

**Radiochemical Data Review Checklist  
Schofield Barracks**

**Project:** 07-3080.04 Schofield Barracks  
**LAB ID:** SC&A  
**Reviewer:** Stacey Sedano  
**Date:** 12/28/2007

**Work Order:** 7925  
**Analysis Type:** Gamma Spectrometry

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-2173-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2174-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2175-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2176-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2177-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2178-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2179-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2180-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2181-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2182-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/06/07	N/A
SB-CZ-SS-2183-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/07/07	N/A
SB-CZ-SS-2184-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/07/07	N/A
SB-CZ-SS-2185-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/07/07	N/A
SB-CZ-SS-2186-ST	SOIL	9/24/07	9/27/07	10/03/07	N/A	11/07/07	N/A

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Validation Item	Acceptable (YES)	Not Acceptable (NO)	Not Applicable (N/A)
<b>Sample Chain of Custody Review</b>			
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.)	X		
Were the sample(s) preserved appropriately?			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:			
<p style="margin-left: 40px;">1. Printed name not present in received by block. No data were qualified as a result of this omission.</p>			
<b>Sample Receipt Checklist Review</b>			
Did the laboratory complete the Sample Receiving Checklist?	X		
Are all receipt inspection items marked "Yes"? (If "No" are they acceptable?).	X		
Comments:			
<b>Case Narrative/Analytical Report</b>			
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:			
<b>Laboratory Quality Control Sample Review</b>			
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 (2)		
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)	X(2,3,4)		
Comments: 2. Matrix Spikes are not necessary for Gamma Spec. 3. LCS and NAD results are all acceptable. 4. Potential Blank contamination for samples with Bi-214 with activity less than 0.38 pCi/g. No samples were flagged for Bi-214 blank contamination.			

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<b>Other Evaluation Factors</b>			
If a result has an uncertainty greater than the result, is the uncertainty is less than the required detection limit?	X		
Are the sample hold times acceptable? (Six months or less for all Rad except <sup>3</sup> H, which is three months or less )			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(5)		
<p><b>Comments:</b></p> <p>5. Detection limit of 0.5 pCi/g was not met for samples for Th-234 listed below: SB-CZ-SS-2184-ST</p>			