

ORAUT-OTIB-0088

External Dose Reconstruction

Report from the Subcommittee for Procedure Reviews (SCPR)

Presented to the
Advisory Board on Radiation and Worker Health
Oakland, California
December 11, 2019

ORAUT-OTIB-0088, “External Dose Reconstruction”

ORAUT-OTIB-0088 outlines external dose reconstructions (DRs) under Part B of the Energy Employees Occupational Illness Compensation Program Act of 2000. This document incorporates direction from NIOSH on the performance of external DRs as contained in OCAS-IG-001, “External Dose Reconstruction Implementation Guideline,” technical information bulletins, approved site profiles, and Oak Ridge Associated Universities Team procedures.

- **Revision 00:** Issued September 14, 2018, to convert ORAUT-PROC-0006, “External Dose Reconstruction,” to an OTIB and incorporate guidance on the assignment of onsite ambient dose to facilitate the cancelation of ORAUT-PROC-0060.
- **Revision 01:** Issued October 21, 2019, to correct error in Attachment A, “Method for Assigning Missed Dose when the Number of Null Results is Unknown,” and add a new attachment providing dates when DOE sites incorporated ICRP Publication 60 recommendations for neutron weighting factors.
- SC&A was tasked to review Revision 00. The review was submitted January 8, 2019, and contained two observations.

Observation 1: OTIB-0088 does not incorporate informative guidance in ORAUT-PROC-0060, Attachment A, “External Onsite Ambient Dose Assignment for Monitored Site Employees”; Attachment B, “Maximizing Dose Summary”; and Attachment C, “Methods for Assigning Site-Specific Best Estimates of External Onsite Ambient Doses.” These attachments help to ensure the DR process is conducted in a consistent manner.

- NIOSH response:
 - The information provided in the PROC-0060 attachments will not be lost; it will be incorporated into other procedures or site-specific TBDs.
 - NIOSH did question whether this approach would make the information less useful or less easy to find. They stated that they would like to consider whether it is better to consolidate it in one place or incorporate it into individual TBDs.
- ***Resolution as of February 13, 2019: The SCPR found NIOSH’s response acceptable and closed this finding. However, the SCPR requested that NIOSH inform the Subcommittee of their decision on where the PROC-0060 guidance would be placed. NIOSH subsequently determined that the PROC-0060 guidance would be incorporated into the site-specific TBDs.***

Observation 2: Attachment A of OTIB-0088 provides instructions that state the 95th percentile missed dose is calculated by multiplying the number of zeros by the LOD value. However, the example calculation shows the dose was calculated using the LOD/2.

- NIOSH agreed that the Attachment A example calculation was in error and the document would be corrected in the next revision.
- NIOSH published Revision 01 of OTIB-0088 on October 21, 2019, which corrects the Attachment A error.
- ***Resolution as of February 13, 2019: The SCPR agreed with NIOSH's resolution to the document error and closed the observation.***

Questions?