

# **Radiochemical Data Review Checklist** **Schofield Barracks**

**Project:** 07-3080.04 Schofield Barracks  
**LAB ID:** SC&A  
**Reviewer:** Stacey Sedano  
**Date:** 12/27/2007

**Work Order:** 7905  
**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-2002-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2003-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2004-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2005-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2006-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2007-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2008-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2009-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
| SB-CZ-SS-2010-BA | SOIL   | 9/13/07         | 9/25/07       | 9/25/07          | N/A                            | 10/28/07      | N/A                            |
|                  |        |                 |               |                  |                                |               |                                |
|                  |        |                 |               |                  |                                |               |                                |
|                  |        |                 |               |                  |                                |               |                                |
|                  |        |                 |               |                  |                                |               |                                |
|                  |        |                 |               |                  |                                |               |                                |

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| Validation Item   | Acceptable<br>(YES) | Not<br>Acceptable<br>(NO) | Not<br>Applicable<br>(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:<br><br>1. Printed name not present in received by block. No data were qualified as a result of this omission.   |                     |                           |                            |
| <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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|--|------------|-------------------|-------------------|
| 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?<br>LCS - 1 per matrix and one per batch or 1/20 samples whichever is more frequent<br>Matrix Spike – 1 per matrix and one per batch or 1/20 samples whichever is more frequent<br>Duplicates - 1 per matrix and one per batch or 1/20 samples whichever is more frequent<br>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)?<br>LCS - 30% -69% estimated (J); >130% estimated (J); <30% unusable (R)<br>Matrix Spike – 20% -70% estimated (J); >130% estimated (J); <20% unusable (R)<br>Duplicates - Duplicates – Normalized Absolute Difference (NAD)>1.96 estimated (J)   | X(2,3,4)   |                   |                   |
| Comments:<br><br>2. Matrix Spikes are not necessary for Gamma Specy.<br>3. LCS and NAD results are all acceptable.<br>4. Potential Blank contamination for Pb-214 and U-235 with sample activity less than 0.29 pCi/g and 0.63 pCi/g, respectively. No samples were flagged.   |            |                   |                   |

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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)       |                |                |
| <b>Comments:</b><br><br><div style="margin-left: 40px;">5. Detection limit of 0.5 pCi/g was met for all samples for Th-234.</div> |            |                |                |