The Canadian Nuclear Safety Commission
c/o Ms. Rachel Timmins, Project Officer, and Ms Susan Fundarek, Regulatory Framework Officer,
Canadian Nuclear Safety Commission
280 Slater St., P.O. Box 1046
Ottawa, Ontario K1P 5S9

Re: *Draft* REGDOC-2.7.3, *Radiation Protection Guidelines for the Safe Handling of Decedents*

Dear Mses. Timmins and Fundarek:

We are writing to you on behalf of the Canadian Organization of Medical Physicists (COMP) to comment on the draft REGDOC-2.7.3, *Radiation Protection Guidelines for the Safe Handling of Decedents*, which the Canadian Nuclear Safety Commission (CNSC) opened for comment in August 2017. We trust that this letter will provide the CNSC with some points to consider as the Commission continues to develop the guidelines.

We the undersigned are members of COMP who have, or have recently had, radiation safety roles in our respective hospitals and cancer centres. We are responding on behalf of the CNSC Liaison Subcommittee of COMP's Quality Assurance and Radiation Safety Advisory Committee (QARSAC).

We commend the CNSC for the development of REGDOC-2.7.3. We believe there is considerable confusion and concern in the public, in provincial regulatory agencies, and among health-care and death-care professionals regarding the appropriate action to take when handling decedents that have undergone diagnostic or therapeutic procedures involving nuclear substances. And over the last several years, this has led many patients to either refuse to undergo an appropriate implant treatment for religious or cultural reasons (to maintain their cremation 'rights') or to have burial enforced on family after previous cremation arrangements had been made. The development of clear guidelines by the Canadian nuclear regulator for the safe handling of such decedents will do much to define and establish standards of practice that will protect workers, families and public.

We do however have some comments and questions that we hope can help guide CNSC staff as they work on a final version of the REGDOC.

A) Comments on Safety Content:

1) Funeral directors are prompted to contact the Cancer Centre or hospital RSO in 10 places in the document, but no guidance is given to RSOs as to what their course of action should be when consulted by a funeral home, or where their responsibilities begin and end. We understand that the REGDOC as now written is specifically aimed at death care professionals and the public, not at RSOs, but we believe some guidance for RSOs is also needed. For example, how is an RSO to respond if a funeral director asks him or her to retrieve the organ containing the sources (as has happened to one of the signatories)? Is organ retrieval subject to Transport and Packaging regulations? Which hospital RSO is responsible: the RSO at the centre that performed the nuclear procedure or the RSO at the closest hospital? Some informed guidance developed by CNSC staff and hospital RSOs would strengthen the document.

2) While Table 2 is a nice summary of the recommended timeframes for precautions, more information could be given, and it may need review (the Sr-89 cremation limit is different than for autopsy; for all other substances the times are the same). Breaking the Table into wet and sealed isotope management (i.e., Table 2a, and 2b) might be helpful as would providing

some practical examples using the table. For example, the endpoints for each of the three columns must have been decided using some assumed final activity; listing these activities would clarify the timelines and help hospital RSOs when contacted to perform calculations.

Perhaps the document should simply and clearly state the activity below which there are no restrictions, along with the time limits specified in Table 2. For example for I-125 the Cremation/Autopsy time of 2 years may have been based on an initial implant activity of 200 mCi which over two years would decay to below 0.05 mCi. Then it would be helpful if the guideline specified that a decedent having less than XXX mCi of I-125 would be safe to undergo Cremation/Autopsy. And similar data could also be easily provided for the other isotopes with examples of situations provided.

3) Section 6.4 on I-131 seems weak, suggesting that decedent handling procedures would need to be assessed on a case-by-case basis which would involve contacting a treatment centre's RSO (see 1 above). At a minimum, perhaps the guideline can clearly state that no precautions are necessary after 2 months (as per Table 2).

4) Appendix A is informative but the definitions and limits presented are not specific to the topic of decedents containing nuclear substances. It may be useful to define activity (in both SI and older units) and to give some radiological data related to the isotopes which could be provided in the appendix (or in a linked website where data could be kept current as new isotopes are developed and used).

   The use of the term '*activity'* as currently written in the table heading (Limit or activity) is specifying an *action* and not the quantification of a radioactive substance, this may be confusing to readers.

5) Appendix B is a useful summary of the relevant provincial regulations, although a web link to specific provincial acts and regulations in the second paragraph might add value. Also as now written it is clear that the regulations in some provinces undermine the radiation safety based rational of these guidelines. For example, under current Ontario regulations there are no conditions under which a decedent with an intact radioactive implant can be cremated.

   The draft regulatory guide provides much needed flexibility in this regard but it is unclear how this will have any influence in the provinces with current prohibitive legislation. While this may be difficult to articulate in the guidelines, we would be interested to note if there is any chance that discussions between the national and provincial regulatory agencies can remove the current inconsistencies.

B) Editorial Comments:

Page 1: The last sentence of the sixth paragraph states that more information on the types of medical procedures can be found on the CNSC website. This is a vague reference to a large site with many subsections which are somewhat difficult to navigate. Perhaps a specific URL can be given.

Page 2: Section 2.2 on Manual Brachytherapy (permanent implants) says that on average 100 seeds are distributed through the affected tissue. This estimate seems high; we would suggest saying 50-100 seeds.

Page 4: the first sentence of Section 3 refers to further details in subsequent Sections 4 and 5. But it does not indicate what topics the specific details cover.

Page 5: Section 5.1 refers to sections 4.1.1, 4.1.2, and 4.1.3. Is the numbering correct or should this be referring to Sections 5.1.1, 5.1.2, and 5.1.3?

Page 6: Section 5.1.2 reads "...to avoid contamination of the cremated remains from future cremations." This should read "...to avoid contamination of future cremations" as written in remainder of document.

Page 9: Section 6.2.2 needs some editing attention to remove double period, correct the point stating "Leave the exhaust fan should be on...".

Page 9: While the word '*cremains'* is correct, it is only used 4 times in the document and is not defined. For clarity and consistency we suggest sticking with '*cremated remains'* which is used about 40 times.

We trust these comments provide some points CNSC staff can consider in their future revisions. We believe this REGDOC is important and look forward to future versions we can review.

We will close by offering our assistance in the further development of REGDOC-2.7.3.

Sincerely,

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(Chair Liaison Committee)
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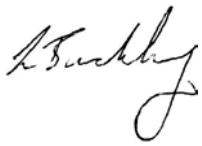

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