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Release of Solid Materials:  
May 9, 2000, Commission Meeting  
Comments

**W. E. Kennedy, Jr.**  
On Behalf of the  
**Health Physics Society**

# Summary Remarks

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- **HPS Applauds NRC Efforts to Obtain Information on Control of Solid Materials**
- **SECY-00-0070 Provides Useful Background Information**
- **HPS Agrees That the NAS Study Would Provide Essential Information**
- **HPS Understands Depth of Emotions, but Believes Uniform Criteria are Needed**

# Summary Remarks

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- **HPS Recommends Regulations be Based on Consensus Standards, Including ANSI Standard N13.12**
- **Recommends a Primary Dose Standard Should be Adopted, with Screening Levels to Establish Survey Programs**
- **HPS Believes that ANSI N13.12 is Consistent with International Commerce**

# Comparisons (Bq/cm<sup>2</sup>)

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<u>Radionuclide</u>	<u>N13.12</u>	<u>IAEA Clearance</u>
<sup>60</sup> Co	1	1 - 10
<sup>90</sup> Sr	1	1 - 10
<sup>137</sup> Cs	1	0.1 - 1
<sup>144</sup> Ce	10	10 - 100
<sup>226</sup> Ra	0.1	0.1 - 1
<sup>232</sup> Th	0.1	0.1 - 1
<sup>238</sup> U	1	0.1 - 1
<sup>239</sup> Pu	0.1	0.1 - 1

# Comparisons With EC (Bq/g)

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<u>Radionuclide</u>	<u>N13.12</u>	<u>EC Metals</u>	<u>EC Rubble</u>
<sup>60</sup> Co	1	1	0.1
<sup>90</sup> Sr	1	10	1
<sup>137</sup> Cs	1	1	1
<sup>144</sup> Ce	10	10	10
<sup>226</sup> Ra	0.1	1	0.1
<sup>232</sup> Th	0.1	1	0.1
<sup>238</sup> U	1	1	1
<sup>239</sup> Pu	0.1	1	0.1

# Comparisons With EC (Bq/cm<sup>2</sup>)

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<u>Radionuclide</u>	<u>N13.12</u>	<u>EC Metals</u>	<u>EC Reuse</u>
<sup>60</sup> Co	1	10	1
<sup>90</sup> Sr	1	10	100
<sup>137</sup> Cs	1	100	1
<sup>144</sup> Ce	10	10	10
<sup>226</sup> Ra	0.1	0.1	1
<sup>232</sup> Th	0.1	0.1	0.1
<sup>238</sup> U	1	1	1
<sup>239</sup> Pu	0.1	0.1	0.1

**Release of Solid Materials:  
May 9, 2000, Commission Meeting Comments**

**Steven C. Collins, M.S.  
Illinois Department of Nuclear Safety  
Past Chairman, CRCPD**

**On Behalf of the  
Conference of Radiation Control Program Directors, Inc.  
and the  
Organization of Agreement States**

**May 9, 2000**

**Comments on SECY-00-0070, *Control of Solid Materials: Results of Public Meetings, Status of Technical Analyses, and Recommendations for Proceeding*, and our suggestions regarding the control of solid materials**



- **The NRC and the states--equal partners--establish uniform national dose-based criteria for control of solid materials**

**majority of licensees  
centers of expertise  
states' motive**

## **States' motive**

**Ensure consistent application of uniform criteria  
and adequate protection of the public,  
workers, and the environment without  
excessive cost**

**Ensure that radiation sources are controlled,  
while conserving our natural resources**

- **Scientific consensus standards and recommendations-  
- the basis for the dose-based criteria.**

**NCRP, ICRP, IAEA, and ANSI Standard N13.12**

**Current guidance based upon technical capabilities  
of survey instruments; but these instrument  
capabilities have changed, with no concurrent  
change to the guidance**

- **Scientific consensus standards and recommendations-  
- the basis for the dose-based criteria.**

**Licensees use different survey instruments that have different levels of detection, leading to disagreements and confusion over permissible levels of release that are costly to both licensees and regulatory agencies**

- **Scientifically correct action--establish criteria for release of solid materials that are adequately protective of the public, workers and the environment.**

**Not supported by some. Reasons other than actual radiation risk.**

**Radioactivity in everything**

**Radioactivity is not a significant radiological risk to anyone at one millirem/year**

**The level selected considering benefits, costs, and the public's reluctance to accept anything other than a trivial dose**

- **National Academy of Sciences (NAS) Board on Energy and Environmental Systems study and recommendations on possible alternatives**

**Recommendations to supplement SECY-00-0070**

**Support decision that rulemaking is needed for control of solid materials**

- **Not prevent commercial firms from imposing additional restrictions for materials used as feedstock, if the firms believe that loss of market share or other harm from acceptance of released materials is likely to occur**

**The states' vision for implementation of the criteria**

**Case-by-case evaluations**

**no unsafe releases of radioactivity, but extra cost  
for legally cleared solids**



## **The states' vision for implementation of the criteria**

### **States flexibility**

**continue case-by-case evaluations with uniform  
criteria and derived values**

**values derived for release of radioactive solids,  
along with the corresponding data, analyses,  
and description of how the values were derived  
be made available**

## **The states' vision for implementation of the criteria**

### **States flexibility**

**not allow licensees to exercise the provisions of the rule independently, without the specific approval of the regulatory body**

**states may approve of higher levels, for example, levels based on ten mrem/year to the average member of a critical group**

**The states' vision for implementation of the criteria**

**recycling of cleared metals only after the sorting of metals, such that no metals above the recommended one mrem/year release criteria would find its way into commerce**

**The states' vision for implementation of the criteria**

**a final survey or analysis just prior to release of the contaminated solids with documentation of the assay could increase benefits and reduce cost for the metals industries and the regulatory agencies**

**The states' vision for implementation of the criteria  
present facts to the public in "plain language"**

**Our written comments outline items that the CRCPD and OAS believe are important in demonstrating that uniform national criteria for control of very low levels of radioactivity in solid materials should be established.**

**Results should be:**

**improved consistency in radiation protection requirements**

**continued adequate protection of the public, workers and the environment without too much excessive cost**

**conserved natural and economic resources**

**We strongly encourage the NRC to pursue rulemaking in this area, and we encourage the NRC to adopt criteria as recommended by the NCRP, ICRP, IAEA, and ANSI in its ANSI Standard N13.12.**