

**From:** Francis, Kiza [<mailto:Kiza.Francis@cnscccsn.gc.ca>]

**Sent:** January 2, 2013 1:09 PM

**To:** McGee, Kelly; Myles, Debra [CEAA]

**Cc:** DGR Review / Examen DFGP [CEAA]

**Subject:** E-DOCS-#3997986-v1-

Clarify\_some\_Microshield\_calculations\_and\_differences\_between\_the\_ALARA\_report\_and\_PSR\_report.DOC

Please see the attached meeting minutes from a teleconference that was held in June 2012 for posting on the CEAR.

My apologies for the lateness of this document, I thought I had sent it in already.

sincerely,  
Kiza

Kiza Francis  
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Canadian Nuclear Safety Commission  
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**Teleconference Date:** June 28, 2012

**Goal of teleconference:**

Clarify some Microshield calculations and differences between the ALARA report and PSR report

**Attendees:**

CNSC - K. Francis, K. Klassen, N. Kwamena, M. Rickard  
NWMO - D. Barker, A. Khan, P. Gierszewski, C. Medri, F. King

**Items that require a response from NWMO/OPG (i.e. new information)**

1. **CNSC Clarification Request:** Confirmation of Scenario 1 of the PSR.

**OPG Response:** There is a typographical error in Table 7-21, which should not say 4mm for a thick steel container. The correct container thickness values, and those that were used in the calculations, are those that are listed in Table 7-20 (2.6 mm and 2.8 mm).

2. **CNSC Clarification Request:** Copy of the MS case summaries as requested: Scenario 3 (feeder pipes) and Scenario 2, R2 (moderator resin). The results are on page 415 of the PSR.

**OPG Response:** A copy of Scenario 2, R2 (moderator resin) and of Scenario 3 (feeder pipes) is attached (e-doc 3997983 and e-doc 3997984 respectively)

3. **CNSC Clarification Request:** The container packages described on page 405 of the PSR do not correspond exactly to those described in the Preliminary ALARA Assessment (PAA) TSD, specifically in Tables 2.1 and B.7 on page B-8. For example, RWC (PT) is not described in Table B.7, nor is RLSHLD2.

**OPG Response:** Slightly different containers were considered for the Preliminary ALARA Assessments and the PSR, because these assessments had different purposes.

The ALARA Assessment provided a preliminary estimate of the annual worker dose, and was intended to be best estimate. Therefore, two representative containers were selected from each of the four container handling groups (one container representing the high dose rates and the other representing the high number handled), and the waste activity concentrations were defined based on realistic values rather than conservative values.

The PSR provided a preliminary estimate of dose rates around the facility, and was more conservative. It assumed the maximum number of packages within the

Waste Package Receiving Building, and selected higher dose rate LLW and ILW packages for which there is a relatively large number of packages handled.

For example, the RLSHLD2 was selected for the PSR because it was a higher dose rate package with a relatively large abundance, whereas the RLSHLD1 was selected for the ALARA Assessment because it was the most abundant waste package in its container handling group.