

Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health
Advisory Board on Radiation and Worker Health (ABRWH)
Subcommittee for Procedures Reviews
Meeting Minutes

June 21, 2023

Summary Proceedings

The Subcommittee for Procedures Review meeting convened via teleconference at 11:00 a.m. Eastern Daylight Time (EDT), Ms. Josie Beach, Chair, presiding.

Attendees

Members

Josie Beach, Chair
Victoria Cassano, Member
Loretta Valerio, Member
Paul Ziemer, Member

Non-Members

Rashaun Roberts, Designated Federal Official
Nancy Adams, NIOSH contractor
Barton, Bob, SC&A
Behling, Kathy, SC&A
Buchanan, Ron, SC&A
Calhoun, Grady, DCAS
Carver, Mr.
Gogliotti, Rose, SC&A
Griffiths, Richard
Habighurst, Ashton, HHS
Mangel, Amy, SC&A
Sharfi, Mutty, ORAU
Taulbee, Tim, DCAS

Roll Call/Welcome - Dr. Rashaun Roberts, DFO

Dr. Rashaun Roberts called to order the Subcommittee for Procedures Review at 11:00 a.m. EDT on June 21, 2023, via teleconference. A roll call of all Subcommittee members confirmed that a quorum was present. The quorum was maintained throughout the meeting. Subcommittee members, federal staff, and contractors announced conflicts-of interest during roll call. Dr. Roberts turned the meeting over to Ms. Beach, Subcommittee chair. Ms. Beach noted an error in the posted agenda item b. It should not include “and also provide an additional case for SC&A.”

Carry Over Items from February 16, 2023, SPR Meeting

DCAS PER-049

LaVon Rutherford, DCAS reported that he had provided additional files to Kathy Behling, SC&A, as requested. SC&A had additional questions, which DCAS responded to near the end of April. Ms. Behling reported that SC&A had not yet completed their evaluation of the information. Consequently, this item will be discussed again at the next Subcommittee meeting.

DCAS-PER-092

SC&A developed one finding and four observations during their review of PER-092. At the last Subcommittee meeting, Scott Siebert, SC&A, provided verbal responses to those, that appeared to satisfy the Subcommittee. However, the Subcommittee asked DCAS to prepare a written version of Scott’s response to assist in establishing a record of the discussion. DCAS has provided that, and the Subcommittee determined that the finding and observations are closed.

Peek Street

At its last meeting the Subcommittee asked DCAS to provide two additional Peek Street cases to SC&A for their review of this PER. DCAS has done that, and SC&A intends to report the result of their review in a memo. It might be ready to discuss at the next Subcommittee meeting.

DCAS-PER-073 (Birdsboro)

Dr. Robert Anigstein, SC&A, led this discussion. He noted that DCAS had found evidence that the Betatron at Birdsboro was in a separate facility, well-removed from the covered uranium operations, so doses from the Betatron need not be included in Birdsboro dose reconstructions. However, there is evidence that Birdsboro performed radiography using radium and maybe cobalt sealed sources, so doses from those radiography sources should be included. DCAS agreed to respond to this item, as well as the observations from SC&A’s review of PER-073, at a future date.

Battelle TBD-5000

Dr. Anigstein led this discussion as well. Battelle-5000 is an old document, much of which is no longer used. It has not been cancelled, though, so the Subcommittee had previously tasked SC&A to review it. That review resulted in 13 observations, 5 of which were closed by the Subcommittee at a previous meeting. Dr. Anigstein described the other 8 observations and discussed the nature of discussions up to this time. The methods that gave rise to 6 of the observations are no longer used, and DCAS has described replacement methods that SC&A found acceptable. The Subcommittee concurred and closed those observations. DCAS is preparing documents that describe the technical basis for methods that replaced those that gave rise to the remaining 2 observations. Those observations remain open.

OCAS-TIB-009, Example of “not suitable closeout for matrix

Kathy Behling, SC&A had previously told the Subcommittee that some document reviews that the Subcommittee had completed might not be suitable to present to the full Board using the matrix format that the Subcommittee typically uses. Ms. Behling described the long history of the Subcommittee’s review of OCAS-TIB-009, which addresses worker ingestion. During the discussions, ingestion came to be considered an overarching issue, and was designated OVER-0002. Because of the extended discussion, and the amount of material presented by SC&A and DCAS during that discussion, several presentation slides were needed to describe it. The Subcommittee decided that today’s presentation was probably too much detail for the full Board. Members suggested a shorter presentation with links to documents that were prepared for the Subcommittee’s discussion.

Newly Issued SC&A Reviews

ORAUT-OTIB-0087, “Extremity Doses for Mound Exposures to Plutonium-238

Dr. Ron Buchanan presented the results of SC&A’s review of OTIB-0087. OTIB-0087 contains information from dosimetry studies performed at the Mound facility. In those studies workers who were working with Plutonium-238 in glove boxes were monitored for radiation to their whole body, their wrists, and in some cases their fingers. From the data in those studies DCAS developed ratios of extremity dose to whole body dose for use for affected workers who had whole body dosimetry results but no extremity dosimetry results. SC&A’s review of OTIB-0087 resulted in two findings. One concerned the limited time period and the limited operations represented in the Mound dosimetry study, which would indicate the ratios might have limited applicability. The second finding suggested that a bounding ratio might be preferable for dose reconstruction, given the limited scope of the data in the Mound dosimetry study. SC&A also developed two observations. One noted that there were some data in the Mound dosimetry study which were not included in the OTIB-0087 analysis, and the other that SC&A calculated slightly different values for the ratio means and standard deviations than appeared in OTIB-0087. DCAS is developing responses to these findings and observations.

ORAUT-RPRT-0085, “Probability of Causation Evaluation of ICRP 116 Anterior-Posterior, Isotropic, and Rotational Geometries”

Kathy Behling presented the results of SC&A’s review of Report 85. This report is a portion of the work that DCAS and ORAUT are completing in order to adopt recent guidance in ICRP-116 that describes how to convert external dosimetry measurements into doses to specific organs. The guidance in ICRP-116 replaces earlier guidance in ICRP-74, on which DCAS’s current dose reconstruction process is based. As part of her presentation, Ms. Behling noted that Report 85 uses data from Reports 68 and 69, which SC&A has not been tasked to review.

ICRP-116 contains dose conversion coefficients (DCCs) which can be used to convert fluence rates for photons and neutrons of various energies and geometries into organ doses for many different organs. In their review SC&A’s team repeated the calculations in Report 85 for a subset of organs, radiation energies, and geometries. In most cases, but not all, their calculations agreed well with those in Report 85. SC&A did develop three observations from their review. One was that some values purportedly from Reports 68 and 69 and used in developing Report 85 did not appear to match the values SC&A found in Reports 68 and 69. The second was that SC&A derived values that were significantly different from Report 85’s for some organs and geometries. The third was that DCAS and ORAUT Team had used imprecise or incorrect terminology in some of these reports.

Dr. Tim Taulbee, DCAS, replied that dose reconstruction methods have not yet changed to conform to ICRP-116, and SC&A’s observations from this review will be helpful in that implementation process. He further opined that, since Reports 68, 69, and 85, all contained work that was done to facilitate the implementation of ICRP-116 into dose reconstruction methodology, it might be prudent to wait until implementation is finalized before responding to the findings on Report 85 or undertaking review of the other documents. The Subcommittee agreed that DCAS’s response to the Report 85 observations, and review of the other reports should wait until closer to, or after, ICRP-116 implementation is complete.

Preparation for August 2023 Full ABRWH Meeting: Review of technical guidance documents ready for full Board approval

The Subcommittee decided to present their completed review of OVER-002, using an abbreviated version of today’s presentation, at the next full Board meeting. They also decided to present their completed reviews for four other documents at that time. SC&A will prepare the presentation. The documents that the Subcommittee plans to present in addition to OVER-0002 are ORAUT-PROC-031, Rev. 1; DCAS-RPRT-005, Rev. 1; DCAS-PER-047, Rev. 0, and OCAS-PER-005, Rev. 0. The list might change due to time constraints.

Newly Issued Guidance Documents and Supplemental Topics

The Subcommittee tasked SC&A with reviewing four documents for the next or a future Subcommittee meeting. Those documents are PER-068, PER-070, PER-072, and RPRT-060.

Meeting Adjourned

The Subcommittee tentatively scheduled their next meeting for Thursday, November 16, 2023, at 11:00 Eastern time. The meeting was adjourned at 2:58 p.m. EDT.