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Department of Energy

memorandumCarlsbad Field Office
Carlsbad, New Mexico 88221

DATE: DEC - 4 2012

REPLY TO
ATTN OF: CBFO:OQA:CF:CC:12-1590:UFC 2300.00

SUBJECT: Observer Inquiry Identified During Recertification Audits A-13-01 and A-13-02

TO: J.R. Stroble, Director, National TRU Program

Attached, in accordance with Carlsbad Field Office (CBFO) Management Procedure 10.3, *Audits*, is a completed Observer Inquiry submitted by the New Mexico Environment Department (NMED). This Observer Inquiry was discussed during CBFO Recertification Audits A-13-01 of the Advanced Mixed Waste Treatment Project and A-13-02 of the Savannah River Site Central Characterization Project. A written response to the Observer Inquiry is required from the Office of the National TRU Program to the NMED within thirty days of the inquiry submission dated November 28, 2012.

If you have any questions or concerns, please contact me at (575) 234-7065.

Courtland G. Fesmire, P.E.
Quality Assurance Engineer

Attachment

cc: w/attachment
 J. Franco, CBFO *ED
 R. Unger, CBFO ED
 T. Kliphuis, NMED ED
 R. Maestas, NMED ED
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 P. Martinez, CTAC ED
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 WIPP Operating Record ED
 CBFO QA File
 CBFO M&RC

*ED denotes electronic distribution

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Observer Inquiry Form

Observer: Ricardo Maestas/TLK Tracking No. _____ Date: November 28, 2012

Discussion of Request:

During the AMWTP A-13-01 audit NMED observed an operations technician performing on site Real Time Radiography (RTR) as well as review of audio/video records as part of the audit process. NMED observed practices that may affect the RTR independence as required by the WIPP Permit.

NMED and the Audit team were informed of new computer software (VJ Technologies) being utilized for RTR. NMED first observed the use of this software with the High Energy (HE) RTR Unit at the Hanford Site during CBFO WIPP Audit A-11-10 in April of 2011.

When audio/video records are created during RTR scans of waste containers using this new software the cursor (arrow that is controlled by a computer mouse) also shows up in the recorded scan. During the Hanford A-11-10 audit a recommendation (Recommendation 3) was issued by the audit team and reads, "The audit team identified a concern while reviewing the audio/video records generated by the operator while using the HERTR system. The RTR operator was not using the cursor for its intended purpose, which is to make adjustments to the image contrast. The audit team observed the RTR operator identifying container contents using the cursor. This practice could influence the person performing independent observations. The audit team recommended that the cursor not be used to identify container contents." NMED supported this recommendation.

During Audit A-13-01 NMED observed practices that may affect the independence of the independent observer. NMED understands that AMWTP does not utilize a High Energy RTR unit to characterize waste but the same software is currently being utilized by the existing RTR units.

During the field observation of an RTR scan the operations technician used the cursor to point out a couple of container contents. NMED concurs that the operator did so for the benefit of the audit team to see what the technician was calling out. NMED is aware that the container that was being scanned was not a WIPP bound container. The concern is that there does not appear to be sufficient training and guidance on how to use this new software so that independence is assured. NMED believes that if the technician had appropriate guidance, he would not have pointed out container contents to the audit team unless it is made clear that it is not part of the formal RTR process and was being used for demonstration only.

During the review of audio/video records, NMED and the audit team also identified an RTR operations technician using the cursor to point out a horsetail in one of the containers. In addition, NMED has a copy of a container scan in which the cursor is used to point out several items (container 10311408). AMWTP personnel provided NMED with a copy of four scanned containers so that NMED could review and discuss internally. It must be noted that the audit team did not have these scan copies to take into consideration.

The audit team concluded that upon reviewing all the objective evidence that was requested plus additional audio/video records, there was no evidence of using the cursor to point items out. NMED understands this conclusion but is still very concerned that the lack of guidance may risk RTR operations technicians to continue to point out items in waste containers leading to deficiencies with Permit required RTR independence.

Permit Attachment C1, Section C1-3 Radiography, states, "Independent replicate scans and replicate observations of the video output of the radiography process shall be performed under uniform conditions and procedures. Independent replicate scans shall be performed... by a qualified radiography operator that was not involved in the original scan of the waste container. Independent observations of one scan (not the replicate scan) shall also be made... by a qualified radiography operator that was not involved in the original scan of the waste container."

Permit Attachment C3-10a(1) Independent Technical Review, states, "One hundred percent of the Batch Data Reports must receive an independent technical review by a trained and qualified individual who was not involved in the generation or recording of the data under review. This review shall be performed by an individual other than the data generator who is qualified to have performed the initial work."

AMWTP procedure INST-OI-12, Rev. 49, Real-Time Radiography Operations (Drum), section 4.10.13 states, "Ensure that a qualified RTR OT who was not involved in the original scan performs the replicate scan." Section 4.10.15 states, "Ensure that a qualified RTR OT who was not involved in the original scan of the waste performs the independent observation." The NOTE between these two sections reads, "The independent observation is performed by reviewing the recording from a waste container (not the replicate scan), and documenting the results on a radiography analysis sheet in WTS. The independent observation is performed without reference to the original radiography analysis sheet in WTS." In the interest of ensuring RTR Independence one could also interpret this last sentence to be more inclusive and to mean without reference to the original radiography cursor as well.

NMED believes that when performing the replicate scan, independent observation and/or independent technical review and seeing the previous operator's cursor pointing out waste items from the original scan, RTR independence may not be met per the Permit requirements in Attachment C1, Section C1-3. This is similar in nature to the instructions for the second operator to turn off the volume on the audio/video records and using a separate analysis sheet.

NMED also noticed that the cursor, when not being used to adjust window leveling would on many occasions be left over the container that was being scanned. NMED is concerned that this cursor, left in the middle of the screen may also effect the replicate scan, independent observation and/or independent technical review and suggests that training and/or guidance be established so that RTR operators do not use the cursor to point out container contents and to move the cursor away from the container scan when it is not being used to adjust window leveling. Another possible solution would be to format the software so that the cursor does not show up in the recordings.

Finally, during the Savannah River Site (SRS)/CCP Audit A-13-02 on November 6-8, 2012, the auditors documented concern #9 which reads, "While observing the video for RTR scan of container #MDL0500775 (Large Box) in BDR# SRLBR0057, the audit team observed the operator using the VJ Technology software feature of "Window Leveling", which enhances the screen contrast. At 3:19 (minutes/seconds) into the video, the operator was observed using the cursor and pointing to an area of the box and is heard verbally stating "You can see the bottom of a plastic container". This practice could potentially influence the results of the independent observation (OI) if the container was selected for IO from the batch."

NMED takes RTR independence very serious, as documented in two previous observer inquiries from January and May of 2009. These previous concerns were dealt with satisfactorily. NMED looks forward to discussing these new concerns with the Permittees.

ATL Response: Inquiry will be forwarded to the appropriate CBFO manager/office Director for resolution.

Observer: Accept Response 11/30/12 Do Not Accept Response

Inquiry Closed: [Signature] Date: 11/30/12

* NMED accepts this response with the understanding that this inquiry will only be closed in regards to the responsibilities of CTAC per procedure CBFO mp 10.3 Rev. 7.

Per ATL Response, NMED acknowledges that this inquiry will be forwarded to the appropriate CBFO manager/office Director for resolution and that DOE shall be responsible for submitting a written response to NMED within 30 days of the inquiry submission, as required in section C6-4 of the WIPP Permit.