

Department of Energy
 Carlsbad Field Office
 P. O. Box 3090
 Carlsbad, New Mexico 88221
 JUL 20 2016



Mr. Val Cannon, Manager
 Quality Assurance
 Nuclear Waste Partnership LLC
 P.O. Box 2078
 Carlsbad, NM 88221-2078

Subject: Evaluation of the CAP for CBFO CAR 16-045 *INL Neutron Measurement*
 Resulting from CBFO Audit A-16-18

Dear Mr. Cannon:

Enclosed are the results of the Carlsbad Field Office (CBFO) evaluation of the Corrective Action Plan (CAP) associated with CBFO Corrective Action Report (CAR) 16-045. As documented on the enclosed CAR Continuation Sheet, the evaluation indicates that the CAP is acceptable.

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

Sincerely,

Dennis S. Miehl
 Senior Quality Assurance Specialist

Enclosure

cc: w/enclosure

M. Brown, CBFO	*ED	S. Punchios, NWP	ED
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A.J. Fisher, NWP	ED	Site Documents	ED
I. Joo, NWP	ED	CBFO QA File	
J. Carter, NWP	ED	CBFO M&RC	
V. Cannon, NWP	ED	*ED denotes electronic distribution	
B. Allen, NWP	ED		



CAR CONTINUATION SHEET

1. CAR No: 16-045

2. Activity No: A-16-18

3. Page 1 of 3

Block # 15 Acceptance/Rejection of Proposed Corrective Actions:

An evaluation was performed of the Corrective Action Plan (CAP) developed to address Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 16-045. The CAP was submitted via Nuclear Waste Partnership LLC (NWP) letter QA:16:00306 UFC:2300.00 (CBFO Unique # 1601779), dated July 14, 2016, from Mr. V.K. Cannon, Manager, Quality Assurance, to Mr. D.S. Miehl, Senior Quality Assurance Specialist, CBFO Office of Quality Assurance.

Italicized text, taken verbatim from the CAP, is used to reflect the correlation between the actions required by the CAR and the method used for evaluation.

REMEDIAL ACTIONS

CCP has taken the following remedial action:

- 1. CCP has completed a review of all RH containers characterized at INL, to determine whether the neutron contribution to the total dose rate was ever used to make an RH determination for the waste, or whether the gamma contribution was always sufficient to determine that the waste was RH, regardless of the neutron contribution. The review showed that, in all cases, the gamma measurement was always great enough to make the RH determination for the waste, and the neutron measurement was never used for this purpose.*

Evaluation

Accepted. Remedial Actions address the immediate concerns of the auditor. The CAP evaluator requests that documentation reviewed for the remedial action be included as part of the CAP closure package.

No other remedial actions are required.

INVESTIGATIVE ACTIONS

As discussed during the audit and in follow-on meetings, CCP does not take neutron measurements in accordance with CCP-TP-504 at any Host location. The procedure has been revised in anticipation of taking of neutron measurements to calculate DTC for neutron-emitting radionuclides in the future, but no CCP neutron instrumentation has been purchased or installed at INL. The fact that CCP operators entered "N/A" in the neutron sections of Attachments 1 and 2 of CCP-TP-504 shows that they clearly understood that they were not taking neutron measurements as part of the procedure.

Neutron measurement readings unrelated to CCP-TP-504 and the CCP program were read off to INL radiological technicians during performance of gamma dose measurements, at their request. When interviewed, the DTC operators explained that the INL neutron instruments are mounted near the gamma probes used by CCP. By swiveling the camera after taking the gamma readings, the CCP operators can see the neutron readings needed by INL under their radiological control program. INL radiological technicians have fallen into the practice of allowing the CCP DTC operator to read off the instrument measurements which the technicians then enter into their INL documentation. During the audit, there was no visual confirmation of the reading by INL radiological technicians.

As noted in the Actions to Prevent Recurrence section of this Corrective Action Plan, CCP has directed DTC

CAR CONTINUATION SHEET

1. CAR No: 16-045

2. Activity No: A-16-18

3. Page 2 of 3

As noted in the Actions to Prevent Recurrence section of this Corrective Action Plan, CCP has directed DTC operators at INL to discontinue the practice of reading off neutron measurements to INL radiological technicians.

Extent

CCP has confirmed that the practice observed by the auditors is limited to CCP at INL. CCP operators do not read off information to Host site personnel anywhere but INL. In addition, CCP operators universally enter "N/A" for neutron information, in DTC data sheets, at all locations where DTC is performed, since CCP does not take neutron measurements under CCP-TP-504 anywhere.

Impact

The CAR condition states that the neutron measurements at INL are not accurate, based on manufacturer recommendations for response time considerations. CCP obtains neutron measurement data from Host location radiological programs and uses it in determining whether waste containers are Remote-Handled (RH) or Contact-Handled (CH). Based on the statement in the CAR condition, CCP performed a review of all RH waste characterized at INL to evaluate whether the neutron contribution to the total dose rate was ever used to make an RH determination for the waste. As discussed in the Remedial Action section of this Corrective Action Plan, the review showed that the gamma measurement was always great enough to make the RH determination for the waste, and the neutron measurement was never used for this purpose. Neutron measurements taken under the INL radiological control program have had no impact on the CCP program.

Qualification of Dose-to-Curie Operators at INL

The CAR condition states that, during the audit, no objective evidence was provided that the CCP Operators are trained in the use of the radiological instruments specified in the procedure. The only radiological instruments used for DTC at INL are the FHZ 612 gamma probe and the FH 40 G gamma display instrument. During initial qualification and two-year requalifications, DTC operators must complete a qualification that includes On-the-job Practical Requirements, where they demonstrate proficiency in the DTC process, including use of the radiological instruments. DTC operators are observed by a Subject Matter Expert, and satisfactory performance is documented on the DTC qualification card.

DTC qualification cards are available in CCP Training files, and CCP will provide an example of a completed DTC qualification card for CCP at INL in the closure documentation for this CAR.

ROOT CAUSE

Not requested.

Evaluation

Accepted. Investigative Actions were sufficient to determine the causal factors and extent of potential impact to the CCP program, at INL and other generator sites. Inclusion of the DTC qualification card with closure documentation indicating training to the specific instruments listed above will satisfy objective evidence requirements for adequate training and qualifications.

CAR CONTINUATION SHEET

1. CAR No: 16-045

2. Activity No: A-16-18

3. Page 3 of 3

ACTIONS TO PREVENT RECURRENCE

1. CCP has directed DTC operators at INL to discontinue the practice of reading off neutron measurements to INL radiological technicians.
2. CCP will issue a Lessons Learned reminding personnel that performing actions outside the CCP scope, even when requested to do so, can impact the integrity of other programs.

Evaluation

Evaluated the stated actions and found actions are appropriate and sufficient to provide reasonable assurance of precluding the likelihood of recurrence.

No further actions are necessary to preclude recurrence.

SCHEDULE FOR COMPLETION OF CORRECTIVE ACTIONS

COMMITMENTS

DUE DATES

CCP to direct DTC operators at INL to discontinue the practice of reading off neutron measurements to INL radiological technicians.

Complete

CCP to issue Lessons Learned reminding personnel that performing actions outside the CCP scope, even when requested to do so, can impact the integrity of other programs.

July 28, 2016

CCP to provide closure documentation to NWP Quality Assurance (including an example of a completed DTC qualification card for CCP at INL)

August 22, 2016

NWP QA transmit closure documentation to the CBFO.

August 30, 2016

Evaluation

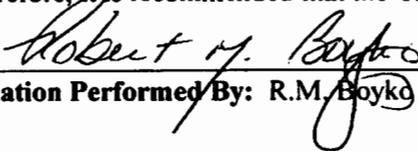
The proposed schedule for completion of corrective actions is deemed to be acceptable. The expected completion date for all corrective actions is August 8, 2016.

ACCEPTANCE

The results of the evaluation of the CAP indicate that the remedial actions, investigative actions, root cause, and actions to preclude recurrence are adequate to address the condition adverse to quality documented in CAR 16-045. Therefore, it is recommended that the CAP for CAR 16-045 be accepted.

Evaluation Performed By: R.M. Boyko

Date



20 July 16