Radiochemical Data Review Checklist
Schofield Barracks

Project: 07-3080.04
LAB ID: Sanford Cohen & Associates
Reviewer: Bachir Badaoui
Date: 12/4/2007

Work Order: 7859
Analysis Type: Gamma Spec

Sample	Matrix	Collection Date	Date Received	Preparation Date	Hold Times Met? (Y, N< or N/A)	Analysis Date	Hold Times Met? (Y, N< or N/A)
SB-CZ-SS-2095-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/22/2007	N/A
SB-CZ-SS-2096-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/22/2007	N/A
SB-CZ-SS-2097-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/23/2007	N/A
SB-CZ-SS-2098-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/23/2007	N/A
SB-CZ-SS-2099-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/23/2007	N/A
SB-CZ-SS-2100-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/23/2007	N/A
SB-CZ-SS-2101-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/23/2007	N/A
SB-CZ-SS-2102-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/23/2007	N/A
SB-CZ-SS-2103-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2104-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2105-SD	SOIL	8/28/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2106-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2107-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2108-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2109-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2110-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A

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LAB ID:	**Sanford Cohen & Associates**	**Analysis Type:**	**Gamma Spect**
Reviewer:	**Bachir Badaoui**		
Date:	**12/4/2007**		

Sample	Matrix	Collection Date	Date Received	Preparation Date	Hold Times Met? (Y, N< or N/A)	Analysis Date	Hold Times Met? (Y, N< or N/A)
SB-CZ-SS-2111-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2112-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A
SB-CZ-SS-2113-SD	SOIL	8/29/2007	9/10/2007	9/26/2007	N/A	10/24/2007	N/A

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Validation Item	Acceptable (YES)	Not Acceptable (NO)	Not Applicable (N/A)
Sample Chain of Custody Review			
Are there printed names and signatures present in the Relinquished By and Received By Blocks?		X(1)	
Does the COC date match the Relinquished By date?	X		
Is the Received By date consistent with sample custody transfer (Relinquished By)?	X		
Have all the samples listed on the Chain of Custody have been analyzed? (Verify this by checking that the Memo and/or case narratives are consistent with the COC. - Actinides Pu & U, and Gamma Isotopes w/Ra-226)	X		
Were the sample(s) preserved appropriately?	X		X
Are all the samples included in the analytical report are listed correctly on the Chain of Custody?	X		
Are the analytes reported consistent with the project requirements? (See Attached Sheet)	X		
Comments: 1. Printed name not present in received by block. No data were qualified as a result of this omission.			
Sample Receipt Checklist Review			
Did the laboratory complete the Sample Receiving Checklist?	x		
Are all receipt inspection items marked “Yes”? (If “No” are they acceptable?).	x		
Comments:			
Case Narrative/Analytical Report			
Does the Case Narrative report submitted by the laboratory indicate any problems with the analysis or other factors which could impact the validity of the sample analysis?	x		
Does the Analytical report agree with the analyte list specified for the project?	x		

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Validation Item	Acceptable	Not Acceptable	Not Applicable
Are results that are flagged by laboratory necessary and complete, and are understandable comments provided?	x		
Are the reporting units are correct and consistent? (pCi/g)	x		
Comments:			
Laboratory Quality Control Sample Review			
Did the laboratory properly complete all required laboratory quality control samples at required frequencies? LCS - 1 per matrix and one per batch or 1/20 samples whichever is more frequent Matrix Spike – 1 per matrix and one per batch or 1/20 samples whichever is more frequent Duplicates - 1 per matrix and one per batch or 1/20 samples whichever is more frequent Blanks - 1 per matrix and one per batch or 1/20 samples whichever is more frequent	X(3)		
Are the laboratory quality control sample results acceptable (solids)? LCS - 30% -69% estimated (J); >130% estimated (J); <30% unusable (R) Matrix Spike – 20% -70% estimated (J); >130% estimated (J); <20% unusable (R) Duplicates - Duplicates – Normalized Absolute Difference (NAD)>1.96 estimated (J) Blanks – see section 4.3 of McAFB-048	X(4-5)		
Comments: 3. Matrix Spikes are not necessary for Gamma Spec. 4. LCS and NAD results are all acceptable. 5. The alpha LCS, duplicate analyses, and tracer recoveries indicate acceptable data quality, so the data will not be qualified despite the lack of a matrix spike.			

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Validation Item	Acceptable	Not Acceptable	Not Applicable
Other Evaluation Factors			
If a result has an uncertainty greater than the result, is the uncertainty is less than the required detection limit?	X(6)		
Are the sample hold times acceptable? (Six months or less for all Rad except ^{3}H, which is three months or less)	X		X
Are total propagated uncertainty (TPU) values provided for all results?	X		
Are the aliquot sizes appropriate – (1 g minimum for dry solids)	X		
Are soil sample results reported on a dry-weight basis? (See Case Narrative)	X		
Were required detection limits achieved? (see "QA/QC Plan" Table 2.2)	X (7)		

Comments:

6. 6. When the uncertainty is higher than its reported activity result, and, is also higher than the required detection limit, then, those samples have been identified and qualified with a "J" flag in the Schofield Data database. None were qualified for this package 7859.

7. Detection limits were not met for the following samples:
   Th-234: SB-CZ-SS-2101-SD, SB-CZ-SS-2103-SD, and SB-CZ-SS-2107-SD. Results were qualified with a "DL" flag.