

## MEMO

**DATE:** February 23, 2016  
**TO:** Subcommittee on Procedures Review  
**FROM:** Kathleen Behling, SC&A  
**SUBJECT:** Program Evaluation Reports and Technical Guidance Documents Not Tasked for SC&A's Review

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Since the last Procedures Review Subcommittee (PRSC) teleconference on April 28, 2015, the National Institute for Occupational Safety and Health (NIOSH) has issued numerous program evaluation reports (PERs) and technical basis documents (TBDs) that have not been assigned for SC&A's review. In addition, there are two technical information bulletins (OTIBs) and two PERs that were issued prior to the last PRSC meeting, which have not been tasked for review. Therefore, SC&A has prepared two tables listing these documents for the Subcommittee's consideration. For the unassigned PERs, SC&A has included a recommendation regarding whether a review of each PER is warranted. For those PERs for which SC&A is recommending that a review be completed, the PER title and justification for this recommendation has been highlighted in yellow.

**Table 1. PERs Not Assigned for SC&A’s Review as of February 23, 2016**

PER Description	Doses Changes	Cases Impacted	SC&A’s Recommendation
<p><b>DCAS-PER-046: “Nevada Test Site”</b> Effective Date: 9/22/2015</p> <p>The Nevada Test Site (NTS) TBD consists of 6 sections. Revisions have been made to Section 3 (Occupation Medical Dose), Section 4 (Environmental Dose), Section 5 (Internal Dose) and Section 6 (External Dose) since the issues of PER 032 (NTS TBD revisions) on 12/18/2007.</p>	<p><u>Occupational Medical</u>: Lumbar spine x-rays not previously included in TBD, and posterior-anterior (PA) chest x-ray dose increased between 1960 and 1966 for some organs.</p> <p><u>Environmental</u>: Increases in assigned doses due to (1) addition of correction for inhalation of short-lived fission products; (2) radon intake estimate from G tunnel and unknown tunnels increased prior to 1984; and (3) ambient external dose estimates extended through 2010.</p> <p><u>Internal</u>: Change to isotopic ratios leading to an increase in assigned intakes from plutonium-238 (Pu-238) and americium-241 (Am-241).</p> <p><u>External</u>: Misinterpretation of beta-to-photon ratio to be assigned prior to 1966.</p>	<p>2,316 initially identified cases.</p> <p>After removal of cases due to compensation under the Special Exposure Cohort (SEC) and specifics associated with the current TBD revisions, <u>590 cases</u> remained that required reevaluation.</p>	<p>SC&amp;A recommends that this PER be reviewed due to the numerous modifications that affected all exposure pathways and the number of cases impacted by these changes.</p>

PER Description	Doses Changes	Cases Impacted	SC&A's Recommendation
<p><b>DCAS-PER-054: Carborundum</b> Effective Date: 7/25/2014</p> <p>No TBD exists for the Carborundum site. Methods in one dose reconstruction were <u>often</u> carried forward to the next as applicable. Revision to ORAUT-OTIB-0070 on 3/5/2012 could affect previously completed Carborundum claims. In addition, the covered period for the site was increased to include 1943.</p>	<p>Due to the additional year of exposure at the beginning of the covered period, an increase in dose could impact nearly all Carborundum claims. The revised OTIB-0070 depletion factors could also result in an increase in dose.</p>	<p><u>58 cases</u> were identified and reevaluated</p>	<p>SC&amp;A recommends that this PER be reviewed due to the fact that no formal dose reconstruction (DR) methodology exists for Carborundum cases and to assess consistency of the DR methods that were "<u>often carried forward to the next as applicable.</u>" An SEC petition has been submitted for this site. NIOSH evaluated this petition and has proposed a revised DR methodology, which has been reviewed by SC&amp;A but not yet considered by the Board. Nevertheless, we believe that the earlier PER merits review.</p>
<p><b>DCAS-PER-059: "Norton Company"</b> Effective Date: 4/24/2015</p> <p>No TBD exists for Norton Company. However, a "DR Methodology Template" was used for completing claims, which has been modified.</p>	<p>Changes to the template include the addition of a class of employees to the SEC based on NIOSH's inability to estimate internal and external dose between 1/1/1945 and 10/10/1962. Also, contamination depletion rates changed during the residual period starting 10/10/1962, causing an increase in dose.</p>	<p>54 initially identified cases. <u>43 cases</u> remained after removing claim that had employment only prior to 1962.</p>	<p>SC&amp;A recommends that the PER be reviewed, since the DR methodology used in the template has not been previously evaluated by the Board.</p>

PER Description	Doses Changes	Cases Impacted	SC&A's Recommendation
<p><b>DCAS-PER-060:</b> "Blockson Chemical Company" Effective Date: 4/27/2015</p> <p>Revision 4 of the Blockson TBD changed the way internal dose was estimated for the stomach, small intestine, upper large intestine, lower large intestine, and colon.</p>	<p>The TBD revision changes instruction to comparison ingestion and inhalation doses and assign the dose that produces the higher dose.</p>	<p>23 cases initially identified.</p> <p><u>6 cases</u> remained after considering cases compensated under the SEC and one cases that had been completed using Rev. 4.</p>	<p>SC&amp;A recommends that there is <u>no need to complete Subtasks 1–3</u> of SC&amp;A's PER review procedure since this PER was initiated due to findings from a previously reviewed Blockson TBD PER (PER-036). However, <u>SC&amp;A does recommend a review of 1 or 2 claims under Subtask 4</u> of our procedure.</p>
<p><b>OCAS-PER-061:</b> "Bridgeport Brass Company" Effective Date: 6/5/2015</p> <p>The TBD covers operations at the Bridgeport Brass Havens Laboratory in Bridgeport, CT as well as the Adrian Facility in Adrian, MI. This revision (Rev. 2) was issued due to a change in the facility designation for the Adrian Facility by the U.S. Department of Labor (DOL).</p>	<p>Primary changes include (1) external dose was analyzed using OTIB-0020 in Rev. 1 of the TBD and using a Monte Carlo approach in Rev. 0; and (2) thorium intakes in Rev. 1 were assigned based on air samples and, in Rev. 0, thorium intakes were assigned as a fraction of the uranium intake.</p>	<p>14 cases identified at Haven's Lab; 36 cases at Adrian Facility. All <u>50 cases</u> were reevaluated.</p>	<p>SC&amp;A recommends that this PER be reviewed, since the <u>only review of these facilities has been performed under an expanded review of a DR audit performed in May 2008.</u></p>
<p><b>DCAS-PER-063:</b> "Aluminum Company of America – Pennsylvania (ALCOA-PN)" Effective Date: 6/15/2015</p> <p>DRs are performed using Appendix R of Battelle-TBD-6000. Revision 1 of TBD-6000 was issued to incorporate OTIB-0070 and other changes.</p>	<p>Revision 1 increased inhalation, ingestion, and external photon dose during the operation period.</p>	<p>44 cases initially identified.</p> <p><u>35 cases</u> were reevaluated.</p>	<p>SC&amp;A recommends that this PER be reviewed, since the <u>Board has not previously evaluated the ALCOA-PN DR methodology.</u></p>

PER Description	Doses Changes	Cases Impacted	SC&A's Recommendation
<p><b>DCAS-PER-064: "DuPont Deep Water Work"</b> Effective Date: 11/16/2015</p> <p>DRs were originally performed using Appendix B of Battellee-TBD-6001. TBD-6001 was cancelled and the Appendix converted to a standalone TBD (DCAS-TKBS-0006). This PER evaluates changes introduced in Revision 2 of the TBD.</p>	<p>Inhalation intakes and external dose rates increased during the operational period and ingestion intakes increased during the residual period.</p>	<p><u>56 cases</u> were identified and reevaluated.</p>	<p>Since SC&amp;A has reviewed revision 1 of Appendix B, there is <u>no need to complete Subtasks 1-3</u> of SC&amp;A's PER review procedure. However, SC&amp;A does recommend a review of a number of representative claims under Subtask 4 of our procedure. If tasked with the Subtask 4 review, SC&amp;A will (1) provide case selection criteria, (2) identify relevant cases, and (3) perform a review of selected reworked claims.</p>
<p><b>DCAS-PER-065: "Anaconda"</b> Effective Date: 11/30/2015</p> <p>DRs are performed using Appendix G of Battelle-TBD-6000. Revision 1 of TBD-6000 was issued to incorporate changes to TBD-6000 and to make dose estimates more consistent with existing techniques.</p>	<p>External photon doses increased for all job categories in all years of operations.</p>	<p><u>10 cases</u> identified and reevaluated.</p>	<p>SC&amp;A recommends that this PER be reviewed, since the Board has not previously evaluated the Anaconda DR methodology.</p>

PER Description	Doses Changes	Cases Impacted	SC&A's Recommendation
<p><b>DCAS-PER-066:</b> "Huntington Pilot Plant" Effective Date: 11/30/2015</p> <p>This PER evaluates changes to Rev. 1 of DCAS-TKBS-0004.</p>	<p>Revision 1 added intakes for Am-241, thorium-230 (Th-230), and technetium-99 (Tc-99) and, therefore, increased internal dose estimates for cases.</p>	<p>59 cases initially identified.</p> <p><u>57 cases</u> required a new dose estimate.</p>	<p>Since SC&amp;A has reviewed Revision 0 of DCAS-TKBS-0004, there is <u>no need to complete Subtasks 1–3</u> of SC&amp;A's PER review procedure. However, SC&amp;A does recommend a review of a number of representative claims under Subtask 4 of our procedure. If tasked with the Subtask 4 review, SC&amp;A will (1) provide case selection criteria, (2) identify relevant cases, and (3) perform a review of selected reworked claims.</p>

**Table 2. Technical Guidance Documents Not Assigned for SC&A’s Review as of February 23, 2016**

Technical Document	Description
<p><b>Battelle-TBD-6000 Appendix CD– Seymour Specialty Wiring Company</b> – Revision 01 Effective Date: 04/23/2015</p>	<p>The revision to update Appendix CD is based on revisions to TBD-6000.</p>
<p><b>DCAS-TKBS-0010: Technical Basis Document for Nuclear Metals Inc.</b> – Revision 00 Effective Date: 04/24/2015</p>	<p>Document initiated to establish a technical basis for radiation dose reconstructions for former workers of Nuclear Metals Inc.</p>
<p><b>ORAUT-TKBS-0025: An Exposure Matrix for Linde Ceramics Plant (Including Tonawanda Laboratory)</b> – Revision 04 Effective Date: 05/08/2015</p>	<p>Revision 04 was updated as follows:</p> <ul style="list-style-type: none"> <li>• Corrects a footnote in Table 4-24 (the year 1947 superscript was changed from i to j).</li> <li>• Changes made to Section 6.4 regarding tunnel occupancy time.</li> <li>• Previously, the text assumed that Trade Workers and Laborers worked in tunnels doing maintenance for 8 hours per workday (hr/wd) (2 months of the year) and for the other 10 months, spent a transit time of 10 minutes per workday (min/wd) using the tunnels to get between buildings. For all other workers, the assumption that only the transit time of 10 min/wd should be applied year-round was changed to, for Trade Workers &amp; Laborers, the assumption that they worked in these tunnels doing maintenance 50% of their time. For all other workers, an occupancy factor of 5% was assumed. This change did not affect Table 6-12 values.</li> </ul>

Technical Document	Description
<p><b>ORAUT-OTIB-0064: Coworker External Dosimetry Data for the Y-12 National Security Complex -</b>  Revision: 02  Effective Date: 04/29/2013  Supersedes: ORAUT-OTIB-0047, Revision 00 and Revision 01</p>	<p>Technical information bulletin initially approved 08/03/2009 for providing background information on the Y-12 coworker external dosimetry data, which includes tables with annual values that may be used in the process of assigning doses for unmonitored years of employment.</p> <p>Revision 1 was issued 12/18/2009 to modify Sections 4.0 and 5.0 to be consistent with current practices of applying coworker data. Table 7-1c and references to Tables 7-1a, 7-1b, and 7-1c were added in Section 7.0. Table 7-1c includes the 95th- and 50th-percentile annual doses derived from Table 7-1a. Adds details for Table 7-1c in Section 7.0. In Section 7.0, Table 7-2 was updated to include 1947 to 1949.</p> <p>Revision 02 was published 04/29/2013 to update Section 6.1 and add update of previous ORAUT-OTIB-0047, Revision 00 as Attachment A.</p> <p>This OTIB also contains guidance previously cited in ORAUT-PROC-0042 (Account for Incomplete Personal Monitoring Data on Penetrating Gamma-Ray Doses), which has been canceled.</p>