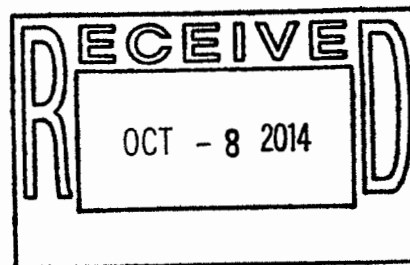




**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221

OCT - 7 2014

 ENTERED



Mr. Jon E. Hoff, Manager  
Quality Assurance  
Nuclear Waste Partnership LLC  
P.O. Box 2078  
Carlsbad, NM 88221-2078

Subject: Verification and Acceptance of Corrective Actions for CAR 14-047 from Audit A-14-18,  
Idaho National Laboratory Central Characterization Program

Dear Mr. Hoff:

The Carlsbad Field Office (CBFO) has completed its review and verification of completion of the corrective actions associated with CBFO Corrective Action Report (CAR) 14-047. The results of the verification are documented on the enclosed CAR Continuation Sheets, and indicate that the documentation of completion of corrective actions is acceptable.

The verification concluded that the associated corrective actions have been fulfilled and are satisfactorily implemented. Therefore, CAR 14-047 is considered closed.

If you have any questions or comments regarding the CAR closure, please contact me at (575) 234-7491.

Sincerely,

  
Dennis S. Miehl  
Senior Quality Assurance Specialist

Enclosure



cc: w/enclosures

- M. Brown, CBFO \* ED
- J. R. Stroble, CBFO ED
- M. Navarrete, CBFO ED
- M. Pinzel, CBFO ED
- N. Castaneda, CBFO ED
- J. Zimmerman, DOE-ID ED
- J. Wells, DOE-ID ED
- B. Roberts, DOE-ID ED
- R. McQuinn, NWP ED
- J. Blankenhorn, NWP ED
- J. Harris, NWP ED
- F. Sharif, NWP/CCP ED
- D. E. Gulbransen, NWP/CCP ED
- V. Cannon, NWP/CCP ED
- A.J. Fisher, NWP/CCP ED
- I. Joo, NWP/CCP ED
- M. Walker, NWP/CCP ED
- W. Ledford, NWP/CCP ED
- J. Carter, NWP/CCP ED
- B. Allen, NWP/QA ED
- S. Punchios, NWP/QA ED
- S. Escareno-Soto, NWP/QA ED
- T. Peake, EPA ED
- L. Bender, EPA ED
- E. Feltcorn, EPA ED
- R. Joglekar, EPA ED
- S. Ghose, EPA ED
- R. Lee, EPA ED
- J. Kieling, NMED ED
- S. Holmes, NMED ED
- R. Maestas, NMED ED
- C. Smith, NMED ED
- Site Documents ED
- V. Daub, CTAC ED
- R. Allen, CTAC ED
- P. Martinez, CTAC ED
- B. Pace, CTAC ED
- T. Ackman, CTAC ED
- D. Blauvelt, CTAC ED
- P. Hinojos, CTAC ED
- D. Sellmer, CTAC ED
- G. White, CTAC ED

CBFO QA File

CBFO M&RC

\*ED denotes electronic distribution

## CAR CONTINUATION SHEET

1. CAR No: 14-047

2. Activity No: A-14-18

3. Page 1 of 3

**Block # 17 & 18 Acceptance of Corrective Action Completion and Closure:**

The Carlsbad Field Office (CBFO) has reviewed the closure package for Corrective Action Report (CAR) 14-047, including objective evidence and supporting documentation, submitted via Nuclear Waste Partnership (NWP) letter QA:14:00315 UFC:2300.00 from J. E. Hoff to D. S. Miehls, Subject: "TRANSMITTAL OF THE DOCUMENTATION SUPPORTING COMPLETION OF THE CORRECTIVE ACTIONS ASSOCIATED WITH CBFO CORRECTIVE ACTION REPORT 14-047, WHICH RESULTED FROM CBFO AUDIT A-14-18, INL/CCP CHARACTERIZATION AND CERTIFICATION ACTIVITIES FOR CONTACT-HANDLED AND REMOTE-HANDLED TRU WASTE."

Italicized text, taken verbatim from the corrective action plan, is used to reflect the correlation between the actions required by the CAR and the method used for verification.

**REMEDIAL ACTIONS**

*Since the concentrations were less than regulatory limits, the AK contained all the information necessary for characterization and confirmation, and the only remedial action is to correct Attachment 5 of the AK as follows:*

- a) *The CCP-TP-005 Attachment 5 for waste stream ID-EBR-S5000 will be revised. The "Suspected Present (Y/N)" column will be changed to "Y" for arsenic, cadmium, chromium, lead, and silver. In addition, the "TC constituent concentration less than regulatory level (Y/N/NA)" column will be changed to "Y" for these same constituents.*
- b) *Section 5.4.2.2 of AK Summary Report CCP-AK-INL-600 will be revised to read: "Based on review of AK relative to chemicals and materials used during the EBR-I decommissioning operations, waste stream ID-EBR-S5000 is not contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24 (Reference 11). With the exception of lead (EPA HWN D008), none of the other toxicity characteristic metals were identified in EBR-I decommissioning operations. Although lead was used as shielding in fuel and reactor component transfer coffins and casks, as described in Sections 4.1 and 4.2, lead is not identified as present in the waste containers. The lead reflector, built to replace the NU outer blanket assembly for the Mark IV core experiments as described in Section 5.3, is not identified as present in the container paperwork as it is not expected to have been packaged with the NU components. Arsenic, cadmium, chromium, lead, and silver were detected in spectral analysis of the blanket bricks. However, the concentrations are below the regulatory levels (Reference P838). No toxicity characteristic organic hazardous constituents were identified for EBR-I decommission operations or present on reactor outer blanket components. Therefore no toxicity characteristic EPA HWNs are assigned to waste stream ID-EBR-S5000 (References P777, P778, P838, P881, P954, P4078, P4079, P4082, P4090)."*

**Verification:**

Verified remedial actions were completed through a review of the revision to Acceptable Knowledge Attachment 5 for waste stream ID-EBR-5000 where trace heavy metals were listed as "present." Verified that text changes were made to section 5.4.2.2 of AK Summary Report CCP-AK-INL-600 to further justify why hazardous waste numbers were not assigned.

**CAR CONTINUATION SHEET**

1. CAR No: 14-047

2. Activity No: A-14-18

3. Page 2 of 3

**INVESTIGATIVE ACTIONS**

*Waste stream ID-EBR-S5000 is somewhat unique in that the waste stream is composed of discreet materials, stainless steel clad depleted uranium items, and characterized as non-mixed waste. The stream was generated from disassembly operations, not hot cell or laboratory operations involving destructive analysis. Other waste materials such as combustible and plastics, tools, etc., were not identified. In addition, the concentrations of TC metals identified from the spectral analysis of the depleted uranium bricks in AK source document P838 are below the regulatory levels.*

*Typically when assessing potential hazardous constituents present in a waste stream, trace contaminants present in materials are considered and EPA HWNs conservatively assigned. Examples of waste items, known or conservatively assumed to contain toxicity characteristic metals above regulatory levels based on previous characterization activities, include circuit boards, incandescent light bulbs, mercury bulbs and thermometers, leaded gloves and aprons, and paint. When these items are identified as potentially used in the waste generating operations or otherwise identified in the waste, the applicable HWNs are assigned to the waste stream. For waste items composed of known metal compositions in a waste stream, such as depleted uranium bricks, or stainless steel tools, the trace contaminants of these metals are known to be present; however, they are not considered toxicity characteristic. However, should the generating process involve destructive operations or analysis of these materials where the TC metal constituents may leach, such as destructive examination of steel cladding, or the use of stainless steel in an acid environment, the EPA HWNs for trace metals present may be assigned to the waste stream if applicable.*

**Extent**

*Because of the special nature of this particular waste stream (as discussed in detail in the section just above), characterized as non-mixed waste, extent of condition is considered to be limited to the waste stream cited in the CAR.*

**Impact**

*Since the concentrations were less than regulatory limits, there was no impact from the CAR condition. The AK contained all the information necessary for characterization and confirmation.*

**Verification:**

The investigative actions as described are deemed appropriate to address the condition adverse to quality identified in the CAR.

**ROOT CAUSE DETERMINATION**

*None requested.*

**ACTIONS TO PRECLUDE RECURRENCE**

*The CCP AK Subject Matter Expert (SME) will provide a briefing to AKEs to reinforce that, for the development of AK reports on future non-hazardous waste streams, extra precautions are to be taken to include verbiage in the AK report: non-impactive metals, chemicals and other compounds are to be mentioned and discounted as necessary. The training will further instruct the AKEs to verify inclusion of trace chemicals, metals, and other compounds on the Attachment 5 as necessary.*

### CAR CONTINUATION SHEET

1. CAR No: 14-047

2. Activity No: A-14-18

3. Page 3 of 3

Verification:

Verified through review of attendance sheets that the requisite training was performed for all AKEs.

Based on the results of the review and verification of the objective evidence included in the CAR 14-047 closure package, it is recommended that CAR 14-047 be closed.

Verification Performed By:

*Dick Blauvelt*  
Dick Blauvelt, CTAC Technical Specialist

09/30/14  
Date