



United States Government

Department of Energy

memorandum

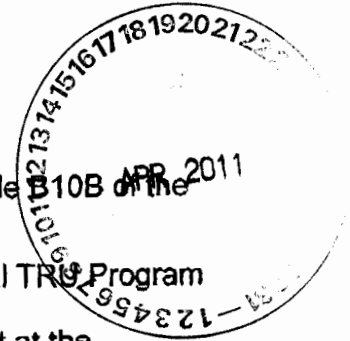
 Carlsbad Field Office
 Carlsbad, New Mexico 88221

DATE: April 12, 2011

REPLY TO
ATTN OF: CBFO:NTP:MRB:MDA:11-0253:UFC 5900.00

SUBJECT: Approval Status Notification for Hanford/CCP – Supplemental Box Cycle B10B of the
Nondestructive Assay Performance Demonstration Program

TO: Courtland Fesmire, TRU Waste Integration Manager, Office of National TRU Program



The Washington TRU Solutions (WTS) Central Characterization Project at the Hanford Site (Hanford-CCP) has completed Supplemental Box Cycle B10B of the Nondestructive Assay (NDA) Performance Demonstration Program (PDP). The NDA PDP samples for this cycle consisted of two Standard Waste Box (SWB) matrices (combustibles and mixed metals). The WTS organization submitted data on March 1, 2011 for all SWB test samples provided this cycle, using one NDA system - the Super High Efficiency Neutron Counter (SuperHENC). At the time of data submission, it was discovered that the incorrect box (i.e. the matrix storage box versus the sample configuration box) was used for the combustible matrix sample. The results for the metals matrix sample were accepted and a new matrix configuration was provided for the combustible matrix sample. The data for the revised combustible matrix sample was received on March 31, 2011. The NDA PDP samples for this cycle tested one transuranic alpha activity range; (> 2.0 Ci). The activity type consisted of weapons grade plutonium in both matrices with enhanced quantities of Am-241 in the combustibles matrix. The Scoring Report for NDA Box PDP Cycle B10B will provide detailed scoring information and will be published and distributed at a later date.

Based upon the performance of the tested system in meeting the NDA Box PDP scoring criteria, the Carlsbad Field Office (CBFO) approval status of the Hanford-CCP SuperHENC to conduct measurements of Waste Isolation Pilot Plant (WIPP)-bound waste for shipment to the WIPP facility is as follows:

Approved for radioassay of WIPP wastes contained in TRU standard waste boxes using the SuperHENC (NDA PDP Registration # HA06/HAN4) and procedure identified as CCP-TP-137, revision 1. The metals matrix sample measurements were performed utilizing CCP-TP-137, revision 0; prior to the revised combustible matrix sample being assayed the procedure was revised to make the purpose description be consistent with the text of the calibration and validation report for the SuperHENC. This approval is based on the current revision of the procedure. This approval will expire on **April 30, 2012**.

In accordance with the requirements of the NDA Box PDP Plan, only the specific methods and the analytical systems identified may be utilized for WIPP sample analyses. Any future method and/or system changes or additions that could be



considered to potentially impact WIPP qualification of the Hanford-CCP SuperHENC NDA system must be approved by CBFO prior to implementation.

The current approval status of the Hanford-CCP SuperHENC to conduct NDA for the identified waste configurations using the referenced method is valid for 12 months (plus a month grace) from the date that the last set of Cycle B10B data were received. The next primary NDA PDP cycle for boxed wastes is scheduled for distribution in June 2011. If the Hanford-CCP SuperHENC NDA system does not participate in the next scheduled primary cycle and a supplemental cycle is required, the cost of the supplemental cycle will be borne by the participant.

If you have any questions, please call me at (575) 234-7476.


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