

**Radiochemical Data Review Checklist  
Schofield Barracks**

**Project:** 07-3080.04  
**LAB ID:** GEL  
**Reviewer:** Stacey Sedano  
**Date:** 01-07-08

**Work Order:** 708130  
**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-2322-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2323ST  | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2324-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2325-ST | Soil   | 9/18/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2326-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2327-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2328-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2326-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2330-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2331-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2332-ST | Soil   | 9/28/2007       | 12/042007     | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2333-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2334-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2335-ST | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2322-SD | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | N/A                            |
| SB-CZ-SS-2323-SD | Soil   | 9/28/2007       | 12/04/2007    | 12/05/2007       | N/A                            | 12/12/2007    | 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. - Gamma Isotopes) | 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>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                   |                           |                            |

| 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          |                |                |

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|  |          |  |  |
|--|----------|--|--|
| 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: <div style="margin-top: 20px;">           2. Matrix Spikes are not necessary for Gamma Spec.<br/>           3. LCS and NAD results are all acceptable.<br/>           4. No Potential Blank contamination.         </div>  |          |  |  |

| Validation Item   | Acceptable | Not Acceptable | Not Applicable |
|---|------------|----------------|----------------|
| <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  |            |                | X              |

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|  |       |  |  |
|--|-------|--|--|
| <sup>3</sup> H, which is three months or less )                              |       |  |  |
| 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) |  |  |

## **Comments:**

5. Detection limit of 0.5 pCi/g was met for all samples for Th-234.