23	chk		5647.2656	| | |
20-NOV-2008 01:33	chk		5647.2671	| | |
21-NOV-2008 03:50	chk		5647.1021	| | |
24-NOV-2008 04:44	chk		5648.5225	| | |
25-NOV-2008 04:38	chk		5648.2163	| | |
26-NOV-2008 03:18	chk		5647.5815	| | |
27-NOV-2008 06:34	chk		5647.3730	| | |
28-NOV-2008 06:47	chk		5647.2983	| | |
29-NOV-2008 07:09	chk		5647.4067	| | |
1-DEC-2008 03:22	chk		5647.5220	| | |
1-DEC-2008 23:35	chk		5647.2549	| | |
2-DEC-2008 04:13	chk		5648.4404	| | |
3-DEC-2008 01:56	chk		5648.6523	| | |
4-DEC-2008 03:16	chk		5648.1992	| | |
5-DEC-2008 01:32	chk		5647.5005	| | |
6-DEC-2008 04:58	chk		5646.9854	| | |
8-DEC-2008 00:53	chk		5646.9824	| | |
9-DEC-2008 02:29	chk		5646.9707	| | |
10-DEC-2008 05:37	chk		5647.3032	| | |
11-DEC-2008 03:05	chk		5647.6045	| | |
12-DEC-2008 06:50	chk		5647.1362	| | |
13-DEC-2008 06:32	chk		5646.3540	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.842248 Std Deviation : 0.118346

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.7886	| | |
17-NOV-2008 06:31	chk		1.9089	| | |
18-NOV-2008 00:55	chk		1.7358	| | |
19-NOV-2008 01:23	chk		1.7371	| | |
20-NOV-2008 01:33	chk		2.0451	| | |
21-NOV-2008 03:50	chk		1.8750	| | |
24-NOV-2008 04:44	chk		1.7050	| | |
25-NOV-2008 04:38	chk		1.6782	| | |
26-NOV-2008 03:18	chk		1.9132	| | |
27-NOV-2008 06:34	chk		2.0338	| | |
28-NOV-2008 06:47	chk		1.8840	| | |
29-NOV-2008 07:09	chk		1.8287	| | |
1-DEC-2008 03:22	chk		1.8421	| | |
1-DEC-2008 23:35	chk		1.8835	| | |
2-DEC-2008 04:13	chk		1.9704	| | |
3-DEC-2008 01:56	chk		1.9277	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
4-DEC-2008 03:16	chk		1.9906	| | |
5-DEC-2008 01:32	chk		1.9541	| | |
6-DEC-2008 04:58	chk		1.9936	| | |
8-DEC-2008 00:53	chk		1.8546	| | |
9-DEC-2008 02:29	chk		1.9830	| | |
10-DEC-2008 05:37	chk		1.9341	| | |
11-DEC-2008 03:05	chk		1.9313	| | |
12-DEC-2008 06:50	chk		1.9471	| | |
13-DEC-2008 06:32	chk		1.8327	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001110 Upper Bound : 0.001330

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001220 Std Deviation : 0.000036

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0012				
17-NOV-2008 06:31	chk		0.0012				
18-NOV-2008 00:55	chk		0.0012				
19-NOV-2008 01:23	chk		0.0012				
20-NOV-2008 01:33	chk		0.0012				
21-NOV-2008 03:50	chk		0.0012				
24-NOV-2008 04:44	chk		0.0013				
25-NOV-2008 04:38	chk		0.0013				
26-NOV-2008 03:18	chk		0.0012				
27-NOV-2008 06:34	chk		0.0012				
28-NOV-2008 06:47	chk		0.0012				
29-NOV-2008 07:09	chk		0.0012				
1-DEC-2008 03:22	chk		0.0012				
1-DEC-2008 23:35	chk		0.0013		In		
2-DEC-2008 04:13	chk		0.0012				
3-DEC-2008 01:56	chk		0.0012				
4-DEC-2008 03:16	chk		0.0012				
5-DEC-2008 01:32	chk		0.0012				
6-DEC-2008 04:58	chk		0.0012				
8-DEC-2008 00:53	chk		0.0012				
9-DEC-2008 02:29	chk		0.0012				
10-DEC-2008 05:37	chk		0.0012				
11-DEC-2008 03:05	chk		0.0013				
12-DEC-2008 06:50	chk		0.0012				
13-DEC-2008 06:32	chk		0.0013				

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3023.000000 Upper Bound : 3223.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3124.9219	| | |
17-NOV-2008 06:31	chk		3124.9072	| | |
18-NOV-2008 00:55	chk		3124.9377	| | |
19-NOV-2008 01:23	chk		3124.9077	| | |
20-NOV-2008 01:33	chk		3124.7329	| | |
21-NOV-2008 03:50	chk		3124.6765	| | |
24-NOV-2008 04:44	chk		3125.5288	| | |
25-NOV-2008 04:38	chk		3125.3601	| | |
26-NOV-2008 03:18	chk		3124.8318	| | |
27-NOV-2008 06:34	chk		3125.0212	| | |
28-NOV-2008 06:47	chk		3124.9067	| | |
29-NOV-2008 07:09	chk		3124.7402	| | |
1-DEC-2008 03:22	chk		3124.9575	| | |
1-DEC-2008 23:35	chk		3124.7441	| | |
2-DEC-2008 04:13	chk		3125.4148	| | |
3-DEC-2008 01:56	chk		3125.4519	| | |
4-DEC-2008 03:16	chk		3125.0999	| | |
5-DEC-2008 01:32	chk		3124.9678	| | |
6-DEC-2008 04:58	chk		3124.7056	| | |
8-DEC-2008 00:53	chk		3124.6050	| | |
9-DEC-2008 02:29	chk		3124.5457	| | |
10-DEC-2008 05:37	chk		3124.8301	| | |
11-DEC-2008 03:05	chk		3124.7651	| | |
12-DEC-2008 06:50	chk		3124.6946	| | |
13-DEC-2008 06:32	chk		3124.1626	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution

Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.461725 Std Deviation : 0.085097

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.5055	| | |
17-NOV-2008 06:31	chk		1.4762	| | |
18-NOV-2008 00:55	chk		1.5065	| | |
19-NOV-2008 01:23	chk		1.5650	| | |
20-NOV-2008 01:33	chk		1.4979	| | |
21-NOV-2008 03:50	chk		1.5239	| | |
24-NOV-2008 04:44	chk		1.4118	| | |
25-NOV-2008 04:38	chk		1.6304	| | |
26-NOV-2008 03:18	chk		1.5888	| | |
27-NOV-2008 06:34	chk		1.4274	| | |
28-NOV-2008 06:47	chk		1.4709	| | |
29-NOV-2008 07:09	chk		1.4877	| | |
1-DEC-2008 03:22	chk		1.5409	| | |
1-DEC-2008 23:35	chk		1.4545	| | |
2-DEC-2008 04:13	chk		1.3341	| | |
3-DEC-2008 01:56	chk		1.4269	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
4-DEC-2008 03:16	chk		1.6042	| | |
5-DEC-2008 01:32	chk		1.4757	| | |
6-DEC-2008 04:58	chk		1.4774	| | |
8-DEC-2008 00:53	chk		1.5293	| | |
9-DEC-2008 02:29	chk		1.3129	| | |
10-DEC-2008 05:37	chk		1.6196	| | |
11-DEC-2008 03:05	chk		1.3663	| | |
12-DEC-2008 06:50	chk		1.3833	| | |
13-DEC-2008 06:32	chk		1.3679	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:46:28.37

QA Filename : RDND06::RDND06$DKA100:[GER5.QA]BKG.QAF;2

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.099977 Std Deviation : 0.006165

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.1068	| | |
23-NOV-2008 05:01	BKG		0.1053	| | |
30-NOV-2008 05:53	BKG		0.1109	| | |
7-DEC-2008 04:34	BKG		0.1100	| | |
14-DEC-2008 06:39	BKG		0.1127	|In| |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.091075 Std Deviation : 0.003643

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0912	| | |
23-NOV-2008 05:01	BKG		0.0908	| | |
30-NOV-2008 05:53	BKG		0.0979	| | |
7-DEC-2008 04:34	BKG		0.0936	| | |
14-DEC-2008 06:39	BKG		0.0945	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM

Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.040056 Std Deviation : 0.002037

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0372	| | |
23-NOV-2008 05:01	BKG		0.0351	|In| |
30-NOV-2008 05:53	BKG		0.0418	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
7-DEC-2008 04:34	BKG		0.0396	| | |
14-DEC-2008 06:39	BKG		0.0403	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.045888 Std Deviation : 0.002011

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0429	| | |
23-NOV-2008 05:01	BKG		0.0448	| | |
30-NOV-2008 05:53	BKG		0.0466	| | |
7-DEC-2008 04:34	BKG		0.0483	| | |
14-DEC-2008 06:39	BKG		0.0479	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.064189 Std Deviation : 0.002182

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0646	| | |
23-NOV-2008 05:01	BKG		0.0648	| | |
30-NOV-2008 05:53	BKG		0.0652	| | |
7-DEC-2008 04:34	BKG		0.0683	| | |
14-DEC-2008 06:39	BKG		0.0616	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.070870 Std Deviation : 0.002840

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0726	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-NOV-2008 05:01	BKG		0.0716	| | |
30-NOV-2008 05:53	BKG		0.0692	| | |
7-DEC-2008 04:34	BKG		0.0708	| | |
14-DEC-2008 06:39	BKG		0.0740	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.061159 Std Deviation : 0.001786

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0628	| | |
23-NOV-2008 05:01	BKG		0.0629	| | |
30-NOV-2008 05:53	BKG		0.0637	| | |
7-DEC-2008 04:34	BKG		0.0617	| | |
14-DEC-2008 06:39	BKG		0.0648	|In| |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.131986 Std Deviation : 0.005058

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.1380	| | |
23-NOV-2008 05:01	BKG		0.1376	| | |
30-NOV-2008 05:53	BKG		0.1409	| | |
7-DEC-2008 04:34	BKG		0.1355	| | |
14-DEC-2008 06:39	BKG		0.1410	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.085252 Std Deviation : 0.005175

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0966	|In| |
23-NOV-2008 05:01	BKG		0.0907	| | |
30-NOV-2008 05:53	BKG		0.0962	|In| |
7-DEC-2008 04:34	BKG		0.0995	|In| |
14-DEC-2008 06:39	BKG		0.0923	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.066161 Std Deviation : 0.003338

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.0661	| | |
23-NOV-2008 05:01	BKG		0.0676	| | |
30-NOV-2008 05:53	BKG		0.0716	| | |
7-DEC-2008 04:34	BKG		0.0728	| | |
14-DEC-2008 06:39	BKG		0.0727	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : cpm Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.119677 Std Deviation : 0.005205

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.1276	| | |
23-NOV-2008 05:01	BKG		0.1228	| | |
30-NOV-2008 05:53	BKG		0.1282	| | |
7-DEC-2008 04:34	BKG		0.1254	| | |
14-DEC-2008 06:39	BKG		0.1283	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.764756 Std Deviation : 0.026590

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	BKG		0.7912	| | |
23-NOV-2008 05:01	BKG		0.7680	| | |
30-NOV-2008 05:53	BKG		0.7415	| | |
7-DEC-2008 04:34	BKG		0.7985	| | |
14-DEC-2008 06:39	BKG		0.8401	|In| |

Quality Assurance Report. Generated 16-DEC-2008 14:48:30.14

QA Filename : RDND07$DKA100:[GER6.QA]CHECK.QAF;5

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

Analysis 12/6/08

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005700 Upper Bound : 0.006100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.005896 Std Deviation : 0.000062

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0058	| | |
17-NOV-2008 06:30	chk		0.0059	| | |
17-NOV-2008 06:51	chk		0.0058	| | |
18-NOV-2008 03:39	chk		0.0059	| | |
19-NOV-2008 01:22	chk		0.0060	| | |
20-NOV-2008 01:32	chk		0.0059	| | |
21-NOV-2008 03:49	chk		0.0059	| | |
24-NOV-2008 04:43	chk		0.0059	| | |
25-NOV-2008 04:38	chk		0.0057	|In| |
26-NOV-2008 03:17	chk		0.0060	| | |
27-NOV-2008 06:34	chk		0.0059	| | |
28-NOV-2008 06:47	chk		0.0059	| | |
29-NOV-2008 07:09	chk		0.0060	| | |
1-DEC-2008 03:22	chk		0.0059	| | |
1-DEC-2008 23:35	chk		0.0059	| | |
2-DEC-2008 04:12	chk		0.0059	| | |
3-DEC-2008 01:55	chk		0.0059	| | |
4-DEC-2008 03:22	chk		0.0059	| | |
5-DEC-2008 01:31	chk		0.0059	| | |
6-DEC-2008 04:51	chk		0.0058	| | |
8-DEC-2008 00:53	chk		0.0058	| | |

9-DEC-2008 00:27	chk	0.0058 | | |
10-DEC-2008 05:37	chk	0.0059 | | |
11-DEC-2008 05:47	chk	0.0058 | | |
12-DEC-2008 05:53	chk	0.0058 | | |
13-DEC-2008 06:32	chk	0.0059 | | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 389.000000 Upper Bound : 588.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		487.0942	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
17-NOV-2008 06:30	chk		487.3486	| | |
17-NOV-2008 06:51	chk		487.3699	| | |
18-NOV-2008 03:39	chk		487.5394	| | |
19-NOV-2008 01:22	chk		487.5514	| | |
20-NOV-2008 01:32	chk		487.4128	| | |
21-NOV-2008 03:49	chk		487.6554	| | |
24-NOV-2008 04:43	chk		487.5970	| | |
25-NOV-2008 04:38	chk		487.6623	| | |
26-NOV-2008 03:17	chk		487.6005	| | |
27-NOV-2008 06:34	chk		487.7194	| | |
28-NOV-2008 06:47	chk		487.6514	| | |
29-NOV-2008 07:09	chk		487.6421	| | |
1-DEC-2008 03:22	chk		487.7628	| | |
1-DEC-2008 23:35	chk		487.8476	| | |
2-DEC-2008 04:12	chk		487.8679	| | |
3-DEC-2008 01:55	chk		487.8302	| | |
4-DEC-2008 03:22	chk		487.7790	| | |
5-DEC-2008 01:31	chk		487.6982	| | |
6-DEC-2008 04:51	chk		487.6971	| | |
8-DEC-2008 00:53	chk		487.7862	| | |
9-DEC-2008 00:27	chk		487.7845	| | |
10-DEC-2008 05:37	chk		487.7944	| | |

11-DEC-2008 05:47 chk	487.6706	| | |
12-DEC-2008 05:53 chk	487.7454	| | |
13-DEC-2008 06:32 chk	487.6093	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.960000 Upper Bound : 1.080000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.034877 Std Deviation : 0.024536

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.0602	| | |
17-NOV-2008 06:30	chk		1.0430	| | |
17-NOV-2008 06:51	chk		1.0354	| | |
18-NOV-2008 03:39	chk		1.0344	| | |
19-NOV-2008 01:22	chk		1.0463	| | |
20-NOV-2008 01:32	chk		1.0340	| | |
21-NOV-2008 03:49	chk		1.0401	| | |
24-NOV-2008 04:43	chk		1.0429	| | |
25-NOV-2008 04:38	chk		1.0110	| | |
26-NOV-2008 03:17	chk		1.0385	| | |
27-NOV-2008 06:34	chk		1.0274	| | |
28-NOV-2008 06:47	chk		1.0230	| | |
29-NOV-2008 07:09	chk		1.0478	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
1-DEC-2008 03:22	chk		1.0338	| | |
1-DEC-2008 23:35	chk		1.0330	| | |
2-DEC-2008 04:12	chk		1.0022	| | |
3-DEC-2008 01:55	chk		1.0505	| | |
4-DEC-2008 03:22	chk		1.0596	| | |
5-DEC-2008 01:31	chk		0.9888	| | |

6-DEC-2008 04:51	chk	1.0207 | | |
8-DEC-2008 00:53	chk	1.0397 | | |
9-DEC-2008 00:27	chk	1.0331 | | |
10-DEC-2008 05:37	chk	1.0371 | | |
11-DEC-2008 05:47	chk	1.0348 | | |
12-DEC-2008 05:53	chk	1.0542 | | |
13-DEC-2008 06:32	chk	1.0268 | | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000369 Upper Bound : 0.001250

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000782 Std Deviation : 0.000162

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0005	|In| |
17-NOV-2008 06:30	chk		0.0003	Be|Ac| |
17-NOV-2008 06:51	chk		0.0008	| | |
18-NOV-2008 03:39	chk		0.0006	| | |
19-NOV-2008 01:22	chk		0.0007	| | |
20-NOV-2008 01:32	chk		0.0009	| | |
21-NOV-2008 03:49	chk		0.0005	| | |
24-NOV-2008 04:43	chk		0.0007	| | |
25-NOV-2008 04:38	chk		0.0009	| | |
26-NOV-2008 03:17	chk		0.0007	| | |
27-NOV-2008 06:34	chk		0.0009	| | |
28-NOV-2008 06:47	chk		0.0009	| | |
29-NOV-2008 07:09	chk		0.0009	| | |
1-DEC-2008 03:22	chk		0.0009	| | |
1-DEC-2008 23:35	chk		0.0004	|In| |
2-DEC-2008 04:12	chk		0.0009	| | |
3-DEC-2008 01:55	chk		0.0009	| | |
4-DEC-2008 03:22	chk		0.0008	| | |
5-DEC-2008 01:31	chk		0.0005	| | |

6-DEC-2008 04:51 chk	0.0009	| |
8-DEC-2008 00:53 chk	0.0009	| |
9-DEC-2008 00:27 chk	0.0005	| |
10-DEC-2008 05:37 chk	0.0009	| |
11-DEC-2008 05:47 chk	0.0007	| |
12-DEC-2008 05:53 chk	0.0005	| |

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
13-DEC-2008 06:32 chk			0.0006	| |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5541.000000 Upper Bound : 5741.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29 chk			5642.0000	| |
17-NOV-2008 06:30 chk			5645.4243	| |
17-NOV-2008 06:51 chk			5645.4814	| |
18-NOV-2008 03:39 chk			5647.6914	| |
19-NOV-2008 01:22 chk			5650.0000	| |
20-NOV-2008 01:32 chk			5645.0391	| |
21-NOV-2008 03:49 chk			5643.9268	| |
24-NOV-2008 04:43 chk			5644.5630	| |
25-NOV-2008 04:38 chk			5646.3203	| |
26-NOV-2008 03:17 chk			5645.5469	| |
27-NOV-2008 06:34 chk			5645.5840	| |
28-NOV-2008 06:47 chk			5645.8979	| |
29-NOV-2008 07:09 chk			5645.5088	| |
1-DEC-2008 03:22 chk			5645.9634	| |
1-DEC-2008 23:35 chk			5642.0967	| |
2-DEC-2008 04:12 chk			5645.8979	| |
3-DEC-2008 01:55 chk			5646.3960	| |
4-DEC-2008 03:22 chk			5646.0938	| |
5-DEC-2008 01:31 chk			5648.3442	| |
6-DEC-2008 04:51 chk			5645.3945	| |
8-DEC-2008 00:53 chk			5645.6479	| |

9-DEC-2008 00:27	chk	5643.9316 | | |
10-DEC-2008 05:37	chk	5645.7549 | | |
11-DEC-2008 05:47	chk	5644.8481 | | |
12-DEC-2008 05:53	chk	5643.3525 | | |
13-DEC-2008 06:32	chk	5644.8047 | | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.900000 Upper Bound : 3.570000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 2.795203 Std Deviation : 0.329020

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		2.8478	| | |
17-NOV-2008 06:30	chk		2.8147	| | |
17-NOV-2008 06:51	chk		2.7652	| | |
18-NOV-2008 03:39	chk		2.4518	| | |
19-NOV-2008 01:22	chk		2.7766	| | |
20-NOV-2008 01:32	chk		2.9916	| | |
21-NOV-2008 03:49	chk		2.7322	| | |
24-NOV-2008 04:43	chk		3.2383	| | |
25-NOV-2008 04:38	chk		2.4838	| | |
26-NOV-2008 03:17	chk		3.0812	| | |
27-NOV-2008 06:34	chk		3.2090	| | |
28-NOV-2008 06:47	chk		3.0429	| | |
29-NOV-2008 07:09	chk		3.4672	|In| |
1-DEC-2008 03:22	chk		3.1904	| | |
1-DEC-2008 23:35	chk		3.0025	| | |
2-DEC-2008 04:12	chk		3.2623	| | |
3-DEC-2008 01:55	chk		2.7352	| | |

4-DEC-2008 03:22	chk	2.7181 | | |
5-DEC-2008 01:31	chk	2.3504 | | |
6-DEC-2008 04:51	chk	3.1573 | | |
8-DEC-2008 00:53	chk	2.7837 | | |
9-DEC-2008 00:27	chk	3.0232 | | |
10-DEC-2008 05:37	chk	2.9988 | | |
11-DEC-2008 05:47	chk	3.0575 | | |
12-DEC-2008 05:53	chk	2.9828 | | |
13-DEC-2008 06:32	chk	3.1740 | | |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001300 Upper Bound : 0.016100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001482 Std Deviation : 0.000046

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0015	| | |
17-NOV-2008 06:30	chk		0.0016	| | |
17-NOV-2008 06:51	chk		0.0014	| | |
18-NOV-2008 03:39	chk		0.0015	| | |
19-NOV-2008 01:22	chk		0.0014	| | |
20-NOV-2008 01:32	chk		0.0015	| | |
21-NOV-2008 03:49	chk		0.0015	| | |
24-NOV-2008 04:43	chk		0.0016	| | |
25-NOV-2008 04:38	chk		0.0015	| | |
26-NOV-2008 03:17	chk		0.0014	| | |
27-NOV-2008 06:34	chk		0.0015	| | |
28-NOV-2008 06:47	chk		0.0015	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
29-NOV-2008 07:09	chk		0.0014	| | |

1-DEC-2008 03:22	chk	0.0015		
1-DEC-2008 23:35	chk	0.0015		
2-DEC-2008 04:12	chk	0.0015		
3-DEC-2008 01:55	chk	0.0015		
4-DEC-2008 03:22	chk	0.0015		
5-DEC-2008 01:31	chk	0.0015		
6-DEC-2008 04:51	chk	0.0015		
8-DEC-2008 00:53	chk	0.0014		
9-DEC-2008 00:27	chk	0.0014		
10-DEC-2008 05:37	chk	0.0014		
11-DEC-2008 05:47	chk	0.0015		
12-DEC-2008 05:53	chk	0.0015		
13-DEC-2008 06:32	chk	0.0014	In	

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3020.000000 Upper Bound : 3220.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		3122.4236				
17-NOV-2008 06:30	chk		3122.5930				
17-NOV-2008 06:51	chk		3122.8486				
18-NOV-2008 03:39	chk		3122.8147				
19-NOV-2008 01:22	chk		3122.8823				
20-NOV-2008 01:32	chk		3122.5688				
21-NOV-2008 03:49	chk		3123.3799				
24-NOV-2008 04:43	chk		3122.9109				
25-NOV-2008 04:38	chk		3123.1182				
26-NOV-2008 03:17	chk		3122.9448				
27-NOV-2008 06:34	chk		3122.8174				
28-NOV-2008 06:47	chk		3123.3867				
29-NOV-2008 07:09	chk		3122.9858				
1-DEC-2008 03:22	chk		3123.5205				
1-DEC-2008 23:35	chk		3123.6362				
2-DEC-2008 04:12	chk		3123.5186				
3-DEC-2008 01:55	chk		3124.3606				
4-DEC-2008 03:22	chk		3123.5671				
5-DEC-2008 01:31	chk		3123.0134				

6-DEC-2008 04:51	chk	3122.8472		
8-DEC-2008 00:53	chk	3123.2551		
9-DEC-2008 00:27	chk	3123.5269		
10-DEC-2008 05:37	chk	3123.7563		
11-DEC-2008 05:47	chk	3123.5034		
12-DEC-2008 05:53	chk	3123.1294		
13-DEC-2008 06:32	chk	3122.3335		

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.495000 Upper Bound : 2.030000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.926119 Std Deviation : 0.127192

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 7

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		2.0700	Ab			
17-NOV-2008 06:30	chk		2.0573	Ab			
17-NOV-2008 06:51	chk		1.9586				
18-NOV-2008 03:39	chk		2.1173	Ab			
19-NOV-2008 01:22	chk		1.8644				
20-NOV-2008 01:32	chk		2.0249				
21-NOV-2008 03:49	chk		1.8309				
24-NOV-2008 04:43	chk		1.9411				
25-NOV-2008 04:38	chk		2.2794	Ab	In		
26-NOV-2008 03:17	chk		1.8886				
27-NOV-2008 06:34	chk		2.0201				
28-NOV-2008 06:47	chk		1.8381				
29-NOV-2008 07:09	chk		2.0448	Ab			
1-DEC-2008 03:22	chk		1.9741				
1-DEC-2008 23:35	chk		2.0728	Ab			

2-DEC-2008 04:12	chk	1.8315	|	|
3-DEC-2008 01:55	chk	2.0528	Ab|	|
4-DEC-2008 03:22	chk	1.8653	|	|
5-DEC-2008 01:31	chk	2.0184	|	|
6-DEC-2008 04:51	chk	1.8915	|	|
8-DEC-2008 00:53	chk	1.7649	|	|
9-DEC-2008 00:27	chk	1.8207	|	|
10-DEC-2008 05:37	chk	2.0848	Ab|	|
11-DEC-2008 05:47	chk	2.0798	Ab|	|
12-DEC-2008 05:53	chk	2.0506	Ab|	|
13-DEC-2008 06:32	chk	1.8523	|	|

Quality Assurance Report. Generated 16-DEC-2008 14:48:30.97

QA Filename : RDND07$DKA100:[GER6.QA]BKG.QAF;4

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.107544 Std Deviation : 0.002871

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1114	| | |
17-NOV-2008 07:16	bkg		0.1098	| | |
23-NOV-2008 05:00	bkg		0.1117	| | |
24-NOV-2008 05:22	bkg		0.1035	| | |
30-NOV-2008 05:53	bkg		0.1100	| | |
7-DEC-2008 04:33	bkg		0.1087	| | |
8-DEC-2008 04:10	bkg		0.1126	| | |
14-DEC-2008 06:39	bkg		0.1102	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.086360 Std Deviation : 0.002269

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0917	|In| |
17-NOV-2008 07:16	bkg		0.0846	| |
23-NOV-2008 05:00	bkg		0.0909	| |
24-NOV-2008 05:22	bkg		0.0857	| |
30-NOV-2008 05:53	bkg		0.0890	| |
7-DEC-2008 04:33	bkg		0.0914	|In| |
8-DEC-2008 04:10	bkg		0.0856	| |
14-DEC-2008 06:39	bkg		0.0870	| |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.047199 Std Deviation : 0.002058

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0467	| |
17-NOV-2008 07:16	bkg		0.0470	| |
23-NOV-2008 05:00	bkg		0.0468	| |
24-NOV-2008 05:22	bkg		0.0468	| |
30-NOV-2008 05:53	bkg		0.0462	| |
7-DEC-2008 04:33	bkg		0.0494	| |
8-DEC-2008 04:10	bkg		0.0472	| |
14-DEC-2008 06:39	bkg		0.0459	| |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.056656 Std Deviation : 0.001734

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0558	| | |
17-NOV-2008 07:16	bkg		0.0520	|In| |
23-NOV-2008 05:00	bkg		0.0609	|In| |
24-NOV-2008 05:22	bkg		0.0580	| | |
30-NOV-2008 05:53	bkg		0.0588	| | |
7-DEC-2008 04:33	bkg		0.0586	| | |
8-DEC-2008 04:10	bkg		0.0574	| | |
14-DEC-2008 06:39	bkg		0.0577	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.070078 Std Deviation : 0.002113

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0699	| | |
17-NOV-2008 07:16	bkg		0.0697	| | |
23-NOV-2008 05:00	bkg		0.0684	| | |
24-NOV-2008 05:22	bkg		0.0693	| | |
30-NOV-2008 05:53	bkg		0.0681	| | |
7-DEC-2008 04:33	bkg		0.0662	| | |
8-DEC-2008 04:10	bkg		0.0666	| | |

14-DEC-2008 06:39 bkg 0.0686 | | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.075855 Std Deviation : 0.002138

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0753	| | |
17-NOV-2008 07:16	bkg		0.0814	|In| |
23-NOV-2008 05:00	bkg		0.0768	| | |
24-NOV-2008 05:22	bkg		0.0784	| | |
30-NOV-2008 05:53	bkg		0.0757	| | |
7-DEC-2008 04:33	bkg		0.0823	|Ac| |
8-DEC-2008 04:10	bkg		0.0743	| | |
14-DEC-2008 06:39	bkg		0.0791	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.066619 Std Deviation : 0.002202

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0687	| | |
17-NOV-2008 07:16	bkg		0.0702	| | |

23-NOV-2008 05:00 bkg	0.0689	| | |
24-NOV-2008 05:22 bkg	0.0661	| | |
30-NOV-2008 05:53 bkg	0.0682	| | |
7-DEC-2008 04:33 bkg	0.0675	| | |
8-DEC-2008 04:10 bkg	0.0665	| | |
14-DEC-2008 06:39 bkg	0.0691	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.106940 Std Deviation : 0.003202

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1128	| | |
17-NOV-2008 07:16	bkg		0.1081	| | |
23-NOV-2008 05:00	bkg		0.1110	| | |
24-NOV-2008 05:22	bkg		0.1075	| | |
30-NOV-2008 05:53	bkg		0.1062	| | |
7-DEC-2008 04:33	bkg		0.1088	| | |
8-DEC-2008 04:10	bkg		0.1114	| | |
14-DEC-2008 06:39	bkg		0.1101	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.086534 Std Deviation : 0.003037

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0954	|In| |
17-NOV-2008 07:16	bkg		0.0925	| | |
23-NOV-2008 05:00	bkg		0.0919	| | |
24-NOV-2008 05:22	bkg		0.0890	| | |
30-NOV-2008 05:53	bkg		0.0896	| | |
7-DEC-2008 04:33	bkg		0.0960	|Ac| |
8-DEC-2008 04:10	bkg		0.0924	| | |
14-DEC-2008 06:39	bkg		0.0876	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.068306 Std Deviation : 0.001519

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0732	|Ac| |
17-NOV-2008 07:16	bkg		0.0710	| | |
23-NOV-2008 05:00	bkg		0.0736	|Ac| |
24-NOV-2008 05:22	bkg		0.0698	| | |
30-NOV-2008 05:53	bkg		0.0701	| | |
7-DEC-2008 04:33	bkg		0.0701	| | |
8-DEC-2008 04:10	bkg		0.0707	| | |
14-DEC-2008 06:39	bkg		0.0672	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.092564 Std Deviation : 0.002830

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0942	| | |
17-NOV-2008 07:16	bkg		0.0934	| | |
23-NOV-2008 05:00	bkg		0.0936	| | |
24-NOV-2008 05:22	bkg		0.0927	| | |
30-NOV-2008 05:53	bkg		0.0914	| | |
7-DEC-2008 04:33	bkg		0.0911	| | |
8-DEC-2008 04:10	bkg		0.0934	| | |
14-DEC-2008 06:39	bkg		0.0951	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.712145 Std Deviation : 0.018728

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.7517	|In| |
17-NOV-2008 07:16	bkg		0.7174	| | |
23-NOV-2008 05:00	bkg		0.7124	| | |
24-NOV-2008 05:22	bkg		0.7151	| | |
30-NOV-2008 05:53	bkg		0.7294	| | |
7-DEC-2008 04:33	bkg		0.7248	| | |
8-DEC-2008 04:10	bkg		0.7249	| | |
14-DEC-2008 06:39	bkg		0.7442	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:21.58

QA Filename : RDND07$DKA100:[GER7.QA]CHECK.QAF;4

analysis 12/16/08

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005842 Upper Bound : 0.006184

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.006018 Std Deviation : 0.000057

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0061	| | |
17-NOV-2008 06:30	CHK		0.0060	| | |
18-NOV-2008 00:58	CHK		0.0060	| | |
19-NOV-2008 01:22	CHK		0.0060	| | |
20-NOV-2008 01:39	CHK		0.0060	| | |
21-NOV-2008 03:49	CHK		0.0060	| | |
24-NOV-2008 04:43	CHK		0.0061	| | |
25-NOV-2008 08:45	CHK		0.0060	| | |
25-NOV-2008 08:57	CHK		0.0060	| | |
26-NOV-2008 03:17	CHK		0.0061	| | |
27-NOV-2008 06:34	CHK		0.0061	| | |
28-NOV-2008 06:47	CHK		0.0061	| | |
29-NOV-2008 07:09	CHK		0.0060	| | |
1-DEC-2008 03:22	CHK		0.0060	| | |
1-DEC-2008 23:35	CHK		0.0060	| | |
2-DEC-2008 04:18	CHK		0.0060	| | |
3-DEC-2008 02:00	CHK		0.0060	| | |
4-DEC-2008 03:16	CHK		0.0060	| | |
5-DEC-2008 01:50	CHK		0.0060	| | |
6-DEC-2008 04:51	CHK		0.0060	| | |
8-DEC-2008 00:53	CHK		0.0059	| | |

9-DEC-2008 02:29	CHK	0.0060	|	| |
10-DEC-2008 05:37	CHK	0.0060	|	| |
11-DEC-2008 03:05	CHK	0.0060	|	| |
12-DEC-2008 04:09	CHK	0.0061	|	| |
13-DEC-2008 07:10	CHK	0.0060	|	| |
13-DEC-2008 07:22	CHK	0.0059	|	| |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 386.500000 Upper Bound : 586.500000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 486.049683 Std Deviation : 0.077154

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		485.9893	| | |
17-NOV-2008 06:30	CHK		485.9739	| | |
18-NOV-2008 00:58	CHK		485.9930	| | |
19-NOV-2008 01:22	CHK		486.0076	| | |
20-NOV-2008 01:39	CHK		485.9880	| | |
21-NOV-2008 03:49	CHK		485.9667	| | |
24-NOV-2008 04:43	CHK		485.9151	| | |
25-NOV-2008 08:45	CHK		485.9541	| | |
25-NOV-2008 08:57	CHK		485.9394	| | |
26-NOV-2008 03:17	CHK		485.9104	| | |
27-NOV-2008 06:34	CHK		485.9295	| | |
28-NOV-2008 06:47	CHK		485.9575	| | |
29-NOV-2008 07:09	CHK		485.9527	| | |
1-DEC-2008 03:22	CHK		485.9818	| | |
1-DEC-2008 23:35	CHK		485.9749	| | |
2-DEC-2008 04:18	CHK		485.9682	| | |

3-DEC-2008 02:00	CHK	486.0133	|	|
4-DEC-2008 03:16	CHK	485.9651	|	|
5-DEC-2008 01:50	CHK	485.8887	In	|
6-DEC-2008 04:51	CHK	485.8758	In	|
8-DEC-2008 00:53	CHK	485.8727	In	|
9-DEC-2008 02:29	CHK	485.8788	In	|
10-DEC-2008 05:37	CHK	485.8703	In	|
11-DEC-2008 03:05	CHK	485.9495	|	|
12-DEC-2008 04:09	CHK	485.9257	|	|
13-DEC-2008 07:10	CHK	485.8198	In	|
13-DEC-2008 07:22	CHK	485.8552	In	|

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.004411 Std Deviation : 0.025032

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.0772	In | |
17-NOV-2008 06:30	CHK		0.9826	| | |
18-NOV-2008 00:58	CHK		1.0031	| | |
19-NOV-2008 01:22	CHK		0.9980	| | |
20-NOV-2008 01:39	CHK		0.9774	| | |
21-NOV-2008 03:49	CHK		0.9970	| | |
24-NOV-2008 04:43	CHK		1.0185	| | |
25-NOV-2008 08:45	CHK		1.1368	Ac | |
25-NOV-2008 08:57	CHK		1.0306	| | |
26-NOV-2008 03:17	CHK		1.0276	| | |
27-NOV-2008 06:34	CHK		0.9958	| | |
28-NOV-2008 06:47	CHK		0.9777	| | |
29-NOV-2008 07:09	CHK		1.0004	| | |
1-DEC-2008 03:22	CHK		1.0214	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

1-DEC-2008 23:35	CHK	1.0270		
2-DEC-2008 04:18	CHK	1.0228		
3-DEC-2008 02:00	CHK	1.0162		
4-DEC-2008 03:16	CHK	1.0294		
5-DEC-2008 01:50	CHK	1.0337		
6-DEC-2008 04:51	CHK	0.9895		
8-DEC-2008 00:53	CHK	1.0015		
9-DEC-2008 02:29	CHK	1.0117		
10-DEC-2008 05:37	CHK	0.9877		
11-DEC-2008 03:05	CHK	1.0148		
12-DEC-2008 04:09	CHK	1.0579	In	
13-DEC-2008 07:10	CHK	0.9843		
13-DEC-2008 07:22	CHK	1.0483		

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000876 Upper Bound : 0.001030

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000949 Std Deviation : 0.000025

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	CHK		0.0010				
17-NOV-2008 06:30	CHK		0.0009	In			
18-NOV-2008 00:58	CHK		0.0010				
19-NOV-2008 01:22	CHK		0.0009				
20-NOV-2008 01:39	CHK		0.0009				
21-NOV-2008 03:49	CHK		0.0009				
24-NOV-2008 04:43	CHK		0.0009				
25-NOV-2008 08:45	CHK		0.0009				
25-NOV-2008 08:57	CHK		0.0009				
26-NOV-2008 03:17	CHK		0.0009				
27-NOV-2008 06:34	CHK		0.0010				
28-NOV-2008 06:47	CHK		0.0010				
29-NOV-2008 07:09	CHK		0.0010				

1-DEC-2008 03:22	CHK		0.0010	| | |	
1-DEC-2008 23:35	CHK		0.0009	| | |	
2-DEC-2008 04:18	CHK		0.0010	| | |	
3-DEC-2008 02:00	CHK		0.0010	| | |	
4-DEC-2008 03:16	CHK		0.0010	| | |	
5-DEC-2008 01:50	CHK		0.0009	| | |	
6-DEC-2008 04:51	CHK		0.0009	| | |	
8-DEC-2008 00:53	CHK		0.0010	| | |	
9-DEC-2008 02:29	CHK		0.0010	| | |	
10-DEC-2008 05:37	CHK		0.0010	|In| |	
11-DEC-2008 03:05	CHK		0.0010	| | |	
12-DEC-2008 04:09	CHK		0.0009	| | |	

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
13-DEC-2008 07:10	CHK		0.0010	|In| |
13-DEC-2008 07:22	CHK		0.0010	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5528.299805 Upper Bound : 5728.299805

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 5626.695801 Std Deviation : 0.467058

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		5626.6445	| | |
17-NOV-2008 06:30	CHK		5626.4199	| | |
18-NOV-2008 00:58	CHK		5626.5459	| | |
19-NOV-2008 01:22	CHK		5626.5513	| | |
20-NOV-2008 01:39	CHK		5626.3154	| | |
21-NOV-2008 03:49	CHK		5626.3730	| | |
24-NOV-2008 04:43	CHK		5625.6909	|In| |
25-NOV-2008 08:45	CHK		5625.9355	| | |

25-NOV-2008 08:57	CHK		5626.4111		
26-NOV-2008 03:17	CHK		5625.9014		
27-NOV-2008 06:34	CHK		5625.9111		
28-NOV-2008 06:47	CHK		5626.0190		
29-NOV-2008 07:09	CHK		5626.0674		
1-DEC-2008 03:22	CHK		5626.0991		
1-DEC-2008 23:35	CHK		5625.9155		
2-DEC-2008 04:18	CHK		5626.2959		
3-DEC-2008 02:00	CHK		5626.6372		
4-DEC-2008 03:16	CHK		5626.3306		
5-DEC-2008 01:50	CHK		5626.0376		
6-DEC-2008 04:51	CHK		5625.7959		
8-DEC-2008 00:53	CHK		5625.8037		
9-DEC-2008 02:29	CHK		5625.7378	In	
10-DEC-2008 05:37	CHK		5625.7705		
11-DEC-2008 03:05	CHK		5625.8965		
12-DEC-2008 04:09	CHK		5625.9287		
13-DEC-2008 07:10	CHK		5625.2319	Ac	
13-DEC-2008 07:22	CHK		5625.3857	In	

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.995020 Std Deviation : 0.135708

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	CHK		2.0653				
17-NOV-2008 06:30	CHK		1.8155				
18-NOV-2008 00:58	CHK		1.9645				
19-NOV-2008 01:22	CHK		2.0665				
20-NOV-2008 01:39	CHK		2.0272				
21-NOV-2008 03:49	CHK		2.1284				

24-NOV-2008 04:43	CHK	2.1373			
25-NOV-2008 08:45	CHK	1.9322			
25-NOV-2008 08:57	CHK	2.1389			
26-NOV-2008 03:17	CHK	2.1034			
27-NOV-2008 06:34	CHK	1.7972			
28-NOV-2008 06:47	CHK	1.8329			
29-NOV-2008 07:09	CHK	1.9806			
1-DEC-2008 03:22	CHK	2.0427			
1-DEC-2008 23:35	CHK	1.9423			
2-DEC-2008 04:18	CHK	1.8932			
3-DEC-2008 02:00	CHK	2.2781	In		
4-DEC-2008 03:16	CHK	2.0062			
5-DEC-2008 01:50	CHK	1.7408			
6-DEC-2008 04:51	CHK	2.0654			
8-DEC-2008 00:53	CHK	1.9338			
9-DEC-2008 02:29	CHK	1.9174			
10-DEC-2008 05:37	CHK	2.1941			
11-DEC-2008 03:05	CHK	2.0787			
12-DEC-2008 04:09	CHK	2.1996			
13-DEC-2008 07:10	CHK	1.9456			
13-DEC-2008 07:22	CHK	2.1601			

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001424 Upper Bound : 0.001700

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001560 Std Deviation : 0.000048

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	CHK		0.0015				
17-NOV-2008 06:30	CHK		0.0016				
18-NOV-2008 00:58	CHK		0.0016				
19-NOV-2008 01:22	CHK		0.0016				
20-NOV-2008 01:39	CHK		0.0016				

21-NOV-2008 03:49	CHK	0.0016	| |	
24-NOV-2008 04:43	CHK	0.0015	| |	
25-NOV-2008 08:45	CHK	0.0016	| |	
25-NOV-2008 08:57	CHK	0.0015	| |	
26-NOV-2008 03:17	CHK	0.0015	| |	
27-NOV-2008 06:34	CHK	0.0015	| |	

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
28-NOV-2008 06:47	CHK		0.0016	| | |
29-NOV-2008 07:09	CHK		0.0016	| | |
1-DEC-2008 03:22	CHK		0.0016	| | |
1-DEC-2008 23:35	CHK		0.0015	| | |
2-DEC-2008 04:18	CHK		0.0016	| | |
3-DEC-2008 02:00	CHK		0.0016	| | |
4-DEC-2008 03:16	CHK		0.0016	| | |
5-DEC-2008 01:50	CHK		0.0017	|In| |
6-DEC-2008 04:51	CHK		0.0015	| | |
8-DEC-2008 00:53	CHK		0.0016	| | |
9-DEC-2008 02:29	CHK		0.0017	|In| |
10-DEC-2008 05:37	CHK		0.0015	| | |
11-DEC-2008 03:05	CHK		0.0016	| | |
12-DEC-2008 04:09	CHK		0.0015	| | |
13-DEC-2008 07:10	CHK		0.0016	| | |
13-DEC-2008 07:22	CHK		0.0017	|In| |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3016.000000 Upper Bound : 3216.000000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 3116.505859 Std Deviation : 0.276815

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

15-NOV-2008 06:29	CHK	3116.9106		
17-NOV-2008 06:30	CHK	3116.4700		
18-NOV-2008 00:58	CHK	3116.7075		
19-NOV-2008 01:22	CHK	3116.8645		
20-NOV-2008 01:39	CHK	3116.4890		
21-NOV-2008 03:49	CHK	3116.5784		
24-NOV-2008 04:43	CHK	3116.4343		
25-NOV-2008 08:45	CHK	3116.2666		
25-NOV-2008 08:57	CHK	3116.6431		
26-NOV-2008 03:17	CHK	3116.5950		
27-NOV-2008 06:34	CHK	3116.3267		
28-NOV-2008 06:47	CHK	3116.5493		
29-NOV-2008 07:09	CHK	3116.4812		
1-DEC-2008 03:22	CHK	3116.5144		
1-DEC-2008 23:35	CHK	3116.2754		
2-DEC-2008 04:18	CHK	3116.5667		
3-DEC-2008 02:00	CHK	3116.5332		
4-DEC-2008 03:16	CHK	3116.5754		
5-DEC-2008 01:50	CHK	3116.5522		
6-DEC-2008 04:51	CHK	3116.0461		
8-DEC-2008 00:53	CHK	3116.1897		
9-DEC-2008 02:29	CHK	3116.3547		

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-DEC-2008 05:37	CHK		3116.4482			
11-DEC-2008 03:05	CHK		3116.2861			
12-DEC-2008 04:09	CHK		3116.3215			
13-DEC-2008 07:10	CHK		3116.0154			
13-DEC-2008 07:22	CHK		3116.0137			

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.538682 Std Deviation : 0.085779

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.6939	| | |
17-NOV-2008 06:30	CHK		1.5841	| | |
18-NOV-2008 00:58	CHK		1.4170	| | |
19-NOV-2008 01:22	CHK		1.4739	| | |
20-NOV-2008 01:39	CHK		1.5354	| | |
21-NOV-2008 03:49	CHK		1.3675	| | |
24-NOV-2008 04:43	CHK		1.4202	| | |
25-NOV-2008 08:45	CHK		1.4368	| | |
25-NOV-2008 08:57	CHK		1.4117	| | |
26-NOV-2008 03:17	CHK		1.6080	| | |
27-NOV-2008 06:34	CHK		1.3050	|In| |
28-NOV-2008 06:47	CHK		1.6857	| | |
29-NOV-2008 07:09	CHK		1.5832	| | |
1-DEC-2008 03:22	CHK		1.5421	| | |
1-DEC-2008 23:35	CHK		1.4810	| | |
2-DEC-2008 04:18	CHK		1.4807	| | |
3-DEC-2008 02:00	CHK		1.5948	| | |
4-DEC-2008 03:16	CHK		1.7693	|In| |
5-DEC-2008 01:50	CHK		1.4687	| | |
6-DEC-2008 04:51	CHK		1.6230	| | |
8-DEC-2008 00:53	CHK		1.4746	| | |
9-DEC-2008 02:29	CHK		1.4877	| | |
10-DEC-2008 05:37	CHK		1.4244	| | |
11-DEC-2008 03:05	CHK		1.6402	| | |
12-DEC-2008 04:09	CHK		1.5187	| | |
13-DEC-2008 07:10	CHK		1.5167	| | |
13-DEC-2008 07:22	CHK		1.6469	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:22.35

QA Filename : RDND07$DKA100:[GER7.QA]BKG.QAF;3

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.088878 Std Deviation : 0.010153

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0861	| | |
23-NOV-2008 05:00	bkg		0.0884	| | |
30-NOV-2008 05:53	bkg		0.0887	| | |
7-DEC-2008 04:34	bkg		0.0889	| | |
14-DEC-2008 06:39	bkg		0.0871	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.079813 Std Deviation : 0.004134

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0873	| | |
23-NOV-2008 05:00	bkg		0.0768	| | |
30-NOV-2008 05:53	bkg		0.0787	| | |
7-DEC-2008 04:34	bkg		0.0829	| | |
14-DEC-2008 06:39	bkg		0.0784	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.038980 Std Deviation : 0.001947

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg 0.0420 | | |
23-NOV-2008 05:00 bkg 0.0368 | | |
30-NOV-2008 05:53 bkg 0.0349 |In| |
Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
7-DEC-2008 04:34	bkg		0.0394	| | |
14-DEC-2008 06:39	bkg		0.0395	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.044938 Std Deviation : 0.002805

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0455	| | |
23-NOV-2008 05:00	bkg		0.0432	| | |
30-NOV-2008 05:53	bkg		0.0468	| | |
7-DEC-2008 04:34	bkg		0.0438	| | |
14-DEC-2008 06:39	bkg		0.0460	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.060576 Std Deviation : 0.002796

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0603	| | |

23-NOV-2008 05:00 bkg 0.0622 | | |
30-NOV-2008 05:53 bkg 0.0595 | | |
7-DEC-2008 04:34 bkg 0.0611 | | |
14-DEC-2008 06:39 bkg 0.0643 | | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.068494 Std Deviation : 0.002754

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0706	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-NOV-2008 05:00	bkg		0.0662	| | |
30-NOV-2008 05:53	bkg		0.0657	| | |
7-DEC-2008 04:34	bkg		0.0686	| | |
14-DEC-2008 06:39	bkg		0.0699	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.058259 Std Deviation : 0.002335

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0583	| | |
23-NOV-2008 05:00	bkg		0.0556	| | |

30-NOV-2008 05:53 bkg 0.0596 | | |
7-DEC-2008 04:34 bkg 0.0554 | | |
14-DEC-2008 06:39 bkg 0.0606 | | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.110889 Std Deviation : 0.007089

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1131	| | |
23-NOV-2008 05:00	bkg		0.1074	| | |
30-NOV-2008 05:53	bkg		0.1049	| | |
7-DEC-2008 04:34	bkg		0.1069	| | |
14-DEC-2008 06:39	bkg		0.1062	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.083383 Std Deviation : 0.005570

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0915	| | |
23-NOV-2008 05:00	bkg		0.0882	| | |
30-NOV-2008 05:53	bkg		0.0825	| | |

7-DEC-2008 04:34 bkg	0.0977	|In| |
14-DEC-2008 06:39 bkg	0.0846	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.061808 Std Deviation : 0.003244

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0616	| | |
23-NOV-2008 05:00	bkg		0.0624	| | |
30-NOV-2008 05:53	bkg		0.0586	| | |
7-DEC-2008 04:34	bkg		0.0667	| | |
14-DEC-2008 06:39	bkg		0.0596	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.094509 Std Deviation : 0.006636

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0946	| | |
23-NOV-2008 05:00	bkg		0.0918	| | |
30-NOV-2008 05:53	bkg		0.0924	| | |
7-DEC-2008 04:34	bkg		0.0929	| | |
14-DEC-2008 06:39	bkg		0.0912	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.669135 Std Deviation : 0.030834

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.6816	| | |
23-NOV-2008 05:00	bkg		0.6870	| | |
30-NOV-2008 05:53	bkg		0.6735	| | |
7-DEC-2008 04:34	bkg		0.6860	| | |
14-DEC-2008 06:39	bkg		0.6747	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:37.77

QA Filename : RDND07$DKA100:[GER8.QA]CHECK.QAF;4

-- Multi-Test Full Report --

analysis 12/16/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005600 Upper Bound : 0.005900

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.005727 Std Deviation : 0.000051

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0056	| | |
17-NOV-2008 06:30	chk		0.0058	| | |
18-NOV-2008 00:55	chk		0.0057	| | |
19-NOV-2008 01:23	chk		0.0056	|In| |
20-NOV-2008 01:32	chk		0.0057	| | |
21-NOV-2008 03:49	chk		0.0057	| | |
24-NOV-2008 04:43	chk		0.0058	| | |
24-NOV-2008 04:55	chk		0.0057	| | |
25-NOV-2008 04:38	chk		0.0056	|In| |
26-NOV-2008 03:17	chk		0.0057	| | |
27-NOV-2008 06:34	chk		0.0058	| | |
28-NOV-2008 06:47	chk		0.0058	| | |
29-NOV-2008 07:09	chk		0.0057	| | |
29-NOV-2008 07:27	chk		0.0057	| | |
1-DEC-2008 03:22	chk		0.0057	| | |
1-DEC-2008 03:35	chk		0.0058	| | |
1-DEC-2008 23:39	chk		0.0057	| | |
2-DEC-2008 04:23	chk		0.0058	|In| |
3-DEC-2008 01:56	chk		0.0057	| | |
4-DEC-2008 03:16	chk		0.0057	| | |
5-DEC-2008 01:31	chk		0.0056	|In| |

6-DEC-2008 04:51	chk	0.0056 | | |
6-DEC-2008 05:04	chk	0.0056 Be|Ac| |
6-DEC-2008 05:16	chk	0.0056 |In| |
8-DEC-2008 00:58	chk	0.0058 | | |
9-DEC-2008 00:32	chk	0.0058 | | |
10-DEC-2008 05:46	chk	0.0056 | | |
11-DEC-2008 05:47	chk	0.0058 | | |
12-DEC-2008 05:54	chk	0.0057 | | |
13-DEC-2008 06:32	chk	0.0057 | | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 386.000000 Upper Bound : 586.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		494.0360	| | |
17-NOV-2008 06:30	chk		493.8856	| | |
18-NOV-2008 00:55	chk		493.7870	| | |
19-NOV-2008 01:23	chk		493.7892	| | |
20-NOV-2008 01:32	chk		493.8440	| | |
21-NOV-2008 03:49	chk		493.7338	| | |
24-NOV-2008 04:43	chk		490.0156	| | |
24-NOV-2008 04:55	chk		490.0070	| | |
25-NOV-2008 04:38	chk		489.9158	| | |
26-NOV-2008 03:17	chk		489.3595	| | |
27-NOV-2008 06:34	chk		489.3191	| | |
28-NOV-2008 06:47	chk		489.3628	| | |
29-NOV-2008 07:09	chk		490.2481	| | |
29-NOV-2008 07:27	chk		490.2728	| | |
1-DEC-2008 03:22	chk		490.2609	| | |
1-DEC-2008 03:35	chk		490.3565	| | |
1-DEC-2008 23:39	chk		490.1304	| | |
2-DEC-2008 04:23	chk		490.0785	| | |
3-DEC-2008 01:56	chk		489.8708	| | |

4-DEC-2008 03:16 chk	489.7955	| | |
5-DEC-2008 01:31 chk	489.7253	| | |
6-DEC-2008 04:51 chk	489.8713	| | |
6-DEC-2008 05:04 chk	489.8534	| | |
6-DEC-2008 05:16 chk	489.8661	| | |
8-DEC-2008 00:58 chk	489.9066	| | |
9-DEC-2008 00:32 chk	489.9601	| | |
10-DEC-2008 05:46 chk	489.8828	| | |
11-DEC-2008 05:47 chk	489.8966	| | |
12-DEC-2008 05:54 chk	489.7899	| | |
13-DEC-2008 06:32 chk	489.7968	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.020000 Upper Bound : 1.130000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.121632 Std Deviation : 0.022860

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.1256	| | |
17-NOV-2008 06:30	chk		1.1366	Ab| | |
18-NOV-2008 00:55	chk		1.1502	Ab| | |
19-NOV-2008 01:23	chk		1.1458	Ab| | |
20-NOV-2008 01:32	chk		1.1417	Ab| | |
21-NOV-2008 03:49	chk		1.1657	Ab| | |
24-NOV-2008 04:43	chk		1.1215	| | |
24-NOV-2008 04:55	chk		1.1285	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-NOV-2008 04:38	chk		1.1456	Ab| | |
26-NOV-2008 03:17	chk		1.1331	Ab| | |
27-NOV-2008 06:34	chk		1.1451	Ab| | |

28-NOV-2008 06:47	chk	1.1688 Ab|In| |
29-NOV-2008 07:09	chk	1.1489 Ab| | |
29-NOV-2008 07:27	chk	1.1280 | | |
1-DEC-2008 03:22	chk	1.1437 Ab| | |
1-DEC-2008 03:35	chk	1.1758 Ab|In| |
1-DEC-2008 23:39	chk	1.1451 Ab| | |
2-DEC-2008 04:23	chk	1.1445 Ab| | |
3-DEC-2008 01:56	chk	1.1591 Ab| | |
4-DEC-2008 03:16	chk	1.1433 Ab| | |
5-DEC-2008 01:31	chk	1.1443 Ab| | |
6-DEC-2008 04:51	chk	1.1654 Ab| | |
6-DEC-2008 05:04	chk	1.1522 Ab| | |
6-DEC-2008 05:16	chk	1.1293 | | |
8-DEC-2008 00:58	chk	1.1528 Ab| | |
9-DEC-2008 00:32	chk	1.1494 Ab| | |
10-DEC-2008 05:46	chk	1.1792 Ab|In| |
11-DEC-2008 05:47	chk	1.1199 | | |
12-DEC-2008 05:54	chk	1.1030 | | |
13-DEC-2008 06:32	chk	1.0902 | | |

above not out

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001230 Upper Bound : 0.001460

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001344 Std Deviation : 0.000039

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0014	| | |
17-NOV-2008 06:30	chk		0.0013	| | |
18-NOV-2008 00:55	chk		0.0014	| | |
19-NOV-2008 01:23	chk		0.0013	| | |
20-NOV-2008 01:32	chk		0.0014	| | |
21-NOV-2008 03:49	chk		0.0013	| | |
24-NOV-2008 04:43	chk		No Value	| | |

24-NOV-2008 04:55	chk	0.0013	| |	
25-NOV-2008 04:38	chk	0.0014	| |	
26-NOV-2008 03:17	chk	0.0013	| |	
27-NOV-2008 06:34	chk	0.0013	| |	
28-NOV-2008 06:47	chk	0.0014	| |	
29-NOV-2008 07:09	chk	0.0014	| |	
29-NOV-2008 07:27	chk	0.0013	| |	
1-DEC-2008 03:22	chk	0.0014	| |	
1-DEC-2008 03:35	chk	0.0013	| |	

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
1-DEC-2008 23:39	chk		0.0013	| | |
2-DEC-2008 04:23	chk		0.0014	| | |
3-DEC-2008 01:56	chk		0.0014	| | |
4-DEC-2008 03:16	chk		0.0014	| | |
5-DEC-2008 01:31	chk		0.0014	| | |
6-DEC-2008 04:51	chk		0.0013	| | |
6-DEC-2008 05:04	chk		0.0013	| | |
6-DEC-2008 05:16	chk		0.0013	| | |
8-DEC-2008 00:58	chk		0.0013	| | |
9-DEC-2008 00:32	chk		0.0014	| | |
10-DEC-2008 05:46	chk		0.0014	| | |
11-DEC-2008 05:47	chk		0.0014	| | |
12-DEC-2008 05:54	chk		0.0013	| | |
13-DEC-2008 06:32	chk		0.0014	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3012.000000 Upper Bound : 3212.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3144.6279	| | |
17-NOV-2008 06:30	chk		3144.0269	| | |
18-NOV-2008 00:55	chk		3143.5400	| | |
19-NOV-2008 01:23	chk		3143.9521	| | |
20-NOV-2008 01:32	chk		3143.5110	| | |

21-NOV-2008 03:49	chk	3143.5938		
24-NOV-2008 04:43	chk	No Value		
24-NOV-2008 04:55	chk	3129.0959		
25-NOV-2008 04:38	chk	3128.8838		
26-NOV-2008 03:17	chk	3126.7095		
27-NOV-2008 06:34	chk	3126.6816		
28-NOV-2008 06:47	chk	3126.9365		
29-NOV-2008 07:09	chk	3130.7043		
29-NOV-2008 07:27	chk	3130.6589		
1-DEC-2008 03:22	chk	3130.4705		
1-DEC-2008 03:35	chk	3130.4368		
1-DEC-2008 23:39	chk	3129.9048		
2-DEC-2008 04:23	chk	3129.3264		
3-DEC-2008 01:56	chk	3128.8145		
4-DEC-2008 03:16	chk	3128.6790		
5-DEC-2008 01:31	chk	3128.4375		
6-DEC-2008 04:51	chk	3128.9116		
6-DEC-2008 05:04	chk	3128.6401		
6-DEC-2008 05:16	chk	3128.9165		
8-DEC-2008 00:58	chk	3128.9304		
9-DEC-2008 00:32	chk	3128.9819		
10-DEC-2008 05:46	chk	3128.7346		
11-DEC-2008 05:47	chk	3128.9553		
12-DEC-2008 05:54	chk	3128.4548		
13-DEC-2008 06:32	chk	3128.2703		

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.544829 Std Deviation : 0.083273

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

15-NOV-2008 06:29	chk	1.7396	In	
17-NOV-2008 06:30	chk	1.4979		
18-NOV-2008 00:55	chk	1.6482		
19-NOV-2008 01:23	chk	1.7432	In	
20-NOV-2008 01:32	chk	1.5694		
21-NOV-2008 03:49	chk	1.4023		
24-NOV-2008 04:43	chk	No Value		
24-NOV-2008 04:55	chk	1.4458		
25-NOV-2008 04:38	chk	1.6520		
26-NOV-2008 03:17	chk	1.3720	In	
27-NOV-2008 06:34	chk	1.5001		
28-NOV-2008 06:47	chk	1.6511		
29-NOV-2008 07:09	chk	1.5871		
29-NOV-2008 07:27	chk	1.5524		
1-DEC-2008 03:22	chk	1.8600	Ac	
1-DEC-2008 03:35	chk	1.5421		
1-DEC-2008 23:39	chk	1.5235		
2-DEC-2008 04:23	chk	1.5055		
3-DEC-2008 01:56	chk	1.5582		
4-DEC-2008 03:16	chk	1.6477		
5-DEC-2008 01:31	chk	1.4794		
6-DEC-2008 04:51	chk	1.8066	Ac	
6-DEC-2008 05:04	chk	1.5021		
6-DEC-2008 05:16	chk	1.5582		
8-DEC-2008 00:58	chk	1.5006		
9-DEC-2008 00:32	chk	1.6384		
10-DEC-2008 05:46	chk	1.4954		
11-DEC-2008 05:47	chk	1.5398		
12-DEC-2008 05:54	chk	1.3614	In	
13-DEC-2008 06:32	chk	1.5220		

rerun

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000740 Upper Bound : 0.000860

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.000803 Std Deviation : 0.000020

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0008	|In| |
17-NOV-2008 06:30	chk		0.0008	| | |
18-NOV-2008 00:55	chk		0.0008	| | |
19-NOV-2008 01:23	chk		0.0008	| | |
20-NOV-2008 01:32	chk		0.0008	| | |
21-NOV-2008 03:49	chk		0.0008	| | |
24-NOV-2008 04:43	chk		No Value	| | |
24-NOV-2008 04:55	chk		0.0008	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-NOV-2008 04:38	chk		0.0008	| | |
26-NOV-2008 03:17	chk		0.0008	| | |
27-NOV-2008 06:34	chk		0.0009	|In| |
28-NOV-2008 06:47	chk		0.0008	| | |
29-NOV-2008 07:09	chk		0.0000	Be|Ac| |
29-NOV-2008 07:27	chk		0.0008	| | |
1-DEC-2008 03:22	chk		0.0008	| | |
1-DEC-2008 03:35	chk		0.0008	| | |
1-DEC-2008 23:39	chk		0.0008	| | |
2-DEC-2008 04:23	chk		0.0008	| | |
3-DEC-2008 01:56	chk		0.0008	| | |
4-DEC-2008 03:16	chk		0.0008	| | |
5-DEC-2008 01:31	chk		0.0008	| | |
6-DEC-2008 04:51	chk		0.0008	| | |
6-DEC-2008 05:04	chk		0.0008	| | |
6-DEC-2008 05:16	chk		0.0008	| | |
8-DEC-2008 00:58	chk		0.0008	| | |
9-DEC-2008 00:32	chk		0.0008	| | |
10-DEC-2008 05:46	chk		0.0008	| | |
11-DEC-2008 05:47	chk		0.0008	| | |
12-DEC-2008 05:54	chk		0.0008	| | |
13-DEC-2008 06:32	chk		0.0008	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5526.000000 Upper Bound : 5726.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5681.7856	| | |
17-NOV-2008 06:30	chk		5680.7310	| | |
18-NOV-2008 00:55	chk		5680.1899	| | |
19-NOV-2008 01:23	chk		5680.1978	| | |
20-NOV-2008 01:32	chk		5679.9604	| | |
21-NOV-2008 03:49	chk		5679.8901	| | |
24-NOV-2008 04:43	chk		No Value	| | |
24-NOV-2008 04:55	chk		5655.1812	| | |
25-NOV-2008 04:38	chk		5654.3867	| | |
26-NOV-2008 03:17	chk		5651.2578	| | |
27-NOV-2008 06:34	chk		5650.8389	| | |
28-NOV-2008 06:47	chk		5651.1602	| | |
29-NOV-2008 07:09	chk		5657.6045	| | |
29-NOV-2008 07:27	chk		5657.5708	| | |
1-DEC-2008 03:22	chk		5656.9023	| | |
1-DEC-2008 03:35	chk		5657.0566	| | |
1-DEC-2008 23:39	chk		5655.6943	| | |
2-DEC-2008 04:23	chk		5655.4946	| | |
3-DEC-2008 01:56	chk		5654.5010	| | |
4-DEC-2008 03:16	chk		5654.2061	| | |
5-DEC-2008 01:31	chk		5654.0073	| | |
6-DEC-2008 04:51	chk		5654.6992	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
6-DEC-2008 05:04	chk		5654.4668	| | |
6-DEC-2008 05:16	chk		5654.5938	| | |
8-DEC-2008 00:58	chk		5654.4585	| | |
9-DEC-2008 00:32	chk		5654.7173	| | |
10-DEC-2008 05:46	chk		5654.5205	| | |
11-DEC-2008 05:47	chk		5655.0015	| | |
12-DEC-2008 05:54	chk		5654.3135	| | |
13-DEC-2008 06:32	chk		5653.4863	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.879941 Std Deviation : 0.114758

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		2.1713	In			
17-NOV-2008 06:30	chk		1.7528				
18-NOV-2008 00:55	chk		1.9354				
19-NOV-2008 01:23	chk		1.7315				
20-NOV-2008 01:32	chk		1.9013				
21-NOV-2008 03:49	chk		1.8083				
24-NOV-2008 04:43	chk		No Value				
24-NOV-2008 04:55	chk		1.9530				
25-NOV-2008 04:38	chk		1.9173				
26-NOV-2008 03:17	chk		1.8889				
27-NOV-2008 06:34	chk		1.8125				
28-NOV-2008 06:47	chk		1.7592				
29-NOV-2008 07:09	chk		1.9424				
29-NOV-2008 07:27	chk		1.8940				
1-DEC-2008 03:22	chk		1.9872				
1-DEC-2008 03:35	chk		1.9949				
1-DEC-2008 23:39	chk		1.8774				
2-DEC-2008 04:23	chk		1.7638				
3-DEC-2008 01:56	chk		2.1354	In			
4-DEC-2008 03:16	chk		1.9349				
5-DEC-2008 01:31	chk		1.7032				
6-DEC-2008 04:51	chk		1.7846				
6-DEC-2008 05:04	chk		1.7232				
6-DEC-2008 05:16	chk		1.9096				
8-DEC-2008 00:58	chk		1.8497				
9-DEC-2008 00:32	chk		2.0222				
10-DEC-2008 05:46	chk		2.0456				
11-DEC-2008 05:47	chk		1.9030				
12-DEC-2008 05:54	chk		1.7309				
13-DEC-2008 06:32	chk		1.8073				

Quality Assurance Report. Generated 16-DEC-2008 14:48:38.48

QA Filename : RDND07$DKA100:[GER8.QA]BKG.QAF;5

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.058668 Std Deviation : 0.001502

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0604	| | |
23-NOV-2008 05:00	bkg		0.0333	|Ac| |
24-NOV-2008 07:50	bkg		0.0586	| | |
30-NOV-2008 05:53	bkg		0.0592	| | |
7-DEC-2008 04:34	bkg		0.0619	|In| |
8-DEC-2008 04:10	bkg		0.0604	| | |
9-DEC-2008 09:26	bkg		0.0594	| | |
14-DEC-2008 06:39	bkg		0.0586	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.083706 Std Deviation : 0.001966

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0834	| | |
23-NOV-2008 05:00	bkg		0.0829	| | |
24-NOV-2008 07:50	bkg		0.0839	| | |
30-NOV-2008 05:53	bkg		0.0846	| | |

7-DEC-2008 04:34	bkg	0.0842	| | |
8-DEC-2008 04:10	bkg	0.0838	| | |
9-DEC-2008 09:26	bkg	0.0841	| | |
14-DEC-2008 06:39	bkg	0.0824	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.036300 Std Deviation : 0.001988

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0374	| | |
23-NOV-2008 05:00	bkg		0.0357	| | |
24-NOV-2008 07:50	bkg		0.0384	| | |
30-NOV-2008 05:53	bkg		0.0366	| | |
7-DEC-2008 04:34	bkg		0.0378	| | |
8-DEC-2008 04:10	bkg		0.0392	| | |
9-DEC-2008 09:26	bkg		0.0363	| | |
14-DEC-2008 06:39	bkg		0.0326	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.042382 Std Deviation : 0.002014

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg	0.0442	| | |
23-NOV-2008 05:00 bkg	0.0553	|Ac| |
24-NOV-2008 07:50 bkg	0.0419	| | |
30-NOV-2008 05:53 bkg	0.0434	| | |
7-DEC-2008 04:34 bkg	0.0426	| | |
8-DEC-2008 04:10 bkg	0.0447	| | |
9-DEC-2008 09:26 bkg	0.0396	| | |
14-DEC-2008 06:39 bkg	0.0407	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.059169 Std Deviation : 0.002112

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0618	| | |
23-NOV-2008 05:00	bkg		0.0567	| | |
24-NOV-2008 07:50	bkg		0.0611	| | |
30-NOV-2008 05:53	bkg		0.0620	| | |
7-DEC-2008 04:34	bkg		0.0615	| | |
8-DEC-2008 04:10	bkg		0.0623	| | |
9-DEC-2008 09:26	bkg		0.0622	| | |
14-DEC-2008 06:39	bkg		0.0585	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.065426 Std Deviation : 0.002219

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0658	| | |
23-NOV-2008 05:00	bkg		0.0885	|Ac| |
24-NOV-2008 07:50	bkg		0.0672	| | |
30-NOV-2008 05:53	bkg		0.0667	| | |
7-DEC-2008 04:34	bkg		0.0652	| | |
8-DEC-2008 04:10	bkg		0.0655	| | |
9-DEC-2008 09:26	bkg		0.0662	| | |
14-DEC-2008 06:39	bkg		0.0628	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.055917 Std Deviation : 0.001558

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0560	| | |
23-NOV-2008 05:00	bkg		0.0559	| | |
24-NOV-2008 07:50	bkg		0.0531	| | |
30-NOV-2008 05:53	bkg		0.0599	|In| |
7-DEC-2008 04:34	bkg		0.0599	|In| |
8-DEC-2008 04:10	bkg		0.0562	| | |
9-DEC-2008 09:26	bkg		0.0544	| | |
14-DEC-2008 06:39	bkg		0.0569	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.106958 Std Deviation : 0.002353

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1080	| | |
23-NOV-2008 05:00	bkg		0.1093	| | |
24-NOV-2008 07:50	bkg		0.1125	|In| |
30-NOV-2008 05:53	bkg		0.1097	| | |
7-DEC-2008 04:34	bkg		0.1106	| | |
8-DEC-2008 04:10	bkg		0.1107	| | |
9-DEC-2008 09:26	bkg		0.1073	| | |
14-DEC-2008 06:39	bkg		0.1060	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.087737 Std Deviation : 0.007717

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0999	| | |
23-NOV-2008 05:00	bkg		0.0699	|In| |
24-NOV-2008 07:50	bkg		0.1050	|In| |
30-NOV-2008 05:53	bkg		0.0954	| | |
7-DEC-2008 04:34	bkg		0.1168	|Ac| |
8-DEC-2008 04:10	bkg		0.1109	|Ac| |
9-DEC-2008 09:26	bkg		0.0913	| | |
14-DEC-2008 06:39	bkg		0.0832	| | |

rerun

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.051846 Std Deviation : 0.001742

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0509	| | |
23-NOV-2008 05:00	bkg		0.0434	|Ac| |
24-NOV-2008 07:50	bkg		0.0487	| | |
30-NOV-2008 05:53	bkg		0.0539	| | |
7-DEC-2008 04:34	bkg		0.0530	| | |
8-DEC-2008 04:10	bkg		0.0506	| | |
9-DEC-2008 09:26	bkg		0.0506	| | |
14-DEC-2008 06:39	bkg		0.0527	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.103530 Std Deviation : 0.001948

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.1039	| | |
23-NOV-2008 05:00	bkg		0.1020	| | |
24-NOV-2008 07:50	bkg		0.1044	| | |
30-NOV-2008 05:53	bkg		0.0997	| | |
7-DEC-2008 04:34	bkg		0.1097	|Ac| | rerun
8-DEC-2008 04:10	bkg		0.1070	| | |
9-DEC-2008 09:26	bkg		0.1016	| | |
14-DEC-2008 06:39	bkg		0.1039	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.6970	| | |
23-NOV-2008 05:00	bkg		0.6484	| | |
24-NOV-2008 07:50	bkg		0.6781	| | |
30-NOV-2008 05:53	bkg		0.7020	| | |
7-DEC-2008 04:34	bkg		0.7300	| | |
8-DEC-2008 04:10	bkg		0.6873	| | |
9-DEC-2008 09:26	bkg		0.6692	| | |
14-DEC-2008 06:39	bkg		0.7035	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:05.88

QA Filename : RDND07$DKA100:[GER10.QA]CHECK.QAF;5

-- Multi-Test Full Report --

analysis 12/6/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.005400 Upper Bound : 0.005800

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 0.005563 Std Deviation : 0.000065

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		0.0056	| | |
17-NOV-2008 06:51	chk		0.0056	| | |
18-NOV-2008 01:08	chk		0.0055	| | |
19-NOV-2008 01:37	chk		0.0056	| | |
20-NOV-2008 01:50	chk		0.0055	| | |
21-NOV-2008 04:04	chk		0.0056	| | |
24-NOV-2008 04:58	chk		0.0056	| | |
25-NOV-2008 04:38	chk		0.0055	| | |
26-NOV-2008 03:32	chk		0.0055	| | |
27-NOV-2008 06:58	chk		0.0056	| | |
28-NOV-2008 07:05	chk		0.0057	| | |
29-NOV-2008 07:27	chk		0.0056	| | |
1-DEC-2008 03:37	chk		0.0056	| | |
1-DEC-2008 23:49	chk		0.0055	| | |
2-DEC-2008 04:25	chk		0.0054	|In| |
3-DEC-2008 01:56	chk		0.0055	| | |
4-DEC-2008 03:28	chk		0.0055	| | |
5-DEC-2008 01:46	chk		0.0056	| | |
6-DEC-2008 04:51	chk		0.0056	| | |
8-DEC-2008 01:07	chk		0.0056	| | |
9-DEC-2008 02:41	chk		0.0056	| | |

10-DEC-2008 05:51	chk	0.0054 Be|In| |
10-DEC-2008 06:02	chk	0.0056 | | |
11-DEC-2008 03:05	chk	0.0054 |In| |
12-DEC-2008 04:09	chk	0.0056 | | |
13-DEC-2008 07:10	chk	0.0056 | | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 333.000000 Upper Bound : 533.000000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 433.058258 Std Deviation : 0.124967

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		433.0967	| | |
17-NOV-2008 06:51	chk		433.1759	| | |
18-NOV-2008 01:08	chk		433.1715	| | |
19-NOV-2008 01:37	chk		433.1398	| | |
20-NOV-2008 01:50	chk		433.1876	| | |
21-NOV-2008 04:04	chk		433.1740	| | |
24-NOV-2008 04:58	chk		433.1576	| | |
25-NOV-2008 04:38	chk		433.1603	| | |
26-NOV-2008 03:32	chk		433.1746	| | |
27-NOV-2008 06:58	chk		433.2084	| | |
28-NOV-2008 07:05	chk		433.0641	| | |
29-NOV-2008 07:27	chk		433.0799	| | |
1-DEC-2008 03:37	chk		433.1214	| | |
1-DEC-2008 23:49	chk		433.1850	| | |
2-DEC-2008 04:25	chk		433.1355	| | |
3-DEC-2008 01:56	chk		433.0698	| | |
4-DEC-2008 03:28	chk		433.0114	| | |

5-DEC-2008 01:46	chk	433.1079	|	|
6-DEC-2008 04:51	chk	433.1816	|	|
8-DEC-2008 01:07	chk	433.1736	|	|
9-DEC-2008 02:41	chk	433.1022	|	|
10-DEC-2008 05:51	chk	433.2469	|	|
10-DEC-2008 06:02	chk	433.1710	|	|
11-DEC-2008 03:05	chk	433.0982	|	|
12-DEC-2008 04:09	chk	433.1744	|	|
13-DEC-2008 07:10	chk	432.9931	|	|

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.200000 Upper Bound : 1.450000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 1.561248 Std Deviation : 0.078361

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		1.7406	Ab|In| |
17-NOV-2008 06:51	chk		1.7271	Ab|In| |
18-NOV-2008 01:08	chk		1.7226	Ab|In| |
19-NOV-2008 01:37	chk		1.6937	Ab| | |
20-NOV-2008 01:50	chk		1.7306	Ab|In| |
21-NOV-2008 04:04	chk		1.6430	Ab| | |
24-NOV-2008 04:58	chk		1.7664	Ab|In| |
25-NOV-2008 04:38	chk		1.6699	Ab| | |
26-NOV-2008 03:32	chk		1.7137	Ab| | |
27-NOV-2008 06:58	chk		1.6424	Ab| | |
28-NOV-2008 07:05	chk		1.7001	Ab| | |
29-NOV-2008 07:27	chk		1.7255	Ab|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
1-DEC-2008 03:37	chk		1.6964	Ab| | |

1-DEC-2008 23:49	chk	1.6541	Ab|	| |
2-DEC-2008 04:25	chk	1.6855	Ab|	| |
3-DEC-2008 01:56	chk	1.6668	Ab|	| |
4-DEC-2008 03:28	chk	1.7781	Ab|In|	|
5-DEC-2008 01:46	chk	1.7095	Ab|	| |
6-DEC-2008 04:51	chk	1.7338	Ab|In|	|
8-DEC-2008 01:07	chk	1.7078	Ab|	| |
9-DEC-2008 02:41	chk	1.7759	Ab|In|	|
10-DEC-2008 05:51	chk	1.7359	Ab|In|	|
10-DEC-2008 06:02	chk	1.7399	Ab|In|	|
11-DEC-2008 03:05	chk	1.7447	Ab|In|	|
12-DEC-2008 04:09	chk	1.6517	Ab|	| |
13-DEC-2008 07:10	chk	1.6425	Ab|	| |

above not out

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001250 Upper Bound : 0.001410

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 0.001337 Std Deviation : 0.000027

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		0.0014	| | |
17-NOV-2008 06:51	chk		0.0013	| | |
18-NOV-2008 01:08	chk		0.0013	| | |
19-NOV-2008 01:37	chk		0.0013	|In| |
20-NOV-2008 01:50	chk		0.0013	| | |
21-NOV-2008 04:04	chk		0.0014	| | |
24-NOV-2008 04:58	chk		0.0014	| | |
25-NOV-2008 04:38	chk		0.0014	| | |
26-NOV-2008 03:32	chk		0.0013	| | |
27-NOV-2008 06:58	chk		0.0013	| | |
28-NOV-2008 07:05	chk		0.0013	| | |
29-NOV-2008 07:27	chk		0.0014	| | |
1-DEC-2008 03:37	chk		0.0013	| | |

1-DEC-2008 23:49	chk	0.0013	|	|
2-DEC-2008 04:25	chk	0.0013	|	|
3-DEC-2008 01:56	chk	0.0013	|	|
4-DEC-2008 03:28	chk	0.0013	|	|
5-DEC-2008 01:46	chk	0.0013	|In|	|
6-DEC-2008 04:51	chk	0.0013	|	|
8-DEC-2008 01:07	chk	0.0013	|	|
9-DEC-2008 02:41	chk	0.0014	|	|
10-DEC-2008 05:51	chk	0.0014	|	|
10-DEC-2008 06:02	chk	0.0013	|	|
11-DEC-2008 03:05	chk	0.0013	|	|

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
12-DEC-2008 04:09	chk		0.0013	|In| |
13-DEC-2008 07:10	chk		0.0013	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5534.000000 Upper Bound : 5737.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		5638.6895	| | |
17-NOV-2008 06:51	chk		5638.7734	| | |
18-NOV-2008 01:08	chk		5638.8633	| | |
19-NOV-2008 01:37	chk		5638.6226	| | |
20-NOV-2008 01:50	chk		5638.9150	| | |
21-NOV-2008 04:04	chk		5638.6797	| | |
24-NOV-2008 04:58	chk		5638.7817	| | |
25-NOV-2008 04:38	chk		5638.7822	| | |
26-NOV-2008 03:32	chk		5638.7578	| | |
27-NOV-2008 06:58	chk		5638.9497	| | |
28-NOV-2008 07:05	chk		5638.7583	| | |
29-NOV-2008 07:27	chk		5638.7388	| | |
1-DEC-2008 03:37	chk		5638.6362	| | |
1-DEC-2008 23:49	chk		5638.4663	| | |
2-DEC-2008 04:25	chk		5638.6309	| | |

3-DEC-2008 01:56	chk	5638.7056	| | |
4-DEC-2008 03:28	chk	5638.7539	| | |
5-DEC-2008 01:46	chk	5638.9673	| | |
6-DEC-2008 04:51	chk	5638.6450	| | |
8-DEC-2008 01:07	chk	5638.4683	| | |
9-DEC-2008 02:41	chk	5638.6772	| | |
10-DEC-2008 05:51	chk	5638.7778	| | |
10-DEC-2008 06:02	chk	5638.8765	| | |
11-DEC-2008 03:05	chk	5638.7505	| | |
12-DEC-2008 04:09	chk	5638.6968	| | |
13-DEC-2008 07:10	chk	5638.4663	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 2.138280 Std Deviation : 0.124905

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		2.4033	|In| |
17-NOV-2008 06:51	chk		2.4059	|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
18-NOV-2008 01:08	chk		2.2251	| | |
19-NOV-2008 01:37	chk		1.9792	| | |
20-NOV-2008 01:50	chk		2.4176	|In| |
21-NOV-2008 04:04	chk		2.2959	| | |
24-NOV-2008 04:58	chk		2.4458	|In| |
25-NOV-2008 04:38	chk		2.1685	| | |
26-NOV-2008 03:32	chk		2.2704	| | |
27-NOV-2008 06:58	chk		2.0313	| | |
28-NOV-2008 07:05	chk		2.4247	|In| |
29-NOV-2008 07:27	chk		2.2561	| | |
1-DEC-2008 03:37	chk		2.1345	| | |
1-DEC-2008 23:49	chk		2.4009	|In| |

2-DEC-2008 04:25 chk	1.9897	| | |
3-DEC-2008 01:56 chk	2.2501	| | |
4-DEC-2008 03:28 chk	2.3938	|In| |
5-DEC-2008 01:46 chk	2.2773	| | |
6-DEC-2008 04:51 chk	2.4280	|In| |
8-DEC-2008 01:07 chk	2.1735	| | |
9-DEC-2008 02:41 chk	1.9910	| | |
10-DEC-2008 05:51 chk	2.1459	| | |
10-DEC-2008 06:02 chk	2.2659	| | |
11-DEC-2008 03:05 chk	2.4048	|In| |
12-DEC-2008 04:09 chk	2.3559	| | |
13-DEC-2008 07:10 chk	2.1502	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001870 Upper Bound : 0.002150

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 0.002013 Std Deviation : 0.000051

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		0.0020	| | |
17-NOV-2008 06:51	chk		0.0021	| | |
18-NOV-2008 01:08	chk		0.0019	| | |
19-NOV-2008 01:37	chk		0.0020	| | |
20-NOV-2008 01:50	chk		0.0020	| | |
21-NOV-2008 04:04	chk		0.0020	| | |
24-NOV-2008 04:58	chk		0.0020	| | |
25-NOV-2008 04:38	chk		0.0021	| | |
26-NOV-2008 03:32	chk		0.0020	| | |
27-NOV-2008 06:58	chk		0.0020	| | |
28-NOV-2008 07:05	chk		0.0020	| | |
29-NOV-2008 07:27	chk		0.0020	| | |
1-DEC-2008 03:37	chk		0.0020	| | |
1-DEC-2008 23:49	chk		0.0020	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-DEC-2008 04:25	chk		0.0020	| | |
3-DEC-2008 01:56	chk		0.0020	| | |
4-DEC-2008 03:28	chk		0.0020	| | |
5-DEC-2008 01:46	chk		0.0020	| | |
6-DEC-2008 04:51	chk		0.0021	| | |
8-DEC-2008 01:07	chk		0.0020	| | |
9-DEC-2008 02:41	chk		0.0020	| | |
10-DEC-2008 05:51	chk		0.0019	|In| |
10-DEC-2008 06:02	chk		0.0020	| | |
11-DEC-2008 03:05	chk		0.0020	| | |
12-DEC-2008 04:09	chk		0.0019	| | |
13-DEC-2008 07:10	chk		0.0019	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 2990.000000 Upper Bound : 3190.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		3092.4253	| | |
17-NOV-2008 06:51	chk		3092.7986	| | |
18-NOV-2008 01:08	chk		3092.7900	| | |
19-NOV-2008 01:37	chk		3092.7876	| | |
20-NOV-2008 01:50	chk		3092.8025	| | |
21-NOV-2008 04:04	chk		3092.9097	| | |
24-NOV-2008 04:58	chk		3092.8347	| | |
25-NOV-2008 04:38	chk		3092.7046	| | |
26-NOV-2008 03:32	chk		3092.8291	| | |
27-NOV-2008 06:58	chk		3092.8220	| | |
28-NOV-2008 07:05	chk		3092.6851	| | |
29-NOV-2008 07:27	chk		3092.8987	| | |
1-DEC-2008 03:37	chk		3092.7053	| | |
1-DEC-2008 23:49	chk		3092.6328	| | |
2-DEC-2008 04:25	chk		3092.8660	| | |
3-DEC-2008 01:56	chk		3092.7053	| | |

4-DEC-2008 03:28	chk	3092.4888	| | |
5-DEC-2008 01:46	chk	3092.7593	| | |
6-DEC-2008 04:51	chk	3092.8164	| | |
8-DEC-2008 01:07	chk	3092.9102	| | |
9-DEC-2008 02:41	chk	3092.8140	| | |
10-DEC-2008 05:51	chk	3092.7190	| | |
10-DEC-2008 06:02	chk	3093.0332	| | |
11-DEC-2008 03:05	chk	3092.9927	| | |
12-DEC-2008 04:09	chk	3092.8350	| | |
13-DEC-2008 07:10	chk	3092.3647	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-APR-2008 00:00 End Date : 1-OCT-2008 00:00
Mean : 1.864267 Std Deviation : 0.116797

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 7

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 07:01	chk		1.9250	| | |
17-NOV-2008 06:51	chk		2.0727	| | |
18-NOV-2008 01:08	chk		1.8251	| | |
19-NOV-2008 01:37	chk		2.0238	| | |
20-NOV-2008 01:50	chk		2.0348	| | |
21-NOV-2008 04:04	chk		1.9263	| | |
24-NOV-2008 04:58	chk		1.7760	| | |
25-NOV-2008 04:38	chk		2.0421	| | |
26-NOV-2008 03:32	chk		1.8675	| | |
27-NOV-2008 06:58	chk		2.1040	|In| |
28-NOV-2008 07:05	chk		2.1170	|In| |
29-NOV-2008 07:27	chk		2.0663	| | |
1-DEC-2008 03:37	chk		1.9197	| | |
1-DEC-2008 23:49	chk		2.0832	| | |
2-DEC-2008 04:25	chk		1.8828	| | |

3-DEC-2008 01:56	chk	1.8633	| | |
4-DEC-2008 03:28	chk	1.9542	| | |
5-DEC-2008 01:46	chk	1.9584	| | |
6-DEC-2008 04:51	chk	2.0637	| | |
8-DEC-2008 01:07	chk	1.9299	| | |
9-DEC-2008 02:41	chk	2.1259	|In| |
10-DEC-2008 05:51	chk	1.9632	| | |
10-DEC-2008 06:02	chk	1.8519	| | |
11-DEC-2008 03:05	chk	2.0166	| | |
12-DEC-2008 04:09	chk	1.8919	| | |
13-DEC-2008 07:10	chk	1.9076	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:06.73

QA Filename : RDND07$DKA100:[GER10.QA]BKG.QAF;5

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000000 Std Deviation : 0.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0000	| | |
23-NOV-2008 05:00	bkg		0.0000	| | |
30-NOV-2008 05:53	bkg		0.0000	| | |
7-DEC-2008 04:34	bkg		0.0000	| | |
14-DEC-2008 06:39	bkg		0.0000	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 11.319424 Std Deviation : 1.098946

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		12.6220	| | |
23-NOV-2008 05:00	bkg		13.0301	| | |
30-NOV-2008 05:53	bkg		13.1640	| | |
7-DEC-2008 04:34	bkg		13.0903	| | |
14-DEC-2008 06:39	bkg		12.8249	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.300282 Std Deviation : 2.282564

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		22.5006	| | |
23-NOV-2008 05:00	bkg		21.8305	| | |
30-NOV-2008 05:53	bkg		23.7271	| | |
7-DEC-2008 04:34	bkg		25.9761	|In| |
14-DEC-2008 06:39	bkg		22.4768	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.225100 Std Deviation : 2.318473

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		24.1150	| | |
23-NOV-2008 05:00	bkg		22.8452	| | |
30-NOV-2008 05:53	bkg		24.0651	| | |
7-DEC-2008 04:34	bkg		24.4680	| | |
14-DEC-2008 06:39	bkg		23.1923	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 16.909996 Std Deviation : 1.780819

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		18.9627	| | |
23-NOV-2008 05:00	bkg		17.7379	| | |
30-NOV-2008 05:53	bkg		18.3748	| | |
7-DEC-2008 04:34	bkg		19.0206	| | |
14-DEC-2008 06:39	bkg		18.0979	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.133825 Std Deviation : 1.958617

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		20.9143	| | |
23-NOV-2008 05:00	bkg		20.5564	| | |
30-NOV-2008 05:53	bkg		22.3607	| | |
7-DEC-2008 04:34	bkg		21.6413	| | |
14-DEC-2008 06:39	bkg		20.0899	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 16.492334 Std Deviation : 1.768150

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		18.6753	| | |
23-NOV-2008 05:00	bkg		17.4640	| | |
30-NOV-2008 05:53	bkg		18.9724	| | |
7-DEC-2008 04:34	bkg		18.7779	| | |
14-DEC-2008 06:39	bkg		17.8877	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 9.759295 Std Deviation : 1.045471

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		11.8175	| | |
23-NOV-2008 05:00	bkg		11.2594	| | |
30-NOV-2008 05:53	bkg		11.5950	| | |
7-DEC-2008 04:34	bkg		11.4917	| | |
14-DEC-2008 06:39	bkg		10.3103	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.600639 Std Deviation : 2.611883

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		27.1133	|In| |
23-NOV-2008 05:00	bkg		24.6161	| | |
30-NOV-2008 05:53	bkg		27.0164	|In| |
7-DEC-2008 04:34	bkg		28.0442	|In| |
14-DEC-2008 06:39	bkg		22.7542	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.496037 Std Deviation : 2.096033

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08 bkg	21.2216	| | |
23-NOV-2008 05:00 bkg	21.2384	| | |
30-NOV-2008 05:53 bkg	20.5183	| | |
7-DEC-2008 04:34 bkg	22.4241	| | |
14-DEC-2008 06:39 bkg	20.9695	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 6.537992 Std Deviation : 0.702433

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		7.5861	| | |
23-NOV-2008 05:00	bkg		7.3111	| | |
30-NOV-2008 05:53	bkg		7.6474	| | |
7-DEC-2008 04:34	bkg		7.8260	| | |
14-DEC-2008 06:39	bkg		7.4866	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 93.340706 Std Deviation : 9.980039

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08	bkg	105.0201	| | |
23-NOV-2008 05:00	bkg	102.0229	| | |
30-NOV-2008 05:53	bkg	109.1483	| | |
7-DEC-2008 04:34	bkg	108.0977	| | |
14-DEC-2008 06:39	bkg	103.1793	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:13.71

QA Filename : RDND07$DKA100:[GER11.QA]CHECK.QAF;3

analysis 12/6/08

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.006900 Upper Bound : 0.007270

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.007082 Std Deviation : 0.000063

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0070	| | |
17-NOV-2008 06:36	chk		0.0071	| | |
18-NOV-2008 03:39	chk		0.0070	| | |
19-NOV-2008 01:23	chk		0.0071	| | |
20-NOV-2008 01:32	chk		0.0071	| | |
21-NOV-2008 03:49	chk		0.0071	| | |
24-NOV-2008 04:43	chk		0.0071	| | |
25-NOV-2008 04:38	chk		0.0071	| | |
26-NOV-2008 03:17	chk		0.0070	| | |
1-DEC-2008 03:22	chk		0.0070	| | |
2-DEC-2008 01:27	chk		0.0071	| | |
3-DEC-2008 02:40	chk		0.0071	| | |
4-DEC-2008 01:53	chk		0.0070	| | |
5-DEC-2008 02:36	chk		0.0071	| | |
6-DEC-2008 04:57	chk		0.0071	| | |
8-DEC-2008 00:53	chk		0.0069	|In| |
9-DEC-2008 00:27	chk		0.0072	|In| |
10-DEC-2008 05:37	chk		0.0072	| | |
11-DEC-2008 03:05	chk		0.0071	| | |
12-DEC-2008 04:09	chk		0.0071	| | |
13-DEC-2008 06:32	chk		0.0072	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 430.000000 Upper Bound : 630.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		530.4779	| | |
17-NOV-2008 06:36	chk		530.4814	| | |
18-NOV-2008 03:39	chk		530.4937	| | |
19-NOV-2008 01:23	chk		530.5020	| | |
20-NOV-2008 01:32	chk		530.4959	| | |
21-NOV-2008 03:49	chk		530.4891	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
24-NOV-2008 04:43	chk		530.4467	| | |
25-NOV-2008 04:38	chk		530.4711	| | |
26-NOV-2008 03:17	chk		530.4622	| | |
1-DEC-2008 03:22	chk		530.4895	| | |
2-DEC-2008 01:27	chk		530.5137	| | |
3-DEC-2008 02:40	chk		530.5065	| | |
4-DEC-2008 01:53	chk		530.4823	| | |
5-DEC-2008 02:36	chk		530.4402	| | |
6-DEC-2008 04:57	chk		530.4782	| | |
8-DEC-2008 00:53	chk		530.5183	| | |
9-DEC-2008 00:27	chk		530.4990	| | |
10-DEC-2008 05:37	chk		530.5015	| | |
11-DEC-2008 03:05	chk		530.4547	| | |
12-DEC-2008 04:09	chk		530.5172	| | |
13-DEC-2008 06:32	chk		530.4569	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.692335 Std Deviation : 0.011525

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.6882	| | |
17-NOV-2008 06:36	chk		0.6908	| | |
18-NOV-2008 03:39	chk		0.6781	| | |
19-NOV-2008 01:23	chk		0.6863	| | |
20-NOV-2008 01:32	chk		0.6839	| | |
21-NOV-2008 03:49	chk		0.6866	| | |
24-NOV-2008 04:43	chk		0.6950	| | |
25-NOV-2008 04:38	chk		0.6873	| | |
26-NOV-2008 03:17	chk		0.6746	| | |
1-DEC-2008 03:22	chk		0.6770	| | |
2-DEC-2008 01:27	chk		0.7143	| | |
3-DEC-2008 02:40	chk		0.6952	| | |
4-DEC-2008 01:53	chk		0.6845	| | |
5-DEC-2008 02:36	chk		0.6788	| | |
6-DEC-2008 04:57	chk		0.6858	| | |
8-DEC-2008 00:53	chk		0.6790	| | |
9-DEC-2008 00:27	chk		0.6840	| | |
10-DEC-2008 05:37	chk		0.6871	| | |
11-DEC-2008 03:05	chk		0.6887	| | |
12-DEC-2008 04:09	chk		0.6912	| | |
13-DEC-2008 06:32	chk		0.6963	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001420 Upper Bound : 0.158000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001499 Std Deviation : 0.000026

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0015	| | |
17-NOV-2008 06:36	chk		0.0015	| | |
18-NOV-2008 03:39	chk		0.0015	| | |
19-NOV-2008 01:23	chk		0.0015	| | |
20-NOV-2008 01:32	chk		0.0015	| | |
21-NOV-2008 03:49	chk		0.0015	| | |
24-NOV-2008 04:43	chk		0.0015	| | |
25-NOV-2008 04:38	chk		0.0015	| | |
26-NOV-2008 03:17	chk		0.0016	|In| |
1-DEC-2008 03:22	chk		0.0015	| | |
2-DEC-2008 01:27	chk		0.0015	| | |
3-DEC-2008 02:40	chk		0.0015	| | |
4-DEC-2008 01:53	chk		0.0015	| | |
5-DEC-2008 02:36	chk		0.0015	| | |
6-DEC-2008 04:57	chk		0.0015	| | |
8-DEC-2008 00:53	chk		0.0015	| | |
9-DEC-2008 00:27	chk		0.0015	| | |
10-DEC-2008 05:37	chk		0.0015	| | |
11-DEC-2008 03:05	chk		0.0015	| | |
12-DEC-2008 04:09	chk		0.0015	| | |
13-DEC-2008 06:32	chk		0.0015	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5976.000000 Upper Bound : 6176.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		6075.8428	| | |
17-NOV-2008 06:36	chk		6075.7412	| | |
18-NOV-2008 03:39	chk		6075.7686	| | |
19-NOV-2008 01:23	chk		6075.7817	| | |
20-NOV-2008 01:32	chk		6075.8159	| | |

21-NOV-2008 03:49	chk	6075.8530		
24-NOV-2008 04:43	chk	6075.5762		
25-NOV-2008 04:38	chk	6075.7007		
26-NOV-2008 03:17	chk	6075.7896		
1-DEC-2008 03:22	chk	6075.7744		
2-DEC-2008 01:27	chk	6075.8027		
3-DEC-2008 02:40	chk	6075.8594		
4-DEC-2008 01:53	chk	6075.8979		
5-DEC-2008 02:36	chk	6075.6958		
6-DEC-2008 04:57	chk	6075.7178		
8-DEC-2008 00:53	chk	6075.6572		
9-DEC-2008 00:27	chk	6075.7363		
10-DEC-2008 05:37	chk	6075.8042		
11-DEC-2008 03:05	chk	6075.8740		
12-DEC-2008 04:09	chk	6075.9634		
13-DEC-2008 06:32	chk	6075.4434		

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.810724 Std Deviation : 0.081002

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.8797	
17-NOV-2008 06:36	chk		1.6788	
18-NOV-2008 03:39	chk		1.7247	
19-NOV-2008 01:23	chk		1.8929	
20-NOV-2008 01:32	chk		1.7853	
21-NOV-2008 03:49	chk		1.7431	
24-NOV-2008 04:43	chk		1.6355	In
25-NOV-2008 04:38	chk		1.6750	
26-NOV-2008 03:17	chk		1.7310	

1-DEC-2008 03:22	chk	1.7950			
2-DEC-2008 01:27	chk	1.8870			
3-DEC-2008 02:40	chk	1.8074			
4-DEC-2008 01:53	chk	1.8022			
5-DEC-2008 02:36	chk	1.8865			
6-DEC-2008 04:57	chk	1.8315			
8-DEC-2008 00:53	chk	1.7622			
9-DEC-2008 00:27	chk	1.8425			
10-DEC-2008 05:37	chk	1.8298			
11-DEC-2008 03:05	chk	1.7605			
12-DEC-2008 04:09	chk	1.7653			
13-DEC-2008 06:32	chk	1.6407	In		

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.002200 Upper Bound : 0.002530

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.002383 Std Deviation : 0.000057

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0024				
17-NOV-2008 06:36	chk		0.0023				
18-NOV-2008 03:39	chk		0.0023				
19-NOV-2008 01:23	chk		0.0024				
20-NOV-2008 01:32	chk		0.0024				
21-NOV-2008 03:49	chk		0.0024				
24-NOV-2008 04:43	chk		0.0023				
25-NOV-2008 04:38	chk		0.0023				
26-NOV-2008 03:17	chk		0.0023				
1-DEC-2008 03:22	chk		0.0024				
2-DEC-2008 01:27	chk		0.0023				
3-DEC-2008 02:40	chk		0.0024				
4-DEC-2008 01:53	chk		0.0023				
5-DEC-2008 02:36	chk		0.0024				

6-DEC-2008 04:57	chk	0.0025	|	| |
8-DEC-2008 00:53	chk	0.0025	|	| |
9-DEC-2008 00:27	chk	0.0024	|	| |

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-DEC-2008 05:37	chk		0.0024	| | |
11-DEC-2008 03:05	chk		0.0025	|In| |
12-DEC-2008 04:09	chk		0.0024	| | |
13-DEC-2008 06:32	chk		0.0024	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3265.000000 Upper Bound : 3465.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3364.4839	| | |
17-NOV-2008 06:36	chk		3364.3784	| | |
18-NOV-2008 03:39	chk		3364.3752	| | |
19-NOV-2008 01:23	chk		3364.4592	| | |
20-NOV-2008 01:32	chk		3364.6218	| | |
21-NOV-2008 03:49	chk		3364.4871	| | |
24-NOV-2008 04:43	chk		3364.2952	| | |
25-NOV-2008 04:38	chk		3364.2861	| | |
26-NOV-2008 03:17	chk		3364.1965	| | |
1-DEC-2008 03:22	chk		3364.4973	| | |
2-DEC-2008 01:27	chk		3364.6057	| | |
3-DEC-2008 02:40	chk		3364.5544	| | |
4-DEC-2008 01:53	chk		3364.2871	| | |
5-DEC-2008 02:36	chk		3364.4502	| | |
6-DEC-2008 04:57	chk		3364.3250	| | |
8-DEC-2008 00:53	chk		3364.4614	| | |
9-DEC-2008 00:27	chk		3364.3965	| | |
10-DEC-2008 05:37	chk		3364.5081	| | |
11-DEC-2008 03:05	chk		3364.3926	| | |
12-DEC-2008 04:09	chk		3364.6494	| | |
13-DEC-2008 06:32	chk		3364.1943	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.299247 Std Deviation : 0.054484

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.2681	| | |
17-NOV-2008 06:36	chk		1.2743	| | |
18-NOV-2008 03:39	chk		1.3575	| | |
19-NOV-2008 01:23	chk		1.2175	| | |
20-NOV-2008 01:32	chk		1.2247	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
21-NOV-2008 03:49	chk		1.2726	| | |
24-NOV-2008 04:43	chk		1.3844	| | |
25-NOV-2008 04:38	chk		1.2759	| | |
26-NOV-2008 03:17	chk		1.3694	| | |
1-DEC-2008 03:22	chk		1.2183	| | |
2-DEC-2008 01:27	chk		1.3129	| | |
3-DEC-2008 02:40	chk		1.2995	| | |
4-DEC-2008 01:53	chk		1.3381	| | |
5-DEC-2008 02:36	chk		1.3224	| | |
6-DEC-2008 04:57	chk		1.2775	| | |
8-DEC-2008 00:53	chk		1.3350	| | |
9-DEC-2008 00:27	chk		1.3373	| | |
10-DEC-2008 05:37	chk		1.3267	| | |
11-DEC-2008 03:05	chk		1.2776	| | |
12-DEC-2008 04:09	chk		1.3723	| | |
13-DEC-2008 06:32	chk		1.3190	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:48:14.38

QA Filename : RDND07$DKA100:[GER11.QA]BKG.QAF;3

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.100777 Std Deviation : 0.001928

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0985	| | |
17-NOV-2008 07:17	bkg		0.0957	|In| |
18-NOV-2008 04:52	bkg		0.0943	|Ac| |
19-NOV-2008 03:22	bkg		0.0972	| | |
20-NOV-2008 03:15	bkg		0.0960	|In| |
21-NOV-2008 10:18	bkg		0.0977	| | |
22-NOV-2008 06:23	bkg		0.0956	|In| |
23-NOV-2008 05:01	bkg		0.0941	|Ac| |
24-NOV-2008 05:22	bkg		0.1035	| | |
26-NOV-2008 04:25	bkg		0.1020	| | |
27-NOV-2008 06:33	bkg		0.3569	|Ac| |
28-NOV-2008 14:06	bkg		0.0972	| | |
30-NOV-2008 05:54	bkg		0.0959	|In| |
1-DEC-2008 05:18	bkg		0.0961	|In| |
7-DEC-2008 04:34	bkg		0.0986	| | |
8-DEC-2008 04:10	bkg		0.0981	| | |
14-DEC-2008 06:39	bkg		0.0965	|In| |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.078173 Std Deviation : 0.001703

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0774	| | |
17-NOV-2008 07:17	bkg		0.0760	| | |
18-NOV-2008 04:52	bkg		0.0782	| | |
19-NOV-2008 03:22	bkg		0.0806	| | |
20-NOV-2008 03:15	bkg		0.0808	| | |
21-NOV-2008 10:18	bkg		0.0783	| | |
22-NOV-2008 06:23	bkg		0.0817	|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-NOV-2008 05:01	bkg		0.0763	| | |
24-NOV-2008 05:22	bkg		0.0809	| | |
26-NOV-2008 04:25	bkg		0.0799	| | |
27-NOV-2008 06:33	bkg		0.7963	|Ac| |
28-NOV-2008 14:06	bkg		0.0763	| | |
30-NOV-2008 05:54	bkg		0.0779	| | |
1-DEC-2008 05:18	bkg		0.0772	| | |
7-DEC-2008 04:34	bkg		0.0764	| | |
8-DEC-2008 04:10	bkg		0.0781	| | |
14-DEC-2008 06:39	bkg		0.0787	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.043418 Std Deviation : 0.002012

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0440	| | |
17-NOV-2008 07:17	bkg		0.0425	| | |

18-NOV-2008 04:52	bkg	0.0448	| | |
19-NOV-2008 03:22	bkg	0.0424	| | |
20-NOV-2008 03:15	bkg	0.0447	| | |
21-NOV-2008 10:18	bkg	0.0409	| | |
22-NOV-2008 06:23	bkg	0.0442	| | |
23-NOV-2008 05:01	bkg	0.0414	| | |
24-NOV-2008 05:22	bkg	0.0410	| | |
26-NOV-2008 04:25	bkg	0.0419	| | |
27-NOV-2008 06:33	bkg	0.0411	| | |
28-NOV-2008 14:06	bkg	0.0447	| | |
30-NOV-2008 05:54	bkg	0.0404	| | |
1-DEC-2008 05:18	bkg	0.0455	| | |
7-DEC-2008 04:34	bkg	0.0445	| | |
8-DEC-2008 04:10	bkg	0.0431	| | |
14-DEC-2008 06:39	bkg	0.0422	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.050578 Std Deviation : 0.001723

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0521	| | |
17-NOV-2008 07:17	bkg		0.0481	| | |
18-NOV-2008 04:52	bkg		0.0450	|Ac| |
19-NOV-2008 03:22	bkg		0.0510	| | |
20-NOV-2008 03:15	bkg		0.0496	| | |
21-NOV-2008 10:18	bkg		0.0496	| | |
22-NOV-2008 06:23	bkg		0.0478	| | |
23-NOV-2008 05:01	bkg		0.0539	| | |
24-NOV-2008 05:22	bkg		0.0527	| | |
26-NOV-2008 04:25	bkg		0.0531	| | |

27-NOV-2008 06:33 bkg	0.0995	|Ac| |
28-NOV-2008 14:06 bkg	0.0498	| |
30-NOV-2008 05:54 bkg	0.0506	| |
1-DEC-2008 05:18 bkg	0.0529	| |
7-DEC-2008 04:34 bkg	0.0513	| |
8-DEC-2008 04:10 bkg	0.0534	| |
14-DEC-2008 06:39 bkg	0.0480	| |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.064188 Std Deviation : 0.002256

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0622	| | |
17-NOV-2008 07:17	bkg		0.0607	| | |
18-NOV-2008 04:52	bkg		0.0675	| | |
19-NOV-2008 03:22	bkg		0.0637	| | |
20-NOV-2008 03:15	bkg		0.0628	| | |
21-NOV-2008 10:18	bkg		0.0646	| | |
22-NOV-2008 06:23	bkg		0.0633	| | |
23-NOV-2008 05:01	bkg		0.0646	| | |
24-NOV-2008 05:22	bkg		0.0669	| | |
26-NOV-2008 04:25	bkg		0.0610	| | |
27-NOV-2008 06:33	bkg		0.6568	|Ac| |
28-NOV-2008 14:06	bkg		0.0625	| | |
30-NOV-2008 05:54	bkg		0.0661	| | |
1-DEC-2008 05:18	bkg		0.0684	| | |
7-DEC-2008 04:34	bkg		0.0613	| | |
8-DEC-2008 04:10	bkg		0.0589	|In| |
14-DEC-2008 06:39	bkg		0.0622	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.072554 Std Deviation : 0.002299

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0740	| | |
17-NOV-2008 07:17	bkg		0.0690	| | |
18-NOV-2008 04:52	bkg		0.0743	| | |
19-NOV-2008 03:22	bkg		0.0723	| | |
20-NOV-2008 03:15	bkg		0.0759	| | |
21-NOV-2008 10:18	bkg		0.0713	| | |
22-NOV-2008 06:23	bkg		0.0717	| | |
23-NOV-2008 05:01	bkg		0.0727	| | |
24-NOV-2008 05:22	bkg		0.0739	| | |
26-NOV-2008 04:25	bkg		0.0681	| | |
27-NOV-2008 06:33	bkg		0.0640	|Ac| |
28-NOV-2008 14:06	bkg		0.0695	| | |
30-NOV-2008 05:54	bkg		0.0734	| | |
1-DEC-2008 05:18	bkg		0.0728	| | |
7-DEC-2008 04:34	bkg		0.0693	| | |
8-DEC-2008 04:10	bkg		0.0724	| | |
14-DEC-2008 06:39	bkg		0.0714	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.069468 Std Deviation : 0.001731

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

16-NOV-2008 10:08	bkg	0.0682	| | |
17-NOV-2008 07:17	bkg	0.0676	| | |
18-NOV-2008 04:52	bkg	0.0693	| | |
19-NOV-2008 03:22	bkg	0.0681	| | |
20-NOV-2008 03:15	bkg	0.0672	| | |
21-NOV-2008 10:18	bkg	0.0655	|In| |
22-NOV-2008 06:23	bkg	0.0699	| | |
23-NOV-2008 05:01	bkg	0.0666	| | |
24-NOV-2008 05:22	bkg	0.0704	| | |
26-NOV-2008 04:25	bkg	0.0683	| | |
27-NOV-2008 06:33	bkg	0.0780	|Ac| |
28-NOV-2008 14:06	bkg	0.0678	| | |
30-NOV-2008 05:54	bkg	0.0693	| | |
1-DEC-2008 05:18	bkg	0.0719	| | |
7-DEC-2008 04:34	bkg	0.0715	| | |
8-DEC-2008 04:10	bkg	0.0696	| | |
14-DEC-2008 06:39	bkg	0.0676	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.084528 Std Deviation : 0.002222

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0844	| | |
17-NOV-2008 07:17	bkg		0.0901	|In| |
18-NOV-2008 04:52	bkg		0.0891	|In| |
19-NOV-2008 03:22	bkg		0.0870	| | |
20-NOV-2008 03:15	bkg		0.0875	| | |
21-NOV-2008 10:18	bkg		0.0908	|In| |
22-NOV-2008 06:23	bkg		0.0871	| | |

23-NOV-2008 05:01	bkg	0.0900	|In| |
24-NOV-2008 05:22	bkg	0.0893	|In| |
26-NOV-2008 04:25	bkg	0.0910	|In| |
27-NOV-2008 06:33	bkg	0.1920	|Ac| |
28-NOV-2008 14:06	bkg	0.0852	| | |
30-NOV-2008 05:54	bkg	0.0909	|In| |
1-DEC-2008 05:18	bkg	0.0863	| | |
7-DEC-2008 04:34	bkg	0.0902	|In| |
8-DEC-2008 04:10	bkg	0.0872	| | |
14-DEC-2008 06:39	bkg	0.0863	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.083465 Std Deviation : 0.003569

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0988	|Ac| |
17-NOV-2008 07:17	bkg		0.0971	|Ac| |
18-NOV-2008 04:52	bkg		0.1118	|Ac| |
19-NOV-2008 03:22	bkg		0.0916	|In| |
20-NOV-2008 03:15	bkg		0.1017	|Ac| |
21-NOV-2008 10:18	bkg		0.0974	|Ac| |
22-NOV-2008 06:23	bkg		0.0961	|Ac| |
23-NOV-2008 05:01	bkg		0.0988	|Ac| |
24-NOV-2008 05:22	bkg		0.1084	|Ac| |
26-NOV-2008 04:25	bkg		0.1038	|Ac| |
27-NOV-2008 06:33	bkg		0.1458	|Ac| |
28-NOV-2008 14:06	bkg		0.1078	|Ac| |
30-NOV-2008 05:54	bkg		0.0922	|In| |
1-DEC-2008 05:18	bkg		0.0882	| | |
7-DEC-2008 04:34	bkg		0.1003	|Ac| |
8-DEC-2008 04:10	bkg		0.0889	| | |
14-DEC-2008 06:39	bkg		0.0849	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.058390 Std Deviation : 0.001546

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0564	| | |
17-NOV-2008 07:17	bkg		0.0570	| | |
18-NOV-2008 04:52	bkg		0.0575	| | |
19-NOV-2008 03:22	bkg		0.0518	|Ac| |
20-NOV-2008 03:15	bkg		0.0576	| | |
21-NOV-2008 10:18	bkg		0.0558	| | |
22-NOV-2008 06:23	bkg		0.0551	|In| |
23-NOV-2008 05:01	bkg		0.0603	| | |
24-NOV-2008 05:22	bkg		0.0559	| | |
26-NOV-2008 04:25	bkg		0.0535	|Ac| |
27-NOV-2008 06:33	bkg		0.2024	|Ac| |
28-NOV-2008 14:06	bkg		0.0575	| | |
30-NOV-2008 05:54	bkg		0.0556	| | |
1-DEC-2008 05:18	bkg		0.0558	| | |
7-DEC-2008 04:34	bkg		0.0597	| | |
8-DEC-2008 04:10	bkg		0.0551	|In| |
14-DEC-2008 06:39	bkg		0.0571	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.079745 Std Deviation : 0.001542

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0782	| | |
17-NOV-2008 07:17	bkg		0.0800	| | |
18-NOV-2008 04:52	bkg		0.0778	| | |
19-NOV-2008 03:22	bkg		0.0825	| | |
20-NOV-2008 03:15	bkg		0.0829	|In| |
21-NOV-2008 10:18	bkg		0.0822	| | |
22-NOV-2008 06:23	bkg		0.0858	|Ac| |
23-NOV-2008 05:01	bkg		0.0807	| | |
24-NOV-2008 05:22	bkg		0.0853	|Ac| |
26-NOV-2008 04:25	bkg		0.0784	| | |
27-NOV-2008 06:33	bkg		No Value	| | |
28-NOV-2008 14:06	bkg		0.0812	| | |
30-NOV-2008 05:54	bkg		0.0846	|Ac| |
1-DEC-2008 05:18	bkg		0.0772	| | |
7-DEC-2008 04:34	bkg		0.0807	| | |
8-DEC-2008 04:10	bkg		0.0817	| | |
14-DEC-2008 06:39	bkg		0.0798	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.626021 Std Deviation : 0.016480

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.6107	| | |
17-NOV-2008 07:17	bkg		0.6012	| | |
18-NOV-2008 04:52	bkg		0.6279	| | |
19-NOV-2008 03:22	bkg		0.6158	| | |

20-NOV-2008 03:15	bkg	0.6402 | | |
21-NOV-2008 10:18	bkg	0.6242 | | |
22-NOV-2008 06:23	bkg	0.6348 | | |
23-NOV-2008 05:01	bkg	0.6240 | | |
24-NOV-2008 05:22	bkg	0.6511 | | |
26-NOV-2008 04:25	bkg	0.6097 | | |
27-NOV-2008 06:33	bkg	0.6109 | | |
28-NOV-2008 14:06	bkg	0.6366 | | |
30-NOV-2008 05:54	bkg	0.6207 | | |
1-DEC-2008 05:18	bkg	0.6302 | | |
7-DEC-2008 04:34	bkg	0.6215 | | |
8-DEC-2008 04:10	bkg	0.6248 | | |
14-DEC-2008 06:39	bkg	0.6336 | | |

Quality Assurance Report. Generated 16-DEC-2008 14:47:58.80

QA Filename : RDND07$DKA100:[GER13.QA]CHECK.QAF;6

-- Multi-Test Full Report --

analysis 12/16/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.004500 Upper Bound : 0.004800

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.004629 Std Deviation : 0.000055

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0047				
15-NOV-2008 06:48	chk		0.0047				
17-NOV-2008 06:31	chk		0.0047				
18-NOV-2008 00:55	chk		0.0047				
19-NOV-2008 01:23	chk		0.0046				
20-NOV-2008 01:32	chk		0.0047				
21-NOV-2008 03:49	chk		0.0046				
24-NOV-2008 04:43	chk		0.0047				
25-NOV-2008 08:40	chk		0.0047				
26-NOV-2008 03:17	chk		0.0046				
27-NOV-2008 06:34	chk		0.0046				
28-NOV-2008 06:48	chk		0.0047				
29-NOV-2008 07:10	chk		0.0047	In			
1-DEC-2008 03:22	chk		0.0046				
1-DEC-2008 23:35	chk		0.0046				
2-DEC-2008 04:12	chk		0.0047				
3-DEC-2008 02:08	chk		0.0047				
4-DEC-2008 03:16	chk		0.0046				
5-DEC-2008 01:31	chk		0.0046				
6-DEC-2008 05:05	chk		0.0046				
8-DEC-2008 00:53	chk		0.0047				

9-DEC-2008 02:29 chk	0.0046	| | |
10-DEC-2008 05:37 chk	0.0046	| | |
11-DEC-2008 05:52 chk	0.0046	| | |
12-DEC-2008 05:54 chk	0.0045	| | |
13-DEC-2008 06:32 chk	0.0046	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 388.000000 Upper Bound : 588.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		488.8423	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:48	chk		488.8034	| | |
17-NOV-2008 06:31	chk		488.8122	| | |
18-NOV-2008 00:55	chk		488.8568	| | |
19-NOV-2008 01:23	chk		488.8559	| | |
20-NOV-2008 01:32	chk		488.7582	| | |
21-NOV-2008 03:49	chk		488.8306	| | |
24-NOV-2008 04:43	chk		488.7612	| | |
25-NOV-2008 08:40	chk		488.7292	| | |
26-NOV-2008 03:17	chk		488.7793	| | |
27-NOV-2008 06:34	chk		488.7016	| | |
28-NOV-2008 06:48	chk		488.7145	| | |
29-NOV-2008 07:10	chk		488.6658	| | |
1-DEC-2008 03:22	chk		488.6941	| | |
1-DEC-2008 23:35	chk		488.7690	| | |
2-DEC-2008 04:12	chk		488.5867	| | |
3-DEC-2008 02:08	chk		488.7772	| | |
4-DEC-2008 03:16	chk		488.7381	| | |
5-DEC-2008 01:31	chk		488.7118	| | |
6-DEC-2008 05:05	chk		488.7339	| | |
8-DEC-2008 00:53	chk		488.7346	| | |
9-DEC-2008 02:29	chk		488.7041	| | |
10-DEC-2008 05:37	chk		488.6696	| | |

11-DEC-2008 05:52 chk	488.6965	| |
12-DEC-2008 05:54 chk	488.6807	| |
13-DEC-2008 06:32 chk	488.6314	| |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.956896 Std Deviation : 0.017042

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.9178	|In| |
15-NOV-2008 06:48	chk		0.9700	| |
17-NOV-2008 06:31	chk		0.9610	| |
18-NOV-2008 00:55	chk		0.9614	| |
19-NOV-2008 01:23	chk		0.9584	| |
20-NOV-2008 01:32	chk		0.9317	| |
21-NOV-2008 03:49	chk		0.9546	| |
24-NOV-2008 04:43	chk		0.9488	| |
25-NOV-2008 08:40	chk		0.9426	| |
26-NOV-2008 03:17	chk		0.9552	| |
27-NOV-2008 06:34	chk		0.9715	| |
28-NOV-2008 06:48	chk		0.9646	| |
29-NOV-2008 07:10	chk		0.9725	| |
1-DEC-2008 03:22	chk		0.9173	|In| |
1-DEC-2008 23:35	chk		0.9602	| |
2-DEC-2008 04:12	chk		0.9677	| |

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-DEC-2008 02:08	chk		0.9602	| |
4-DEC-2008 03:16	chk		0.9722	| |
5-DEC-2008 01:31	chk		0.9676	| |
6-DEC-2008 05:05	chk		0.9905	| |
8-DEC-2008 00:53	chk		0.9894	| |
9-DEC-2008 02:29	chk		0.9526	| |

10-DEC-2008 05:37	chk	0.9873		
11-DEC-2008 05:52	chk	0.9401		
12-DEC-2008 05:54	chk	0.9599		
13-DEC-2008 06:32	chk	0.9486		

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000857 Upper Bound : 0.001100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000971 Std Deviation : 0.000035

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		0.0008	Be|Ac|
15-NOV-2008 06:48	chk		0.0010	
17-NOV-2008 06:31	chk		0.0010	
18-NOV-2008 00:55	chk		0.0010	
19-NOV-2008 01:23	chk		0.0010	
20-NOV-2008 01:32	chk		0.0009	|In|
21-NOV-2008 03:49	chk		0.0010	
24-NOV-2008 04:43	chk		0.0010	
25-NOV-2008 08:40	chk		0.0010	
26-NOV-2008 03:17	chk		0.0010	
27-NOV-2008 06:34	chk		0.0010	
28-NOV-2008 06:48	chk		0.0009	
29-NOV-2008 07:10	chk		0.0010	
1-DEC-2008 03:22	chk		0.0010	
1-DEC-2008 23:35	chk		0.0010	
2-DEC-2008 04:12	chk		0.0010	
3-DEC-2008 02:08	chk		0.0009	
4-DEC-2008 03:16	chk		0.0010	
5-DEC-2008 01:31	chk		0.0010	
6-DEC-2008 05:05	chk		0.0010	
8-DEC-2008 00:53	chk		0.0010	
9-DEC-2008 02:29	chk		0.0010	

10-DEC-2008 05:37 chk	0.0010	| | |
11-DEC-2008 05:52 chk	0.0010	| | |
12-DEC-2008 05:54 chk	0.0010	| | |
13-DEC-2008 06:32 chk	0.0009	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5526.000000 Upper Bound : 5726.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		5629.7607	| | |
15-NOV-2008 06:48	chk		5628.8735	| | |
17-NOV-2008 06:31	chk		5628.8501	| | |
18-NOV-2008 00:55	chk		5628.8276	| | |
19-NOV-2008 01:23	chk		5628.5884	| | |
20-NOV-2008 01:32	chk		5629.2744	| | |
21-NOV-2008 03:49	chk		5628.6616	| | |
24-NOV-2008 04:43	chk		5628.2837	| | |
25-NOV-2008 08:40	chk		5628.0479	| | |
26-NOV-2008 03:17	chk		5628.3081	| | |
27-NOV-2008 06:34	chk		5628.3589	| | |
28-NOV-2008 06:48	chk		5628.2520	| | |
29-NOV-2008 07:10	chk		5628.2861	| | |
1-DEC-2008 03:22	chk		5628.0835	| | |
1-DEC-2008 23:35	chk		5628.1650	| | |
2-DEC-2008 04:12	chk		5627.5547	| | |
3-DEC-2008 02:08	chk		5628.3394	| | |
4-DEC-2008 03:16	chk		5628.1514	| | |
5-DEC-2008 01:31	chk		5627.9126	| | |
6-DEC-2008 05:05	chk		5628.0645	| | |
8-DEC-2008 00:53	chk		5627.9712	| | |
9-DEC-2008 02:29	chk		5628.0933	| | |
10-DEC-2008 05:37	chk		5627.9087	| | |
11-DEC-2008 05:52	chk		5627.9756	| | |

12-DEC-2008 05:54	chk		5627.5698	| | |
13-DEC-2008 06:32	chk		5627.8833	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 2.023201 Std Deviation : 0.112675

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.8973	| | |
15-NOV-2008 06:48	chk		2.0238	| | |
17-NOV-2008 06:31	chk		1.9543	| | |
18-NOV-2008 00:55	chk		1.9929	| | |
19-NOV-2008 01:23	chk		1.9851	| | |
20-NOV-2008 01:32	chk		2.0737	| | |
21-NOV-2008 03:49	chk		2.2613	|In| |
24-NOV-2008 04:43	chk		2.0007	| | |
25-NOV-2008 08:40	chk		2.0358	| | |
26-NOV-2008 03:17	chk		2.2717	|In| |
27-NOV-2008 06:34	chk		1.8844	| | |
28-NOV-2008 06:48	chk		2.0918	| | |
29-NOV-2008 07:10	chk		2.0045	| | |
1-DEC-2008 03:22	chk		2.0645	| | |
1-DEC-2008 23:35	chk		1.9691	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-DEC-2008 04:12	chk		2.2189	| | |
3-DEC-2008 02:08	chk		1.9772	| | |
4-DEC-2008 03:16	chk		1.9677	| | |
5-DEC-2008 01:31	chk		1.9826	| | |
6-DEC-2008 05:05	chk		2.1932	| | |
8-DEC-2008 00:53	chk		2.0048	| | |
9-DEC-2008 02:29	chk		2.2075	| | |
10-DEC-2008 05:37	chk		2.0035	| | |

11-DEC-2008 05:52	chk	2.1306		
12-DEC-2008 05:54	chk	1.9151		
13-DEC-2008 06:32	chk	2.2156		

-- Multi-Test Full Report --

Description : 778.87 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001447 Upper Bound : 0.001693

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.001573 Std Deviation : 0.000050

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	chk		0.0016				
15-NOV-2008 06:48	chk		0.0016				
17-NOV-2008 06:31	chk		0.0015				
18-NOV-2008 00:55	chk		0.0016				
19-NOV-2008 01:23	chk		0.0016				
20-NOV-2008 01:32	chk		0.0017				
21-NOV-2008 03:49	chk		0.0016				
24-NOV-2008 04:43	chk		0.0016				
25-NOV-2008 08:40	chk		0.0015				
26-NOV-2008 03:17	chk		0.0016				
27-NOV-2008 06:34	chk		0.0017	In			
28-NOV-2008 06:48	chk		0.0015				
29-NOV-2008 07:10	chk		0.0016				
1-DEC-2008 03:22	chk		0.0015				
1-DEC-2008 23:35	chk		0.0015				
2-DEC-2008 04:12	chk		0.0015				
3-DEC-2008 02:08	chk		0.0016				
4-DEC-2008 03:16	chk		0.0016				
5-DEC-2008 01:31	chk		0.0017				
6-DEC-2008 05:05	chk		0.0016				
8-DEC-2008 00:53	chk		0.0016				
9-DEC-2008 02:29	chk		0.0015				
10-DEC-2008 05:37	chk		0.0016				

11-DEC-2008 05:52 chk	0.0016	| | |
12-DEC-2008 05:54 chk	0.0016	| | |
13-DEC-2008 06:32 chk	0.0016	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channles Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3010.000000 Upper Bound : 3210.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		3112.0757	| | |
15-NOV-2008 06:48	chk		3111.6716	| | |
17-NOV-2008 06:31	chk		3111.7090	| | |
18-NOV-2008 00:55	chk		3111.8857	| | |
19-NOV-2008 01:23	chk		3111.8694	| | |
20-NOV-2008 01:32	chk		3111.8372	| | |
21-NOV-2008 03:49	chk		3111.8428	| | |
24-NOV-2008 04:43	chk		3111.3708	| | |
25-NOV-2008 08:40	chk		3111.1428	| | |
26-NOV-2008 03:17	chk		3111.5359	| | |
27-NOV-2008 06:34	chk		3111.6653	| | |
28-NOV-2008 06:48	chk		3111.5654	| | |
29-NOV-2008 07:10	chk		3111.3416	| | |
1-DEC-2008 03:22	chk		3111.6523	| | |
1-DEC-2008 23:35	chk		3111.5815	| | |
2-DEC-2008 04:12	chk		3111.2339	| | |
3-DEC-2008 02:08	chk		3111.4558	| | |
4-DEC-2008 03:16	chk		3111.7329	| | |
5-DEC-2008 01:31	chk		3111.2034	| | |
6-DEC-2008 05:05	chk		3111.2029	| | |
8-DEC-2008 00:53	chk		3111.3586	| | |
9-DEC-2008 02:29	chk		3111.1897	| | |
10-DEC-2008 05:37	chk		3111.4429	| | |
11-DEC-2008 05:52	chk		3111.3247	| | |
12-DEC-2008 05:54	chk		3111.4241	| | |

13-DEC-2008 06:32 chk 3111.1174 | | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.588585 Std Deviation : 0.085447

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	chk		1.6445	| | |
15-NOV-2008 06:48	chk		1.5788	| | |
17-NOV-2008 06:31	chk		1.6284	| | |
18-NOV-2008 00:55	chk		1.5742	| | |
19-NOV-2008 01:23	chk		1.6319	| | |
20-NOV-2008 01:32	chk		1.5294	| | |
21-NOV-2008 03:49	chk		1.4572	| | |
24-NOV-2008 04:43	chk		1.6931	| | |
25-NOV-2008 08:40	chk		1.6825	| | |
26-NOV-2008 03:17	chk		1.5294	| | |
27-NOV-2008 06:34	chk		1.5387	| | |
28-NOV-2008 06:48	chk		1.4599	| | |
29-NOV-2008 07:10	chk		1.5008	| | |
1-DEC-2008 03:22	chk		1.6249	| | |
1-DEC-2008 23:35	chk		1.5188	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-DEC-2008 04:12	chk		1.7300	| | |
3-DEC-2008 02:08	chk		1.4662	| | |
4-DEC-2008 03:16	chk		1.6283	| | |
5-DEC-2008 01:31	chk		1.5995	| | |
6-DEC-2008 05:05	chk		1.5465	| | |
8-DEC-2008 00:53	chk		1.5058	| | |
9-DEC-2008 02:29	chk		1.6693	| | |
10-DEC-2008 05:37	chk		1.5666	| | |
11-DEC-2008 05:52	chk		1.6360	| | |

12-DEC-2008 05:54 chk 1.5861 | | |
13-DEC-2008 06:32 chk 1.5729 | | |

Quality Assurance Report. Generated 16-DEC-2008 14:47:59.49

QA Filename : RDND07$DKA100:[GER13.QA]BKG.QAF;4

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0000	| | |
23-NOV-2008 05:01	bkg		0.0000	| | |
30-NOV-2008 05:54	bkg		0.0000	| | |
7-DEC-2008 04:34	bkg		0.0000	| | |
14-DEC-2008 06:39	bkg		0.0000	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.372843 Std Deviation : 27.325249

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		15.5376	| | |
23-NOV-2008 05:01	bkg		14.5093	| | |
30-NOV-2008 05:54	bkg		14.7199	| | |
7-DEC-2008 04:34	bkg		15.5581	| | |
14-DEC-2008 06:39	bkg		15.2306	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM

Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 26.118835 Std Deviation : 2.859923

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		26.9349	| | |
23-NOV-2008 05:01	bkg		28.2509	| | |
30-NOV-2008 05:54	bkg		27.3549	| | |
7-DEC-2008 04:34	bkg		27.7783	| | |
14-DEC-2008 06:39	bkg		27.6134	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 28.905891 Std Deviation : 6.634084

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		29.4196	| | |
23-NOV-2008 05:01	bkg		30.0088	| | |
30-NOV-2008 05:54	bkg		30.3100	| | |
7-DEC-2008 04:34	bkg		30.4983	| | |
14-DEC-2008 06:39	bkg		31.2196	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 26.626293 Std Deviation : 36.723110

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		19.5217	| | |
23-NOV-2008 05:01	bkg		20.6844	| | |
30-NOV-2008 05:54	bkg		20.9239	| | |
7-DEC-2008 04:34	bkg		20.5890	| | |
14-DEC-2008 06:39	bkg		21.0389	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.243238 Std Deviation : 2.668736

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		22.9619	| | |
23-NOV-2008 05:01	bkg		21.8710	| | |
30-NOV-2008 05:54	bkg		21.6360	| | |
7-DEC-2008 04:34	bkg		22.5120	| | |
14-DEC-2008 06:39	bkg		22.2061	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 20.426060 Std Deviation : 2.385175

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		21.3837	| | |
23-NOV-2008 05:01	bkg		21.5183	| | |
30-NOV-2008 05:54	bkg		21.1782	| | |
7-DEC-2008 04:34	bkg		22.5668	| | |
14-DEC-2008 06:39	bkg		21.6227	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 15.257144 Std Deviation : 3.584542

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		15.3618	| | |
23-NOV-2008 05:01	bkg		15.2240	| | |
30-NOV-2008 05:54	bkg		15.1999	| | |
7-DEC-2008 04:34	bkg		15.4997	| | |
14-DEC-2008 06:39	bkg		15.5781	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 30.413147 Std Deviation : 7.479958

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		32.3121	| | |
23-NOV-2008 05:01	bkg		31.4255	| | |
30-NOV-2008 05:54	bkg		30.4259	| | |
7-DEC-2008 04:34	bkg		32.7663	| | |
14-DEC-2008 06:39	bkg		30.6143	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 35.730511 Std Deviation : 18.326689

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		33.0868	| | |
23-NOV-2008 05:01	bkg		34.1473	| | |
30-NOV-2008 05:54	bkg		34.3822	| | |
7-DEC-2008 04:34	bkg		33.0139	| | |
14-DEC-2008 06:39	bkg		32.8403	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 9.082126 Std Deviation : 0.911474

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		9.4654	| | |
23-NOV-2008 05:01	bkg		9.2777	| | |
30-NOV-2008 05:54	bkg		9.4952	| | |
7-DEC-2008 04:34	bkg		9.5759	| | |
14-DEC-2008 06:39	bkg		9.5015	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 124.494995 Std Deviation : 12.733738

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		130.8738	| | |
23-NOV-2008 05:01	bkg		127.9690	| | |
30-NOV-2008 05:54	bkg		132.7927	| | |
7-DEC-2008 04:34	bkg		131.2757	| | |
14-DEC-2008 06:39	bkg		132.0774	| | |

Quality Assurance Report. Generated 17-DEC-2008 18:43:26.73

QA Filename : RDND07$DKA100:[GER14.QA]CHECK.QAF;4

-- Multi-Test Full Report --

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

analysis 12/6/08

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.006126 Std Deviation : 0.000051

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		0.0062	| | |
21-OCT-2008 04:44	chk		0.0062	| | |
22-OCT-2008 01:38	chk		0.0061	| | |
23-OCT-2008 04:33	chk		0.0061	| | |
24-OCT-2008 06:17	chk		0.0061	| | |
25-OCT-2008 07:07	chk		0.0061	| | |
27-OCT-2008 06:35	chk		0.0061	| | |
28-OCT-2008 07:02	chk		0.0062	|In| |
29-OCT-2008 06:54	chk		0.0062	| | |
30-OCT-2008 06:34	chk		0.0062	| | |
31-OCT-2008 06:37	chk		0.0062	| | |
1-NOV-2008 08:28	chk		0.0061	| | |
4-NOV-2008 04:26	chk		0.0061	| | |
5-NOV-2008 03:20	chk		0.0061	| | |
6-NOV-2008 03:04	chk		0.0061	| | |
7-NOV-2008 01:45	chk		0.0061	| | |
8-NOV-2008 05:18	chk		0.0061	| | |
10-NOV-2008 02:54	chk		0.0061	| | |
11-NOV-2008 04:33	chk		0.0060	|In| |
12-NOV-2008 06:27	chk		0.0060	| | |
13-NOV-2008 02:54	chk		0.0062	| | |
14-NOV-2008 04:30	chk		0.0060	| | |
15-NOV-2008 06:29	chk		0.0061	| | |
17-NOV-2008 06:31	chk		0.0061	| | |

18-NOV-2008 03:39	chk	0.0062	| |	|
19-NOV-2008 01:23	chk	0.0061	| |	|
20-NOV-2008 01:32	chk	0.0060	|In|	|
21-NOV-2008 03:49	chk	0.0061	| |	|
24-NOV-2008 04:43	chk	0.0062	| |	|
25-NOV-2008 04:38	chk	0.0062	| |	|
26-NOV-2008 03:17	chk	0.0061	| |	|
27-NOV-2008 06:34	chk	0.0061	| |	|
28-NOV-2008 06:48	chk	0.0061	| |	|
29-NOV-2008 07:10	chk	0.0060	| |	|
1-DEC-2008 03:22	chk	0.0061	| |	|
2-DEC-2008 01:27	chk	0.0062	| |	|
4-DEC-2008 15:28	chk	0.0061	| |	|
5-DEC-2008 02:36	chk	0.0061	| |	|
6-DEC-2008 04:52	chk	0.0062	| |	|
8-DEC-2008 00:53	chk	0.0061	| |	|
9-DEC-2008 00:27	chk	0.0061	| |	|

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-DEC-2008 05:37	chk		0.0060	| | |
11-DEC-2008 03:05	chk		0.0061	| | |
12-DEC-2008 04:09	chk		0.0062	| | |
13-DEC-2008 07:11	chk		0.0062	| | |
15-DEC-2008 04:09	chk		0.0061	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		493.2100	| | |
21-OCT-2008 04:44	chk		493.2981	| | |
22-OCT-2008 01:38	chk		493.3171	| | |
23-OCT-2008 04:33	chk		493.1996	| | |
24-OCT-2008 06:17	chk		493.2861	| | |
25-OCT-2008 07:07	chk		493.2265	| | |
27-OCT-2008 06:35	chk		493.2037	| | |
28-OCT-2008 07:02	chk		493.1459	| | |
29-OCT-2008 06:54	chk		493.1705	| | |

30-OCT-2008 06:34 chk	493.1396	| | |
31-OCT-2008 06:37 chk	493.2586	| | |
1-NOV-2008 08:28 chk	493.2737	| | |
4-NOV-2008 04:26 chk	493.2170	| | |
5-NOV-2008 03:20 chk	493.2251	| | |
6-NOV-2008 03:04 chk	493.2014	| | |
7-NOV-2008 01:45 chk	493.2724	| | |
8-NOV-2008 05:18 chk	493.2179	| | |
10-NOV-2008 02:54 chk	493.2928	| | |
11-NOV-2008 04:33 chk	493.3128	| | |
12-NOV-2008 06:27 chk	493.2721	| | |
13-NOV-2008 02:54 chk	493.2545	| | |
14-NOV-2008 04:30 chk	493.2665	| | |
15-NOV-2008 06:29 chk	493.2638	| | |
17-NOV-2008 06:31 chk	493.2363	| | |
18-NOV-2008 03:39 chk	493.2484	| | |
19-NOV-2008 01:23 chk	493.2271	| | |
20-NOV-2008 01:32 chk	493.2648	| | |
21-NOV-2008 03:49 chk	493.2322	| | |
24-NOV-2008 04:43 chk	493.1975	| | |
25-NOV-2008 04:38 chk	493.1345	| | |
26-NOV-2008 03:17 chk	493.2263	| | |
27-NOV-2008 06:34 chk	493.2065	| | |
28-NOV-2008 06:48 chk	493.1879	| | |
29-NOV-2008 07:10 chk	493.1780	| | |
1-DEC-2008 03:22 chk	493.2574	| | |
2-DEC-2008 01:27 chk	493.2109	| | |
4-DEC-2008 15:28 chk	493.2072	| | |
5-DEC-2008 02:36 chk	493.1529	| | |
6-DEC-2008 04:52 chk	493.1085	| | |
8-DEC-2008 00:53 chk	493.1477	| | |
9-DEC-2008 00:27 chk	493.1076	| | |
10-DEC-2008 05:37 chk	493.2011	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
11-DEC-2008 03:05 chk			493.1908	| | |
12-DEC-2008 04:09 chk			493.1234	| | |
13-DEC-2008 07:11 chk			493.1190	| | |
15-DEC-2008 04:09 chk			493.1103	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.439287 Std Deviation : 0.023895

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		1.4595	| | |
21-OCT-2008 04:44	chk		1.4668	| | |
22-OCT-2008 01:38	chk		1.4304	| | |
23-OCT-2008 04:33	chk		1.4267	| | |
24-OCT-2008 06:17	chk		1.4466	| | |
25-OCT-2008 07:07	chk		1.4403	| | |
27-OCT-2008 06:35	chk		1.4208	| | |
28-OCT-2008 07:02	chk		1.4436	| | |
29-OCT-2008 06:54	chk		1.4227	| | |
30-OCT-2008 06:34	chk		1.4545	| | |
31-OCT-2008 06:37	chk		1.4698	| | |
1-NOV-2008 08:28	chk		1.4410	| | |
4-NOV-2008 04:26	chk		1.4184	| | |
5-NOV-2008 03:20	chk		1.4625	| | |
6-NOV-2008 03:04	chk		1.4287	| | |
7-NOV-2008 01:45	chk		1.4580	| | |
8-NOV-2008 05:18	chk		1.4516	| | |
10-NOV-2008 02:54	chk		1.4685	| | |
11-NOV-2008 04:33	chk		1.5020	|In| |
12-NOV-2008 06:27	chk		1.4423	| | |
13-NOV-2008 02:54	chk		1.4429	| | |
14-NOV-2008 04:30	chk		1.4724	| | |
15-NOV-2008 06:29	chk		1.4535	| | |
17-NOV-2008 06:31	chk		1.4678	| | |
18-NOV-2008 03:39	chk		1.4309	| | |
19-NOV-2008 01:23	chk		1.4858	| | |
20-NOV-2008 01:32	chk		1.4810	| | |
21-NOV-2008 03:49	chk		1.4417	| | |
24-NOV-2008 04:43	chk		1.4778	| | |
25-NOV-2008 04:38	chk		1.4889	|In| |
26-NOV-2008 03:17	chk		1.4784	| | |

27-NOV-2008 06:34	chk	1.4506	| |	
28-NOV-2008 06:48	chk	1.4111	| |	
29-NOV-2008 07:10	chk	1.3936	| |	
1-DEC-2008 03:22	chk	1.3962	| |	
2-DEC-2008 01:27	chk	1.4680	| |	
4-DEC-2008 15:28	chk	1.4141	| |	

Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
5-DEC-2008 02:36	chk		1.4035	| | |
6-DEC-2008 04:52	chk		1.4903	|In| |
8-DEC-2008 00:53	chk		1.4617	| | |
9-DEC-2008 00:27	chk		1.4203	| | |
10-DEC-2008 05:37	chk		1.4455	| | |
11-DEC-2008 03:05	chk		1.4504	| | |
12-DEC-2008 04:09	chk		1.4735	| | |
13-DEC-2008 07:11	chk		1.4341	| | |
15-DEC-2008 04:09	chk		1.4626	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000994 Std Deviation : 0.000021

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		0.0010	| | |
21-OCT-2008 04:44	chk		0.0010	| | |
22-OCT-2008 01:38	chk		0.0010	| | |
23-OCT-2008 04:33	chk		0.0010	| | |
24-OCT-2008 06:17	chk		0.0010	| | |
25-OCT-2008 07:07	chk		0.0010	| | |
27-OCT-2008 06:35	chk		0.0010	| | |
28-OCT-2008 07:02	chk		0.0010	| | |
29-OCT-2008 06:54	chk		0.0010	| | |
30-OCT-2008 06:34	chk		0.0010	| | |

31-OCT-2008 06:37	chk	0.0010		
1-NOV-2008 08:28	chk	0.0010		
4-NOV-2008 04:26	chk	0.0010		
5-NOV-2008 03:20	chk	0.0010		
6-NOV-2008 03:04	chk	0.0010		
7-NOV-2008 01:45	chk	0.0010		
8-NOV-2008 05:18	chk	0.0010	In	
10-NOV-2008 02:54	chk	0.0010		
11-NOV-2008 04:33	chk	0.0010		
12-NOV-2008 06:27	chk	0.0010		
13-NOV-2008 02:54	chk	0.0010		
14-NOV-2008 04:30	chk	0.0010		
15-NOV-2008 06:29	chk	0.0010		
17-NOV-2008 06:31	chk	0.0010		
18-NOV-2008 03:39	chk	0.0010		
19-NOV-2008 01:23	chk	0.0010		
20-NOV-2008 01:32	chk	0.0010		
21-NOV-2008 03:49	chk	0.0010		
24-NOV-2008 04:43	chk	0.0010		
25-NOV-2008 04:38	chk	0.0010		
26-NOV-2008 03:17	chk	0.0010		
27-NOV-2008 06:34	chk	0.0010		

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
28-NOV-2008 06:48	chk		0.0009	In	
29-NOV-2008 07:10	chk		0.0010		
1-DEC-2008 03:22	chk		0.0010		
2-DEC-2008 01:27	chk		0.0010		
4-DEC-2008 15:28	chk		0.0010		
5-DEC-2008 02:36	chk		0.0009	In	
6-DEC-2008 04:52	chk		0.0010		
8-DEC-2008 00:53	chk		0.0010		
9-DEC-2008 00:27	chk		0.0010		
10-DEC-2008 05:37	chk		0.0010		
11-DEC-2008 03:05	chk		0.0010		
12-DEC-2008 04:09	chk		0.0010		
13-DEC-2008 07:11	chk		0.0010		
15-DEC-2008 04:09	chk		0.0010		

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		5677.2021	| | |
21-OCT-2008 04:44	chk		5677.5757	| | |
22-OCT-2008 01:38	chk		5677.8330	| | |
23-OCT-2008 04:33	chk		5677.3203	| | |
24-OCT-2008 06:17	chk		5677.4556	| | |
25-OCT-2008 07:07	chk		5677.3457	| | |
27-OCT-2008 06:35	chk		5677.3276	| | |
28-OCT-2008 07:02	chk		5677.1777	| | |
29-OCT-2008 06:54	chk		5677.1890	| | |
30-OCT-2008 06:34	chk		5677.1177	| | |
31-OCT-2008 06:37	chk		5676.8799	| | |
1-NOV-2008 08:28	chk		5676.9956	| | |
4-NOV-2008 04:26	chk		5676.9575	| | |
5-NOV-2008 03:20	chk		5677.4375	| | |
6-NOV-2008 03:04	chk		5677.3438	| | |
7-NOV-2008 01:45	chk		5677.4390	| | |
8-NOV-2008 05:18	chk		5677.1294	| | |
10-NOV-2008 02:54	chk		5677.0142	| | |
11-NOV-2008 04:33	chk		5677.1929	| | |
12-NOV-2008 06:27	chk		5676.9268	| | |
13-NOV-2008 02:54	chk		5677.2275	| | |
14-NOV-2008 04:30	chk		5677.7866	| | |
15-NOV-2008 06:29	chk		5677.7363	| | |
17-NOV-2008 06:31	chk		5677.4126	| | |
18-NOV-2008 03:39	chk		5677.1558	| | |
19-NOV-2008 01:23	chk		5677.5308	| | |
20-NOV-2008 01:32	chk		5677.3330	| | |
21-NOV-2008 03:49	chk		5677.2100	| | |
24-NOV-2008 04:43	chk		5677.5820	| | |
25-NOV-2008 04:38	chk		5677.4644	| | |
26-NOV-2008 03:17	chk		5677.3438	| | |
27-NOV-2008 06:34	chk		5677.1147	| | |
28-NOV-2008 06:48	chk		5677.4175	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
29-NOV-2008 07:10	chk		5677.1655	| | |

1-DEC-2008 03:22	chk	5677.0425		
2-DEC-2008 01:27	chk	5676.9829		
4-DEC-2008 15:28	chk	5677.2280		
5-DEC-2008 02:36	chk	5677.2451		
6-DEC-2008 04:52	chk	5677.1079		
8-DEC-2008 00:53	chk	5676.8130		
9-DEC-2008 00:27	chk	5677.1851		
10-DEC-2008 05:37	chk	5677.4365		
11-DEC-2008 03:05	chk	5677.6665		
12-DEC-2008 04:09	chk	5676.9966		
13-DEC-2008 07:11	chk	5676.2720		
15-DEC-2008 04:09	chk	5677.0254		

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 2.089136 Std Deviation : 0.117169

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		2.0338		
21-OCT-2008 04:44	chk		2.2050		
22-OCT-2008 01:38	chk		2.0299		
23-OCT-2008 04:33	chk		2.0654		
24-OCT-2008 06:17	chk		2.2014		
25-OCT-2008 07:07	chk		2.3806	In	
27-OCT-2008 06:35	chk		2.0155		
28-OCT-2008 07:02	chk		2.1480		
29-OCT-2008 06:54	chk		2.1106		
30-OCT-2008 06:34	chk		2.0855		
31-OCT-2008 06:37	chk		2.2070		
1-NOV-2008 08:28	chk		2.1530		
4-NOV-2008 04:26	chk		2.0259		
5-NOV-2008 03:20	chk		1.9862		
6-NOV-2008 03:04	chk		1.9447		
7-NOV-2008 01:45	chk		2.1891		
8-NOV-2008 05:18	chk		2.0285		

10-NOV-2008 02:54	chk	2.1096		
11-NOV-2008 04:33	chk	2.2116		
12-NOV-2008 06:27	chk	2.1078		
13-NOV-2008 02:54	chk	2.0685		
14-NOV-2008 04:30	chk	2.1967		
15-NOV-2008 06:29	chk	2.0710		
17-NOV-2008 06:31	chk	2.2005		
18-NOV-2008 03:39	chk	2.2281		
19-NOV-2008 01:23	chk	2.1144		
20-NOV-2008 01:32	chk	2.0152		
21-NOV-2008 03:49	chk	2.2068		

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
24-NOV-2008 04:43	chk		1.9893	
25-NOV-2008 04:38	chk		1.9984	
26-NOV-2008 03:17	chk		2.1274	
27-NOV-2008 06:34	chk		1.9991	
28-NOV-2008 06:48	chk		2.2306	
29-NOV-2008 07:10	chk		2.2542	
1-DEC-2008 03:22	chk		2.2013	
2-DEC-2008 01:27	chk		2.0869	
4-DEC-2008 15:28	chk		1.9665	
5-DEC-2008 02:36	chk		2.0485	
6-DEC-2008 04:52	chk		2.0794	
8-DEC-2008 00:53	chk		2.0791	
9-DEC-2008 00:27	chk		1.9605	
10-DEC-2008 05:37	chk		2.0322	
11-DEC-2008 03:05	chk		2.1228	
12-DEC-2008 04:09	chk		2.1971	
13-DEC-2008 07:11	chk		2.0813	
15-DEC-2008 04:09	chk		2.1390	

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00

Mean : 0.001616 Std Deviation : 0.000049

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		0.0015	|In| |
21-OCT-2008 04:44	chk		0.0016	| | |
22-OCT-2008 01:38	chk		0.0016	| | |
23-OCT-2008 04:33	chk		0.0017	| | |
24-OCT-2008 06:17	chk		0.0017	| | |
25-OCT-2008 07:07	chk		0.0016	| | |
27-OCT-2008 06:35	chk		0.0016	| | |
28-OCT-2008 07:02	chk		0.0016	| | |
29-OCT-2008 06:54	chk		0.0016	| | |
30-OCT-2008 06:34	chk		0.0015	|In| |
31-OCT-2008 06:37	chk		0.0017	| | |
1-NOV-2008 08:28	chk		0.0017	| | |
4-NOV-2008 04:26	chk		0.0016	| | |
5-NOV-2008 03:20	chk		0.0016	| | |
6-NOV-2008 03:04	chk		0.0017	| | |
7-NOV-2008 01:45	chk		0.0016	| | |
8-NOV-2008 05:18	chk		0.0017	| | |
10-NOV-2008 02:54	chk		0.0016	| | |
11-NOV-2008 04:33	chk		0.0016	| | |
12-NOV-2008 06:27	chk		0.0017	| | |
13-NOV-2008 02:54	chk		0.0016	| | |
14-NOV-2008 04:30	chk		0.0016	| | |
15-NOV-2008 06:29	chk		0.0017	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 8

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
17-NOV-2008 06:31	chk		0.0017	| | |
18-NOV-2008 03:39	chk		0.0017	| | |
19-NOV-2008 01:23	chk		0.0016	| | |
20-NOV-2008 01:32	chk		0.0015	| | |
21-NOV-2008 03:49	chk		0.0016	| | |
24-NOV-2008 04:43	chk		0.0016	| | |
25-NOV-2008 04:38	chk		0.0016	| | |
26-NOV-2008 03:17	chk		0.0016	| | |
27-NOV-2008 06:34	chk		0.0016	| | |
28-NOV-2008 06:48	chk		0.0016	| | |
29-NOV-2008 07:10	chk		0.0016	| | |
1-DEC-2008 03:22	chk		0.0016	| | |

2-DEC-2008 01:27 chk	0.0016	| | |
4-DEC-2008 15:28 chk	0.0016	| | |
5-DEC-2008 02:36 chk	0.0015	| | |
6-DEC-2008 04:52 chk	0.0016	| | |
8-DEC-2008 00:53 chk	0.0016	| | |
9-DEC-2008 00:27 chk	0.0017	| | |
10-DEC-2008 05:37 chk	0.0016	| | |
11-DEC-2008 03:05 chk	0.0017	| | |
12-DEC-2008 04:09 chk	0.0016	| | |
13-DEC-2008 07:11 chk	0.0016	| | |
15-DEC-2008 04:09 chk	0.0016	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		3141.6519	| | |
21-OCT-2008 04:44	chk		3142.0984	| | |
22-OCT-2008 01:38	chk		3142.1973	| | |
23-OCT-2008 04:33	chk		3141.8047	| | |
24-OCT-2008 06:17	chk		3141.8562	| | |
25-OCT-2008 07:07	chk		3141.8020	| | |
27-OCT-2008 06:35	chk		3141.8608	| | |
28-OCT-2008 07:02	chk		3141.7561	| | |
29-OCT-2008 06:54	chk		3141.7463	| | |
30-OCT-2008 06:34	chk		3141.5642	| | |
31-OCT-2008 06:37	chk		3141.5938	| | |
1-NOV-2008 08:28	chk		3141.6509	| | |
4-NOV-2008 04:26	chk		3141.7378	| | |
5-NOV-2008 03:20	chk		3141.6536	| | |
6-NOV-2008 03:04	chk		3141.9622	| | |
7-NOV-2008 01:45	chk		3142.0173	| | |
8-NOV-2008 05:18	chk		3141.5884	| | |
10-NOV-2008 02:54	chk		3141.5942	| | |
11-NOV-2008 04:33	chk		3142.1089	| | |
12-NOV-2008 06:27	chk		3141.6816	| | |
13-NOV-2008 02:54	chk		3141.8496	| | |
14-NOV-2008 04:30	chk		3142.0493	| | |
15-NOV-2008 06:29	chk		3142.0017	| | |
17-NOV-2008 06:31	chk		3141.7129	| | |

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
18-NOV-2008 03:39	chk		3142.0012	| | |
19-NOV-2008 01:23	chk		3141.9673	| | |
20-NOV-2008 01:32	chk		3142.0066	| | |
21-NOV-2008 03:49	chk		3141.7009	| | |
24-NOV-2008 04:43	chk		3142.0771	| | |
25-NOV-2008 04:38	chk		3141.9082	| | |
26-NOV-2008 03:17	chk		3141.6348	| | |
27-NOV-2008 06:34	chk		3141.7920	| | |
28-NOV-2008 06:48	chk		3141.9155	| | |
29-NOV-2008 07:10	chk		3141.6438	| | |
1-DEC-2008 03:22	chk		3141.2932	| | |
2-DEC-2008 01:27	chk		3141.7075	| | |
4-DEC-2008 15:28	chk		3141.6606	| | |
5-DEC-2008 02:36	chk		3141.8596	| | |
6-DEC-2008 04:52	chk		3141.7493	| | |
8-DEC-2008 00:53	chk		3141.5969	| | |
9-DEC-2008 00:27	chk		3141.6836	| | |
10-DEC-2008 05:37	chk		3141.8879	| | |
11-DEC-2008 03:05	chk		3141.7769	| | |
12-DEC-2008 04:09	chk		3141.6677	| | |
13-DEC-2008 07:11	chk		3141.1340	| | |
15-DEC-2008 04:09	chk		3141.5674	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 1.789642 Std Deviation : 0.089716

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
20-OCT-2008 03:44	chk		1.8193	| | |
21-OCT-2008 04:44	chk		1.8479	| | |
22-OCT-2008 01:38	chk		1.9490	| | |

23-OCT-2008 04:33	chk	1.7107	|	| |
24-OCT-2008 06:17	chk	1.7180	|	| |
25-OCT-2008 07:07	chk	1.7826	|	| |
27-OCT-2008 06:35	chk	1.9017	|	| |
28-OCT-2008 07:02	chk	1.8643	|	| |
29-OCT-2008 06:54	chk	1.9491	|	| |
30-OCT-2008 06:34	chk	1.8630	|	| |
31-OCT-2008 06:37	chk	1.7010	|	| |
1-NOV-2008 08:28	chk	1.9181	|	| |
4-NOV-2008 04:26	chk	1.7959	|	| |
5-NOV-2008 03:20	chk	1.8106	|	| |
6-NOV-2008 03:04	chk	1.9105	|	| |
7-NOV-2008 01:45	chk	1.7553	|	| |
8-NOV-2008 05:18	chk	1.7129	|	| |
10-NOV-2008 02:54	chk	1.8255	|	| |
11-NOV-2008 04:33	chk	1.8031	|	| |

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
12-NOV-2008 06:27	chk		1.7841	| | |
13-NOV-2008 02:54	chk		1.8426	| | |
14-NOV-2008 04:30	chk		1.7782	| | |
15-NOV-2008 06:29	chk		1.7135	| | |
17-NOV-2008 06:31	chk		1.7509	| | |
18-NOV-2008 03:39	chk		1.7239	| | |
19-NOV-2008 01:23	chk		1.7266	| | |
20-NOV-2008 01:32	chk		1.7717	| | |
21-NOV-2008 03:49	chk		1.8966	| | |
24-NOV-2008 04:43	chk		1.6681	| | |
25-NOV-2008 04:38	chk		1.6878	| | |
26-NOV-2008 03:17	chk		1.8262	| | |
27-NOV-2008 06:34	chk		1.8172	| | |
28-NOV-2008 06:48	chk		1.8557	| | |
29-NOV-2008 07:10	chk		1.8684	| | |
1-DEC-2008 03:22	chk		1.8055	| | |
2-DEC-2008 01:27	chk		1.8424	| | |
4-DEC-2008 15:28	chk		1.8864	| | |
5-DEC-2008 02:36	chk		1.8155	| | |
6-DEC-2008 04:52	chk		1.7342	| | |
8-DEC-2008 00:53	chk		1.9244	| | |
9-DEC-2008 00:27	chk		1.7728	| | |
10-DEC-2008 05:37	chk		1.6821	| | |

11-DEC-2008 03:05	chk	1.8857	| | |
12-DEC-2008 04:09	chk	1.6903	| | |
13-DEC-2008 07:11	chk	1.7204	| | |
15-DEC-2008 04:09	chk	1.6174	| | |

Quality Assurance Report. Generated 17-DEC-2008 18:43:27.46

QA Filename : RDND07$DKA100:[GER14.QA]BKG.QAF;4

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.138708 Std Deviation : 0.002039

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.1438	|In| |
2-NOV-2008 08:55	bkg		0.1440	|In| |
3-NOV-2008 07:28	bkg		0.1400	| | |
4-NOV-2008 07:10	bkg		0.1428	|In| |
9-NOV-2008 05:05	bkg		0.1451	|Ac| |
10-NOV-2008 04:01	bkg		0.1458	|Ac| |
11-NOV-2008 09:49	bkg		0.1420	| | |
12-NOV-2008 06:45	bkg		0.1418	| | |
16-NOV-2008 10:08	bkg		0.1433	|In| |
17-NOV-2008 07:17	bkg		0.1414	| | |
18-NOV-2008 04:52	bkg		0.1419	| | |
19-NOV-2008 03:22	bkg		0.1409	| | |
23-NOV-2008 05:01	bkg		0.1436	|In| |
30-NOV-2008 05:54	bkg		0.1404	| | |
1-DEC-2008 05:18	bkg		0.1432	|In| |
2-DEC-2008 02:20	bkg		0.1426	| | |
2-DEC-2008 22:45	bkg		0.1404	| | |

3-DEC-2008 19:17	bkg	0.1421		
7-DEC-2008 04:34	bkg	0.1423		
8-DEC-2008 04:10	bkg	0.1431	In	
14-DEC-2008 06:40	bkg	0.1430	In	
15-DEC-2008 04:45	bkg	0.1413		

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.115491 Std Deviation : 0.001996

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
26-OCT-2008 08:41	bkg		0.1130				
2-NOV-2008 08:55	bkg		0.1168				

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-NOV-2008 07:28	bkg		0.1184				
4-NOV-2008 07:10	bkg		0.1195	In			
9-NOV-2008 05:05	bkg		0.1168				
10-NOV-2008 04:01	bkg		0.1193				
11-NOV-2008 09:49	bkg		0.1140				
12-NOV-2008 06:45	bkg		0.1173				
16-NOV-2008 10:08	bkg		0.1181				
17-NOV-2008 07:17	bkg		0.1185				
18-NOV-2008 04:52	bkg		0.1151				
19-NOV-2008 03:22	bkg		0.1184				
23-NOV-2008 05:01	bkg		0.1145				
30-NOV-2008 05:54	bkg		0.1167				
1-DEC-2008 05:18	bkg		0.1178				
2-DEC-2008 02:20	bkg		0.1204	In			
2-DEC-2008 22:45	bkg		0.1178				
3-DEC-2008 19:17	bkg		0.1148				
7-DEC-2008 04:34	bkg		0.1214	In			
8-DEC-2008 04:10	bkg		0.1171				

14-DEC-2008 06:40	bkg	0.1180	| | |
15-DEC-2008 04:45	bkg	0.1153	| | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.048537 Std Deviation : 0.002278

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.0494	| | |
2-NOV-2008 08:55	bkg		0.0505	| | |
3-NOV-2008 07:28	bkg		0.0530	| | |
4-NOV-2008 07:10	bkg		0.0459	| | |
9-NOV-2008 05:05	bkg		0.0471	| | |
10-NOV-2008 04:01	bkg		0.0480	| | |
11-NOV-2008 09:49	bkg		0.0489	| | |
12-NOV-2008 06:45	bkg		0.0463	| | |
16-NOV-2008 10:08	bkg		0.0494	| | |
17-NOV-2008 07:17	bkg		0.0499	| | |
18-NOV-2008 04:52	bkg		0.0499	| | |
19-NOV-2008 03:22	bkg		0.0483	| | |
23-NOV-2008 05:01	bkg		0.0461	| | |
30-NOV-2008 05:54	bkg		0.0458	| | |
1-DEC-2008 05:18	bkg		0.0493	| | |
2-DEC-2008 02:20	bkg		0.0506	| | |
2-DEC-2008 22:45	bkg		0.0494	| | |
3-DEC-2008 19:17	bkg		0.0510	| | |
7-DEC-2008 04:34	bkg		0.0517	| | |
8-DEC-2008 04:10	bkg		0.0514	| | |
14-DEC-2008 06:40	bkg		0.0473	| | |

Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-DEC-2008 04:45	bkg		0.0490	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.060515 Std Deviation : 0.002512

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.0599	| | |
2-NOV-2008 08:55	bkg		0.0617	| | |
3-NOV-2008 07:28	bkg		0.0625	| | |
4-NOV-2008 07:10	bkg		0.0609	| | |
9-NOV-2008 05:05	bkg		0.0636	| | |
10-NOV-2008 04:01	bkg		0.0651	| | |
11-NOV-2008 09:49	bkg		0.0607	| | |
12-NOV-2008 06:45	bkg		0.0609	| | |
16-NOV-2008 10:08	bkg		0.0670	|In| |
17-NOV-2008 07:17	bkg		0.0657	|In| |
18-NOV-2008 04:52	bkg		0.0620	| | |
19-NOV-2008 03:22	bkg		0.0604	| | |
23-NOV-2008 05:01	bkg		0.0628	| | |
30-NOV-2008 05:54	bkg		0.0613	| | |
1-DEC-2008 05:18	bkg		0.0646	| | |
2-DEC-2008 02:20	bkg		0.0609	| | |
2-DEC-2008 22:45	bkg		0.0596	| | |
3-DEC-2008 19:17	bkg		0.0613	| | |
7-DEC-2008 04:34	bkg		0.0600	| | |
8-DEC-2008 04:10	bkg		0.0635	| | |
14-DEC-2008 06:40	bkg		0.0589	| | |
15-DEC-2008 04:45	bkg		0.0587	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.079953 Std Deviation : 0.002556

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.0785	| | |
2-NOV-2008 08:55	bkg		0.0821	| | |
3-NOV-2008 07:28	bkg		0.0843	| | |
4-NOV-2008 07:10	bkg		0.0831	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
9-NOV-2008 05:05	bkg		0.0807	| | |
10-NOV-2008 04:01	bkg		0.0868	|In| |
11-NOV-2008 09:49	bkg		0.0830	| | |
12-NOV-2008 06:45	bkg		0.0843	| | |
16-NOV-2008 10:08	bkg		0.0827	| | |
17-NOV-2008 07:17	bkg		0.0837	| | |
18-NOV-2008 04:52	bkg		0.0814	| | |
19-NOV-2008 03:22	bkg		0.0850	| | |
23-NOV-2008 05:01	bkg		0.0807	| | |
30-NOV-2008 05:54	bkg		0.0836	| | |
1-DEC-2008 05:18	bkg		0.0831	| | |
2-DEC-2008 02:20	bkg		0.0824	| | |
2-DEC-2008 22:45	bkg		0.0823	| | |
3-DEC-2008 19:17	bkg		0.0795	| | |
7-DEC-2008 04:34	bkg		0.0833	| | |
8-DEC-2008 04:10	bkg		0.0830	| | |
14-DEC-2008 06:40	bkg		0.0779	| | |
15-DEC-2008 04:45	bkg		0.0796	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.088520 Std Deviation : 0.002144

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.0891	| | |
2-NOV-2008 08:55	bkg		0.0895	| | |
3-NOV-2008 07:28	bkg		0.0900	| | |
4-NOV-2008 07:10	bkg		0.0894	| | |
9-NOV-2008 05:05	bkg		0.0934	|In| |
10-NOV-2008 04:01	bkg		0.0919	| | |
11-NOV-2008 09:49	bkg		0.0936	|In| |
12-NOV-2008 06:45	bkg		0.0899	| | |
16-NOV-2008 10:08	bkg		0.0949	|In| |
17-NOV-2008 07:17	bkg		0.0920	| | |
18-NOV-2008 04:52	bkg		0.0933	|In| |
19-NOV-2008 03:22	bkg		0.0912	| | |
23-NOV-2008 05:01	bkg		0.0845	| | |
30-NOV-2008 05:54	bkg		0.0869	| | |
1-DEC-2008 05:18	bkg		0.0957	|Ac| |
2-DEC-2008 02:20	bkg		0.0921	| | |
2-DEC-2008 22:45	bkg		0.0893	| | |
3-DEC-2008 19:17	bkg		0.0920	| | |
7-DEC-2008 04:34	bkg		0.0907	| | |
8-DEC-2008 04:10	bkg		0.0889	| | |
14-DEC-2008 06:40	bkg		0.0941	|In| |
15-DEC-2008 04:45	bkg		0.0919	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.075515 Std Deviation : 0.002222

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

26-OCT-2008 08:41	bkg	0.0788	| | |
2-NOV-2008 08:55	bkg	0.0802	|In| |
3-NOV-2008 07:28	bkg	0.0830	|Ac| |
4-NOV-2008 07:10	bkg	0.0771	| | |
9-NOV-2008 05:05	bkg	0.0808	|In| |
10-NOV-2008 04:01	bkg	0.0793	| | |
11-NOV-2008 09:49	bkg	0.0789	| | |
12-NOV-2008 06:45	bkg	0.0799	| | |
16-NOV-2008 10:08	bkg	0.0727	| | |
17-NOV-2008 07:17	bkg	0.0805	|In| |
18-NOV-2008 04:52	bkg	0.0758	| | |
19-NOV-2008 03:22	bkg	0.0764	| | |
23-NOV-2008 05:01	bkg	0.0766	| | |
30-NOV-2008 05:54	bkg	0.0763	| | |
1-DEC-2008 05:18	bkg	0.0789	| | |
2-DEC-2008 02:20	bkg	0.0806	|In| |
2-DEC-2008 22:45	bkg	0.0782	| | |
3-DEC-2008 19:17	bkg	0.0774	| | |
7-DEC-2008 04:34	bkg	0.0749	| | |
8-DEC-2008 04:10	bkg	0.0746	| | |
14-DEC-2008 06:40	bkg	0.0770	| | |
15-DEC-2008 04:45	bkg	0.0809	|In| |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.137504 Std Deviation : 0.002009

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.1395	| | |
2-NOV-2008 08:55	bkg		0.1426	|In| |
3-NOV-2008 07:28	bkg		0.1415	| | |
4-NOV-2008 07:10	bkg		0.1393	| | |
9-NOV-2008 05:05	bkg		0.1398	| | |
10-NOV-2008 04:01	bkg		0.1399	| | |
11-NOV-2008 09:49	bkg		0.1395	| | |

12-NOV-2008 06:45	bkg	0.1395	| |	
16-NOV-2008 10:08	bkg	0.1383	| |	
17-NOV-2008 07:17	bkg	0.1425	In|	
18-NOV-2008 04:52	bkg	0.1426	In|	
19-NOV-2008 03:22	bkg	0.1420	In|	
23-NOV-2008 05:01	bkg	0.1358	| |	
30-NOV-2008 05:54	bkg	0.1382	| |	
1-DEC-2008 05:18	bkg	0.1396	| |	
2-DEC-2008 02:20	bkg	0.1423	In|	
2-DEC-2008 22:45	bkg	0.1362	| |	
3-DEC-2008 19:17	bkg	0.1412	| |	
7-DEC-2008 04:34	bkg	0.1448	Ac|	

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
8-DEC-2008 04:10	bkg		0.1375	| | |
14-DEC-2008 06:40	bkg		0.1393	| | |
15-DEC-2008 04:45	bkg		0.1369	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : uCi Parameter Type : Nuclide

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000000 Upper Bound : 0.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.1083 Ab|	| |
2-NOV-2008 08:55	bkg		0.1110 Ab|	| |
3-NOV-2008 07:28	bkg		0.1128 Ab|	| |
4-NOV-2008 07:10	bkg		0.1104 Ab|	| |
9-NOV-2008 05:05	bkg		0.1133 Ab|	| |
10-NOV-2008 04:01	bkg		0.1096 Ab|	| |
11-NOV-2008 09:49	bkg		0.1127 Ab|	| |
12-NOV-2008 06:45	bkg		0.1111 Ab|	| |
16-NOV-2008 10:08	bkg		0.1178 Ab|	| |
17-NOV-2008 07:17	bkg		0.1206 Ab|	| |
18-NOV-2008 04:52	bkg		0.1212 Ab|	| |
19-NOV-2008 03:22	bkg		0.1088 Ab|	| |
23-NOV-2008 05:01	bkg		0.1113 Ab|	| |

30-NOV-2008 05:54	bkg	0.1167 Ab		
1-DEC-2008 05:18	bkg	0.1104 Ab		
2-DEC-2008 02:20	bkg	0.1177 Ab		
2-DEC-2008 22:45	bkg	0.1192 Ab		
3-DEC-2008 19:17	bkg	0.1112 Ab		
7-DEC-2008 04:34	bkg	0.1182 Ab		
8-DEC-2008 04:10	bkg	0.1115 Ab		
14-DEC-2008 06:40	bkg	0.1116 Ab		
15-DEC-2008 04:45	bkg	0.1086 Ab		

above not out

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.077258 Std Deviation : 0.001896

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.0778		
2-NOV-2008 08:55	bkg		0.0790		
3-NOV-2008 07:28	bkg		0.0788		
4-NOV-2008 07:10	bkg		0.0783		
9-NOV-2008 05:05	bkg		0.0774		

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-NOV-2008 04:01	bkg		0.0838	Ac	
11-NOV-2008 09:49	bkg		0.0830	Ac	
12-NOV-2008 06:45	bkg		0.0779		
16-NOV-2008 10:08	bkg		0.0799		
17-NOV-2008 07:17	bkg		0.0830	Ac	
18-NOV-2008 04:52	bkg		0.0806		
19-NOV-2008 03:22	bkg		0.0818	In	
23-NOV-2008 05:01	bkg		0.0809		
30-NOV-2008 05:54	bkg		0.0803		
1-DEC-2008 05:18	bkg		0.0792		
2-DEC-2008 02:20	bkg		0.0810		

2-DEC-2008 22:45	bkg	0.0804	|	|
3-DEC-2008 19:17	bkg	0.0801	|	|
7-DEC-2008 04:34	bkg	0.0780	|	|
8-DEC-2008 04:10	bkg	0.0764	|	|
14-DEC-2008 06:40	bkg	0.0836	|Ac|	|
15-DEC-2008 04:45	bkg	0.0784	|	|

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : uCi Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.137483 Std Deviation : 0.002461

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.1340	| | |
2-NOV-2008 08:55	bkg		0.1356	| | |
3-NOV-2008 07:28	bkg		0.1428	|In| |
4-NOV-2008 07:10	bkg		0.1343	| | |
9-NOV-2008 05:05	bkg		0.1434	|In| |
10-NOV-2008 04:01	bkg		0.1398	| | |
11-NOV-2008 09:49	bkg		0.1388	| | |
12-NOV-2008 06:45	bkg		0.1390	| | |
16-NOV-2008 10:08	bkg		0.1403	| | |
17-NOV-2008 07:17	bkg		0.1385	| | |
18-NOV-2008 04:52	bkg		0.1402	| | |
19-NOV-2008 03:22	bkg		0.1421	| | |
23-NOV-2008 05:01	bkg		0.1369	| | |
30-NOV-2008 05:54	bkg		0.1356	| | |
1-DEC-2008 05:18	bkg		0.1449	|Ac| |
2-DEC-2008 02:20	bkg		0.1422	| | |
2-DEC-2008 22:45	bkg		0.1410	| | |
3-DEC-2008 19:17	bkg		0.1383	| | |
7-DEC-2008 04:34	bkg		0.1402	| | |
8-DEC-2008 04:10	bkg		0.1431	|In| |
14-DEC-2008 06:40	bkg		0.1400	| | |
15-DEC-2008 04:45	bkg		0.1364	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

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Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
26-OCT-2008 08:41	bkg		0.9099	| | |
2-NOV-2008 08:55	bkg		0.9679	| | |
3-NOV-2008 07:28	bkg		0.9461	| | |
4-NOV-2008 07:10	bkg		0.9449	| | |
9-NOV-2008 05:05	bkg		0.9172	| | |
10-NOV-2008 04:01	bkg		0.9615	| | |
11-NOV-2008 09:49	bkg		0.9202	| | |
12-NOV-2008 06:45	bkg		0.9388	| | |
16-NOV-2008 10:08	bkg		0.9250	| | |
17-NOV-2008 07:17	bkg		0.9440	| | |
18-NOV-2008 04:52	bkg		0.9363	| | |
19-NOV-2008 03:22	bkg		0.9396	| | |
23-NOV-2008 05:01	bkg		0.9039	| | |
30-NOV-2008 05:54	bkg		0.9457	| | |
1-DEC-2008 05:18	bkg		0.9245	| | |
2-DEC-2008 02:20	bkg		0.9248	| | |
2-DEC-2008 22:45	bkg		0.9374	| | |
3-DEC-2008 19:17	bkg		0.9093	| | |
7-DEC-2008 04:34	bkg		0.9097	| | |
8-DEC-2008 04:10	bkg		0.9466	| | |
14-DEC-2008 06:40	bkg		0.9215	| | |
15-DEC-2008 04:45	bkg		0.9324	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:46:38.00

QA Filename : RDND06::RDND06$DKA100:[GER15.QA]CHECK.QAF;3

-- Multi-Test Full Report --

analysis
12/6/08

Description : 121.78 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.007300 Upper Bound : 0.007800

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 0.007621 Std Deviation : 0.000060

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0076	| | |
17-NOV-2008 06:31	CHK		0.0076	| | |
18-NOV-2008 00:55	CHK		0.0076	| | |
19-NOV-2008 01:23	CHK		0.0077	| | |
20-NOV-2008 01:33	CHK		0.0077	| | |
20-NOV-2008 01:48	CHK		0.0076	| | |
20-NOV-2008 02:00	CHK		0.0076	| | |
20-NOV-2008 02:12	CHK		0.0076	| | |
21-NOV-2008 03:50	CHK		0.0077	| | |
21-NOV-2008 04:03	CHK		0.0077	| | |
24-NOV-2008 04:46	CHK		0.0076	| | |
25-NOV-2008 04:38	CHK		0.0077	| | |
26-NOV-2008 03:24	CHK		0.0077	| | |
26-NOV-2008 03:36	CHK		0.0076	| | |
27-NOV-2008 06:34	CHK		0.0076	| | |
28-NOV-2008 06:47	CHK		0.0076	| | |
29-NOV-2008 07:10	CHK		0.0076	| | |
1-DEC-2008 03:22	CHK		0.0077	| | |
1-DEC-2008 23:35	CHK		0.0077	| | |
2-DEC-2008 04:13	CHK		0.0076	| | |
2-DEC-2008 04:25	CHK		0.0076	| | |

3-DEC-2008 01:56	CHK	0.0076	| |	
4-DEC-2008 03:16	CHK	0.0075	| |	
5-DEC-2008 01:32	CHK	0.0076	| |	
5-DEC-2008 01:45	CHK	0.0076	| |	
5-DEC-2008 01:58	CHK	0.0077	| |	
6-DEC-2008 04:52	CHK	0.0075	| |	
8-DEC-2008 00:53	CHK	0.0076	| |	
9-DEC-2008 02:42	CHK	0.0077	| |	
9-DEC-2008 02:53	CHK	0.0077	| |	
10-DEC-2008 05:37	CHK	0.0076	| |	
11-DEC-2008 03:05	CHK	0.0076	| |	
12-DEC-2008 06:50	CHK	0.0076	| |	
13-DEC-2008 06:32	CHK	0.0076	| |	

-- Multi-Test Full Report --

Description : 121.78 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 356.000000 Upper Bound : 556.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		460.6427	| | |
17-NOV-2008 06:31	CHK		460.6124	| | |
18-NOV-2008 00:55	CHK		460.6707	| | |
19-NOV-2008 01:23	CHK		460.6540	| | |
20-NOV-2008 01:33	CHK		460.6734	| | |
20-NOV-2008 01:48	CHK		460.6587	| | |
20-NOV-2008 02:00	CHK		460.6515	| | |
20-NOV-2008 02:12	CHK		460.6600	| | |
21-NOV-2008 03:50	CHK		460.6939	| | |
21-NOV-2008 04:03	CHK		460.6803	| | |
24-NOV-2008 04:46	CHK		460.7424	| | |
25-NOV-2008 04:38	CHK		460.6333	| | |
26-NOV-2008 03:24	CHK		460.6462	| | |
26-NOV-2008 03:36	CHK		460.6848	| | |
27-NOV-2008 06:34	CHK		460.6401	| | |

28-NOV-2008 06:47	CHK	460.6435	| | |
29-NOV-2008 07:10	CHK	460.7457	| | |
1-DEC-2008 03:22	CHK	460.8061	| | |
1-DEC-2008 23:35	CHK	460.7727	| | |
2-DEC-2008 04:13	CHK	460.7667	| | |
2-DEC-2008 04:25	CHK	460.8331	| | |
3-DEC-2008 01:56	CHK	460.7324	| | |
4-DEC-2008 03:16	CHK	460.7471	| | |
5-DEC-2008 01:32	CHK	460.7555	| | |
5-DEC-2008 01:45	CHK	460.7193	| | |
5-DEC-2008 01:58	CHK	460.7510	| | |
6-DEC-2008 04:52	CHK	460.7072	| | |
8-DEC-2008 00:53	CHK	460.6494	| | |
9-DEC-2008 02:42	CHK	460.5637	| | |
9-DEC-2008 02:53	CHK	460.6182	| | |
10-DEC-2008 05:37	CHK	460.6854	| | |
11-DEC-2008 03:05	CHK	460.6872	| | |
12-DEC-2008 06:50	CHK	460.7586	| | |
13-DEC-2008 06:32	CHK	460.6786	| | |

-- Multi-Test Full Report --

Description : 121.78 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 1.034049 Std Deviation : 0.013323

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.0332	| | |
17-NOV-2008 06:31	CHK		1.0645	|In| |
18-NOV-2008 00:55	CHK		1.0249	| | |
19-NOV-2008 01:23	CHK		1.0604	| | |
20-NOV-2008 01:33	CHK		1.0829	|Ac| |
20-NOV-2008 01:48	CHK		1.0883	|Ac| |
20-NOV-2008 02:00	CHK		1.0609	|In| |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

20-NOV-2008 02:12 CHK	1.0686	|In| |
21-NOV-2008 03:50 CHK	1.0780	|Ac| |
21-NOV-2008 04:03 CHK	1.0546	| |
24-NOV-2008 04:46 CHK	1.0524	| |
25-NOV-2008 04:38 CHK	1.0682	|In| |
26-NOV-2008 03:24 CHK	1.0467	| |
26-NOV-2008 03:36 CHK	1.0531	| |
27-NOV-2008 06:34 CHK	1.0204	| |
28-NOV-2008 06:47 CHK	1.0340	| |
29-NOV-2008 07:10 CHK	1.0269	| |
1-DEC-2008 03:22 CHK	1.0011	|In| |
1-DEC-2008 23:35 CHK	1.0191	| |
2-DEC-2008 04:13 CHK	1.0360	| |
2-DEC-2008 04:25 CHK	1.0398	| |
3-DEC-2008 01:56 CHK	1.0328	| |
4-DEC-2008 03:16 CHK	1.0265	| |
5-DEC-2008 01:32 CHK	1.1039	|Ac| |
5-DEC-2008 01:45 CHK	1.0754	|Ac| |
5-DEC-2008 01:58 CHK	1.0893	|Ac| |
6-DEC-2008 04:52 CHK	1.0309	| |
8-DEC-2008 00:53 CHK	1.0035	|In| |
9-DEC-2008 02:42 CHK	1.0273	| |
9-DEC-2008 02:53 CHK	1.0456	| |
10-DEC-2008 05:37 CHK	1.0341	| |
11-DEC-2008 03:05 CHK	1.0568	| |
12-DEC-2008 06:50 CHK	1.0218	| |
13-DEC-2008 06:32 CHK	1.0337	| |

-- Multi-Test Full Report --

Description : 1407.95 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.000000 Upper Bound : 0.002320

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 0.001237 Std Deviation : 0.000025

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0012	| | |
17-NOV-2008 06:31	CHK		0.0012	| | |
18-NOV-2008 00:55	CHK		0.0012	| | |
19-NOV-2008 01:23	CHK		0.0013	| | |
20-NOV-2008 01:33	CHK		0.0013	| | |
20-NOV-2008 01:48	CHK		0.0012	| | |
20-NOV-2008 02:00	CHK		0.0013	| | |
20-NOV-2008 02:12	CHK		0.0013	|In| |
21-NOV-2008 03:50	CHK		0.0013	| | |
21-NOV-2008 04:03	CHK		0.0012	| | |
24-NOV-2008 04:46	CHK		0.0012	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-NOV-2008 04:38	CHK		0.0013	| | |
26-NOV-2008 03:24	CHK		0.0012	| | |
26-NOV-2008 03:36	CHK		0.0012	| | |
27-NOV-2008 06:34	CHK		0.0012	| | |
28-NOV-2008 06:47	CHK		0.0012	| | |
29-NOV-2008 07:10	CHK		0.0012	| | |
1-DEC-2008 03:22	CHK		0.0013	| | |
1-DEC-2008 23:35	CHK		0.0012	| | |
2-DEC-2008 04:13	CHK		0.0011	|Ac| |
2-DEC-2008 04:25	CHK		0.0012	| | |
3-DEC-2008 01:56	CHK		0.0012	| | |
4-DEC-2008 03:16	CHK		0.0012	| | |
5-DEC-2008 01:32	CHK		0.0012	| | |
5-DEC-2008 01:45	CHK		0.0012	| | |
5-DEC-2008 01:58	CHK		0.0012	| | |
6-DEC-2008 04:52	CHK		0.0012	| | |
8-DEC-2008 00:53	CHK		0.0013	| | |
9-DEC-2008 02:42	CHK		0.0012	| | |
9-DEC-2008 02:53	CHK		0.0012	| | |
10-DEC-2008 05:37	CHK		0.0012	| | |
11-DEC-2008 03:05	CHK		0.0013	|In| |
12-DEC-2008 06:50	CHK		0.0012	| | |
13-DEC-2008 06:32	CHK		0.0012	| | |

-- Multi-Test Full Report --

Description : 1407.95 KeV Centroid
Parameter Units : channel Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 5681.000000 Upper Bound : 5881.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		5829.9434	| | |
17-NOV-2008 06:31	CHK		5829.8911	| | |
18-NOV-2008 00:55	CHK		5829.8413	| | |
19-NOV-2008 01:23	CHK		5830.0811	| | |
20-NOV-2008 01:33	CHK		5829.9580	| | |
20-NOV-2008 01:48	CHK		5829.9258	| | |
20-NOV-2008 02:00	CHK		5829.9614	| | |
20-NOV-2008 02:12	CHK		5829.8291	| | |
21-NOV-2008 03:50	CHK		5830.0625	| | |
21-NOV-2008 04:03	CHK		5830.0513	| | |
24-NOV-2008 04:46	CHK		5830.1177	| | |
25-NOV-2008 04:38	CHK		5829.9346	| | |
26-NOV-2008 03:24	CHK		5830.4189	| | |
26-NOV-2008 03:36	CHK		5830.3218	| | |
27-NOV-2008 06:34	CHK		5830.1948	| | |
28-NOV-2008 06:47	CHK		5830.2827	| | |
29-NOV-2008 07:10	CHK		5830.2261	| | |
1-DEC-2008 03:22	CHK		5830.4468	| | |
1-DEC-2008 23:35	CHK		5830.4126	| | |
2-DEC-2008 04:13	CHK		5830.3535	| | |
2-DEC-2008 04:25	CHK		5830.3433	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-DEC-2008 01:56	CHK		5830.5200	| | |
4-DEC-2008 03:16	CHK		5830.4541	| | |
5-DEC-2008 01:32	CHK		5830.5679	| | |
5-DEC-2008 01:45	CHK		5830.3550	| | |
5-DEC-2008 01:58	CHK		5830.3838	| | |
6-DEC-2008 04:52	CHK		5830.2705	| | |
8-DEC-2008 00:53	CHK		5829.5269	| | |
9-DEC-2008 02:42	CHK		5829.6748	| | |
9-DEC-2008 02:53	CHK		5829.9463	| | |
10-DEC-2008 05:37	CHK		5829.9854	| | |

11-DEC-2008 03:05	CHK		5830.2114		
12-DEC-2008 06:50	CHK		5829.9990		
13-DEC-2008 06:32	CHK		5829.9360		

-- Multi-Test Full Report --

Description : 1407.95 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.511000 Upper Bound : 2.222000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 1.858572 Std Deviation : 0.087566

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
15-NOV-2008 06:29	CHK		1.8471				
17-NOV-2008 06:31	CHK		1.8290				
18-NOV-2008 00:55	CHK		1.7947				
19-NOV-2008 01:23	CHK		1.9115				
20-NOV-2008 01:33	CHK		1.8106				
20-NOV-2008 01:48	CHK		1.9206				
20-NOV-2008 02:00	CHK		1.9505				
20-NOV-2008 02:12	CHK		2.0611	In			
21-NOV-2008 03:50	CHK		2.0310				
21-NOV-2008 04:03	CHK		1.9410				
24-NOV-2008 04:46	CHK		1.8549				
25-NOV-2008 04:38	CHK		1.7751				
26-NOV-2008 03:24	CHK		1.7305				
26-NOV-2008 03:36	CHK		1.6267	In			
27-NOV-2008 06:34	CHK		1.8523				
28-NOV-2008 06:47	CHK		1.9417				
29-NOV-2008 07:10	CHK		1.9551				
1-DEC-2008 03:22	CHK		1.7322				
1-DEC-2008 23:35	CHK		1.9330				
2-DEC-2008 04:13	CHK		1.7964				
2-DEC-2008 04:25	CHK		1.8619				
3-DEC-2008 01:56	CHK		1.9538				
4-DEC-2008 03:16	CHK		1.9623				

5-DEC-2008 01:32	CHK		1.8276	| |	
5-DEC-2008 01:45	CHK		1.7209	| |	

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
5-DEC-2008 01:58	CHK		2.0550	|In| |
6-DEC-2008 04:52	CHK		1.8192	| |
8-DEC-2008 00:53	CHK		1.8708	| |
9-DEC-2008 02:42	CHK		2.0353	|In| |
9-DEC-2008 02:53	CHK		1.6899	| |
10-DEC-2008 05:37	CHK		1.8474	| |
11-DEC-2008 03:05	CHK		1.8056	| |
12-DEC-2008 06:50	CHK		1.9218	| |
13-DEC-2008 06:32	CHK		1.9323	| |

-- Multi-Test Full Report --

Description : 778.89 KeV Efficiency
Parameter Units : Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 0.001800 Upper Bound : 0.002100

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 0.002007 Std Deviation : 0.000053

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		0.0020	| |
17-NOV-2008 06:31	CHK		0.0020	| |
18-NOV-2008 00:55	CHK		0.0020	| |
19-NOV-2008 01:23	CHK		0.0020	| |
20-NOV-2008 01:33	CHK		0.0020	| |
20-NOV-2008 01:48	CHK		0.0019	|In| |
20-NOV-2008 02:00	CHK		0.0021	Ab|In| |
20-NOV-2008 02:12	CHK		0.0019	| |
21-NOV-2008 03:50	CHK		0.0021	| |
21-NOV-2008 04:03	CHK		0.0020	| |
24-NOV-2008 04:46	CHK		0.0019	| |

25-NOV-2008 04:38	CHK	0.0020	| |	|
26-NOV-2008 03:24	CHK	0.0021	Ab| |	|
26-NOV-2008 03:36	CHK	0.0021	| |	|
27-NOV-2008 06:34	CHK	0.0020	| |	|
28-NOV-2008 06:47	CHK	0.0020	| |	|
29-NOV-2008 07:10	CHK	0.0021	| |	|
1-DEC-2008 03:22	CHK	0.0020	| |	|
1-DEC-2008 23:35	CHK	0.0020	| |	|
2-DEC-2008 04:13	CHK	0.0020	| |	|
2-DEC-2008 04:25	CHK	0.0020	| |	|
3-DEC-2008 01:56	CHK	0.0020	| |	|
4-DEC-2008 03:16	CHK	0.0020	| |	|
5-DEC-2008 01:32	CHK	0.0019	| |	|
5-DEC-2008 01:45	CHK	0.0020	| |	|
5-DEC-2008 01:58	CHK	0.0020	| |	|
6-DEC-2008 04:52	CHK	0.0020	| |	|
8-DEC-2008 00:53	CHK	0.0020	| |	|
9-DEC-2008 02:42	CHK	0.0021	Ab|In|	|

Quality Assurance Multi-Test Full Report (continued) Page : 7

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
9-DEC-2008 02:53	CHK		0.0020	| | |
10-DEC-2008 05:37	CHK		0.0021	| | |
11-DEC-2008 03:05	CHK		0.0020	| | |
12-DEC-2008 06:50	CHK		0.0020	| | |
13-DEC-2008 06:32	CHK		0.0020	| | |

-- Multi-Test Full Report --

Description : 778.89 KeV Centroid
Parameter Units : channels Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 3077.000000 Upper Bound : 3277.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		3203.9651	| | |
17-NOV-2008 06:31	CHK		3204.1499	| | |
18-NOV-2008 00:55	CHK		3203.9844	| | |
19-NOV-2008 01:23	CHK		3203.9951	| | |
20-NOV-2008 01:33	CHK		3204.0493	| | |

20-NOV-2008 01:48	CHK	3204.1208	|	|
20-NOV-2008 02:00	CHK	3204.0273	|	|
20-NOV-2008 02:12	CHK	3203.8848	|	|
21-NOV-2008 03:50	CHK	3204.1873	|	|
21-NOV-2008 04:03	CHK	3204.1565	|	|
24-NOV-2008 04:46	CHK	3204.1121	|	|
25-NOV-2008 04:38	CHK	3204.0923	|	|
26-NOV-2008 03:24	CHK	3204.4861	|	|
26-NOV-2008 03:36	CHK	3204.3752	|	|
27-NOV-2008 06:34	CHK	3204.2375	|	|
28-NOV-2008 06:47	CHK	3204.3198	|	|
29-NOV-2008 07:10	CHK	3204.1519	|	|
1-DEC-2008 03:22	CHK	3204.4583	|	|
1-DEC-2008 23:35	CHK	3204.3962	|	|
2-DEC-2008 04:13	CHK	3204.2034	|	|
2-DEC-2008 04:25	CHK	3204.2295	|	|
3-DEC-2008 01:56	CHK	3204.4043	|	|
4-DEC-2008 03:16	CHK	3204.1287	|	|
5-DEC-2008 01:32	CHK	3204.3018	|	|
5-DEC-2008 01:45	CHK	3204.4106	|	|
5-DEC-2008 01:58	CHK	3204.4731	|	|
6-DEC-2008 04:52	CHK	3204.2615	|	|
8-DEC-2008 00:53	CHK	3203.9050	|	|
9-DEC-2008 02:42	CHK	3204.1016	|	|
9-DEC-2008 02:53	CHK	3204.0789	|	|
10-DEC-2008 05:37	CHK	3204.1492	|	|
11-DEC-2008 03:05	CHK	3204.1582	|	|
12-DEC-2008 06:50	CHK	3204.1641	|	|
13-DEC-2008 06:32	CHK	3203.9673	|	|

-- Multi-Test Full Report --

Description : 778.89 KeV FWHM Resolution
Parameter Units : keV Parameter Type : Peak

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 1.280000 Upper Bound : 1.720000

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUN-2008 00:00
Mean : 1.520886 Std Deviation : 0.067022

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 8

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-NOV-2008 06:29	CHK		1.4670	| | |
17-NOV-2008 06:31	CHK		1.5848	| | |
18-NOV-2008 00:55	CHK		1.5261	| | |
19-NOV-2008 01:23	CHK		1.4746	| | |
20-NOV-2008 01:33	CHK		1.5076	| | |
20-NOV-2008 01:48	CHK		1.4852	| | |
20-NOV-2008 02:00	CHK		1.5296	| | |
20-NOV-2008 02:12	CHK		1.4482	| | |
21-NOV-2008 03:50	CHK		1.5021	| | |
21-NOV-2008 04:03	CHK		1.5299	| | |
24-NOV-2008 04:46	CHK		1.5556	| | |
25-NOV-2008 04:38	CHK		1.4921	| | |
26-NOV-2008 03:24	CHK		1.5182	| | |
26-NOV-2008 03:36	CHK		1.5021	| | |
27-NOV-2008 06:34	CHK		1.4010	| | |
28-NOV-2008 06:47	CHK		1.4454	| | |
29-NOV-2008 07:10	CHK		1.6450	| | |
1-DEC-2008 03:22	CHK		1.5173	| | |
1-DEC-2008 23:35	CHK		1.5810	| | |
2-DEC-2008 04:13	CHK		1.5131	| | |
2-DEC-2008 04:25	CHK		1.4599	| | |
3-DEC-2008 01:56	CHK		1.4435	| | |
4-DEC-2008 03:16	CHK		1.5117	| | |
5-DEC-2008 01:32	CHK		1.5138	| | |
5-DEC-2008 01:45	CHK		1.4140	| | |
5-DEC-2008 01:58	CHK		1.5684	| | |
6-DEC-2008 04:52	CHK		1.4332	| | |
8-DEC-2008 00:53	CHK		1.4765	| | |
9-DEC-2008 02:42	CHK		1.5340	| | |
9-DEC-2008 02:53	CHK		1.4550	| | |
10-DEC-2008 05:37	CHK		1.5117	| | |
11-DEC-2008 03:05	CHK		1.5746	| | |
12-DEC-2008 06:50	CHK		1.5446	| | |
13-DEC-2008 06:32	CHK		1.4958	| | |

Quality Assurance Report. Generated 16-DEC-2008 14:46:39.78

QA Filename : RDND06::RDND06$DKA100:[GER15.QA]BKG.QAF;3

-- Multi-Test Full Report --

Description : MDA K-40 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Trend Test Test Parameters ----
N Mean Samples : 0 M Slope Samples: 0

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 0.000000 Std Deviation : 0.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		0.0000	| | |
23-NOV-2008 05:01	bkg		0.0000	| | |
30-NOV-2008 05:53	bkg		0.0000	| | |
7-DEC-2008 04:34	bkg		0.0000	| | |
14-DEC-2008 06:39	bkg		0.0000	| | |

-- Multi-Test Full Report --

Description : MDA Cr-51 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 14.154800 Std Deviation : 6.137027

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		18.3460	| | |
23-NOV-2008 05:01	bkg		18.2698	| | |
30-NOV-2008 05:53	bkg		17.9412	| | |
7-DEC-2008 04:34	bkg		17.6240	| | |

14-DEC-2008 06:39 bkg 17.5725 | | |

-- Multi-Test Full Report --

Description : MDA Co-60 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.502625 Std Deviation : 9.073804

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		27.5690	| | |
23-NOV-2008 05:01	bkg		25.5222	| | |
30-NOV-2008 05:53	bkg		25.9775	| | |
7-DEC-2008 04:34	bkg		24.0173	| | |
14-DEC-2008 06:39	bkg		26.2200	| | |

-- Multi-Test Full Report --

Description : MDA Zn-65 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 21.819336 Std Deviation : 9.302514

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		25.6638	| | |
23-NOV-2008 05:01	bkg		24.6228	| | |
30-NOV-2008 05:53	bkg		28.2138	| | |
7-DEC-2008 04:34	bkg		26.8494	| | |
14-DEC-2008 06:39	bkg		26.7233	| | |

-- Multi-Test Full Report --

Description : MDA Ru106da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 17.865231 Std Deviation : 7.676323

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		22.2417	| | |
23-NOV-2008 05:01	bkg		22.0143	| | |
30-NOV-2008 05:53	bkg		22.2817	| | |
7-DEC-2008 04:34	bkg		21.0047	| | |
14-DEC-2008 06:39	bkg		22.4379	| | |

-- Multi-Test Full Report --

Description : MDA Cs-134 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 19.359049 Std Deviation : 8.339755

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		23.4833	| | |
23-NOV-2008 05:01	bkg		22.3451	| | |
30-NOV-2008 05:53	bkg		23.1159	| | |
7-DEC-2008 04:34	bkg		23.4133	| | |
14-DEC-2008 06:39	bkg		23.1876	| | |

-- Multi-Test Full Report --

Description : MDA Cs-137da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 17.756477 Std Deviation : 7.600770

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		23.0455	| | |
23-NOV-2008 05:01	bkg		21.1840	| | |
30-NOV-2008 05:53	bkg		21.5680	| | |
7-DEC-2008 04:34	bkg		19.8521	| | |
14-DEC-2008 06:39	bkg		21.1999	| | |

-- Multi-Test Full Report --

Description : MDA Pb-212 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 13.797050 Std Deviation : 6.065282

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		17.8390	| | |
23-NOV-2008 05:01	bkg		18.8634	| | |
30-NOV-2008 05:53	bkg		18.4900	| | |
7-DEC-2008 04:34	bkg		17.5633	| | |
14-DEC-2008 06:39	bkg		18.2712	| | |

-- Multi-Test Full Report --

Description : MDA Ra-226da CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 23.296396 Std Deviation : 10.160569

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		30.0833	| | |
23-NOV-2008 05:01	bkg		30.3358	| | |
30-NOV-2008 05:53	bkg		30.8255	| | |
7-DEC-2008 04:34	bkg		31.8532	| | |
14-DEC-2008 06:39	bkg		30.1260	| | |

-- Multi-Test Full Report --

Description : MDA Ra-228 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 24.167795 Std Deviation : 10.396915

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		33.2409	| | |
23-NOV-2008 05:01	bkg		29.8762	| | |
30-NOV-2008 05:53	bkg		31.0345	| | |
7-DEC-2008 04:34	bkg		29.6084	| | |
14-DEC-2008 06:39	bkg		30.3995	| | |

-- Multi-Test Full Report --

Description : MDA U-235 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 10.280385 Std Deviation : 4.499244

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		13.9279	| | |
23-NOV-2008 05:01	bkg		13.9377	| | |
30-NOV-2008 05:53	bkg		13.7004	| | |
7-DEC-2008 04:34	bkg		13.4112	| | |
14-DEC-2008 06:39	bkg		13.2093	| | |

-- Multi-Test Full Report --

Description : MDA TH-232 CPM
Parameter Units : CPM Parameter Type : Nuclide

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JAN-2008 00:00 End Date : 1-JUL-2008 00:00
Mean : 119.516228 Std Deviation : 51.932072

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
16-NOV-2008 10:08	bkg		152.9629	| | |
23-NOV-2008 05:01	bkg		155.5463	| | |
30-NOV-2008 05:53	bkg		148.5043	| | |
7-DEC-2008 04:34	bkg		149.6189	| | |
14-DEC-2008 06:39	bkg		152.2688	| | |