

United States Government

Department of Energy

# memorandum

Carlsbad Field Office  
Carlsbad, New Mexico 88221

DATE: November 22, 2000

REPLY TO  
ATTN OF: CBFO:QA:SAV:VW:00-1340 UFC:2300

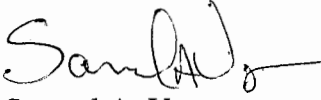
SUBJECT: Issuance of Savannah River Site (SRS) TRU Waste Characterization, Corrective Action Report (CAR) 01-007

TO: K. Watson, CBFO

During the period of November 7 through 16, Certification Audit A-01-01 was conducted at the Savannah River Site. As a result of this audit one condition adverse to quality was identified which resulted in the issuance of Corrective Action Report (CAR) 01-007, attached.

Please determine and document on the attached CAR continuation sheet, your proposed corrective action plan for the CAR. Please forward the proposed corrective action plan and schedule for completion to me prior to the response due date identified in CAR block 14.

If you have any questions or comments, please contact me at (505) 234-7423.

  
Samuel A. Vega  
Quality Assurance Manager

## Attachment

cc: w/attachment  
L. Chism, CBFO  
M. Eagle, EPA  
S. Zappe, NMED  
B. Walker, EEG  
J. May, CTAC  
J. Schuetz, CTAC  
M. Gerle, WID  
D. Winter, DNFSB



001129



# CORRECTIVE ACTION REPORT

<b>1. CAR No.:</b> CAR 01-007	<b>2. Activity Report No.:</b> CBFO A-01-01	<b>3. Page</b> <u>1</u> <b>of</b> <u>2</u>																
<b>4. Controlling Document:</b> 40 CFR 191 & 194, CCA & DOE/WIPP-069, Waste Acceptance Criteria for the WIPP Isolation Pilot Plant (WAC)	<b>5. CAO Assessment Team Leader:</b> S. Vega																	
<b>6. Responsible Organization:</b> Carlsbad Field Office	<b>7. CAQ Was Discussed With:</b> I. Triay and K. Watson																	
<b>8. Requirement that was violated:</b>  (See Continuation Page)																		
<b>9. Condition Adverse to Quality:</b>  DOE/WIPP-069, Section A.1 is not clear. This section does not clearly tell SRS and other TRU generator sites that when isotopic ratios derived from AK are used, confirmation of the ratios by a measurement program must be performed.																		
<b>10. Suggested Actions (Optional):</b>																		
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">11a. Significant CAQ</td> <td style="width: 20%;">(Yes or No):</td> <td>YES</td> </tr> <tr> <td>11b. Work Suspension Recommended</td> <td>(Yes or No):</td> <td>NO</td> </tr> <tr> <td>11c. RCRA-Related</td> <td>(Yes or No):</td> <td>NO</td> </tr> </table>			11a. Significant CAQ	(Yes or No):	YES	11b. Work Suspension Recommended	(Yes or No):	NO	11c. RCRA-Related	(Yes or No):	NO							
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11b. Work Suspension Recommended	(Yes or No):	NO																
11c. RCRA-Related	(Yes or No):	NO																
<b>12. Types of Actions:</b> Remedial: <input checked="" type="checkbox"/> Investigative: <input checked="" type="checkbox"/> Root Cause: <input checked="" type="checkbox"/> Actions to Preclude Recurrence: <input checked="" type="checkbox"/>																		
<b>13. CAR Initiator:</b> <u>J. May</u> <i>J.M.</i> <b>Date:</b> <u>11/21/00</u>																		
<b>14. Response Due Date:</b> <u>12/22/00</u> <b>Corrective Action Plan Required:</b> YES																		
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><b>15. Concurrence:</b> <u>Samuel A. Vega</u></td> <td style="width: 15%;"><u>11/21/00</u></td> <td style="width: 33%;"><u>N/A</u></td> <td style="width: 19%;"></td> </tr> <tr> <td style="text-align: center;">Assessment Team Leader</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Responsible Assistant Manager</td> <td style="text-align: center;">Date</td> </tr> <tr> <td style="padding-top: 10px;"><u>Samuel A. Vega</u></td> <td style="padding-top: 10px;"><u>11/21/00</u></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Quality Assurance Manager</td> <td style="text-align: center;">Date</td> <td></td> <td></td> </tr> </table>			<b>15. Concurrence:</b> <u>Samuel A. Vega</u>	<u>11/21/00</u>	<u>N/A</u>		Assessment Team Leader	Date	Responsible Assistant Manager	Date	<u>Samuel A. Vega</u>	<u>11/21/00</u>			Quality Assurance Manager	Date		
<b>15. Concurrence:</b> <u>Samuel A. Vega</u>	<u>11/21/00</u>	<u>N/A</u>																
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Quality Assurance Manager	Date																	
<b>16. Corrective Actions Proposed by the Responsible Organization:</b> Use CAR Continuation Sheet																		
<b>17. Acceptance of Proposed Corrective Actions:</b>  _____ <b>Assessment Team Leader</b> _____ <b>Date</b>																		
<b>18. Verification of Corrective Action Completion:</b> (Use CAR Continuation Sheet)																		
<b>19a. Verified By:</b> _____																		
<b>19b. Trend Cause Code:</b> _____																		
<b>20. Closure:</b> _____ <b>Quality Assurance Manager</b> _____ <b>Date</b>																		

# CORRECTIVE ACTION REPORT

(continuation sheet)

1. CAR No.: CAR 01-007

2. Activity No.: CBFO A-01-01

3. Page 2 of 2

Block # 8

- 40 CFR 191 requires an assessment be made for a repository. Appendix C to 191 says this will be used to show compliance with 191.13 (containment).
- 40 CFR 194 describes how WIPP will show compliance with 191.
- 194.24 requires the radiological waste components (radionuclides in this case) be described. The description will include the quantity of the component and "may be derived from process knowledge, current non-destructive examination/assay, or other information and methods.
- 194.24 (c)(3) requires demonstration that use of process knowledge to quantify components in waste for disposal conforms with QA requirements found in 194.22.
- 194.24 (c)(4) requires ongoing controls to assure the limitations are not exceeded (need to track radionuclide mix to show the PA was correct).
- 194.22 (a)(2) requires a QA program be established for waste characterization and assumptions.
- 194.22 (a)(2) requires the CCA to discuss how QA will be used to assess the quality characteristics for data (QAOs).
- Chapter 4 of the CCA allows AK for waste characterization (4.1.1).
- Chapter 4, 4.1.3.3 describes how the CCA radionuclide inventory was estimated but will be determined quantitatively prior to shipment to confirm the estimate.
- Chapter 4, 4.3.4 specifies that the QA program as provided in the QAPP and methods manual (MM not relevant for radionuclides) will be used for characterization. It states that the QAOs for NDA are in the QAPP. This is how 194.22 will be met.
- Chapter 4, 4.4 restates that characterization will be performed in accordance with the QAPP and WAC.
- Chapter 4, 4.4.2 allows a combination of assay methods, including AK, can be used as long as the QAOs in the QAPP are met.
- Chapter 5 of the CCA (QA) states that the QAPP will be used to meet QA requirements.
- WAC and WCL of the CCA describe why some components are significant and must be tracked and why some can be dismissed. It explains why there are 10 significant radionuclides. These sections do not discuss making measurements.
- The requirements for NDA were in Chapter 9 of the QAPP. This material was moved to Appendix A of the WAC.
- Section 1.0 of the WAC states that the WAP will provide details for characterization programs. Attachment A, A.1 states that the isotopic ratios used to quantify all radionuclides present in the waste can be made using AK. It also states that AK will meet the WAP requirements.
- B4-1 and B4-3d of the WAP states that AK must be confirmed using sampling and analysis.

The ASTM methods that are the basis for assay describe how to quantify radionuclides in a container by using isotopic ratios for the radionuclides present in the waste. For use at WIPP, knowledge of these ratios can be provided by AK, but AK must be confirmed. Therefore, a site that uses isotopic ratios derived from AK must confirm that ratio by a measurement program.