

June 15, 1999

MEMORANDUM TO: William D. Travers  
Executive Director for Operations

FROM: Annette Vietti-Cook, Secretary /s/

SUBJECT: STAFF REQUIREMENTS - SECY-99-098 - PUBLICATION OF AN ISSUES PAPER ON RELEASE OF SOLID MATERIALS (CLEARANCE), IN THE FEDERAL REGISTER, FOR PUBLIC COMMENT AND FOR USE AT PUBLIC MEETINGS

The Commission has approved publication in the Federal Register of an issues paper on the release of solid materials from licensed facilities which will form the basis for discussion at public meetings as part of an enhanced participatory rulemaking process. The staff should incorporate the changes provided in the attachment prior to publication of the Federal Register notice (FRN) and issuance of the press release. The staff should publish the issues paper and announce the dates of the facilitated public meetings in the same FRN.

(EDO)

(SECY Suspense: 6/25/99)

Attachment: [As stated](#)

cc: Chairman Jackson  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
OGC  
CIO  
CFO  
OCA  
OIG  
OPA  
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)  
PDR  
DCS

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ATTACHMENT

### Changes to the Federal Register Notice

1. On page 1, in the "Summary" section, add the following at the end of the paragraph: "NRC also intends to conduct four public meetings beginning in August of this year. This document provides background and topics of discussion for those meetings."
2. On page 1, next to the last line, correct the spelling of 'Regulatory.'
3. On page 2, under "Background", line 1, insert 'regulatory' after 'specific' so it reads ' ... the Commission currently has no specific **regulatory** requirements ....'
4. On page 2, under "Background", line 2, insert a new sentence after the period which reads 'Even though the NRC does not have requirements in this area, it still receives requests from licensees for release of solid materials which it must evaluate on a case-by-case basis using existing guidance or case-specific criteria.'
5. On page 3, in the first full paragraph, line 2, delete the comma after 'activities.'
6. On page 3, insert a new sentence at the end of the first full paragraph: "The NRC will also utilize its website to disseminate information and solicit input."
7. On page 5, paragraph 2, lines 3 and 4, replace 'a nuclear facility' with 'an NRC-licensed activity' so it reads ' ... and decommissioning of ~~a nuclear facility~~ **an NRC-licensed activity** and also require ....'
8. On page 6, paragraph 2, line 5, insert 'otherwise' after 'not' so it reads ' ... but does not **otherwise** address release of solid material.'
9. On page 6, add the following to the footnote: 'In addition, 10 CFR 40.51 and 40.13 contain transfer or unimportant quantities provisions, respectively, which are the subject of a separate Commission-directed initiative on Part 40 and are outside the scope of this effort.'

10. On page 6, in footnote 1, verify section 36.58(e) is the proper example since there is no section 36.58.
11. On page 7, paragraph a), revise line 3 to read ' ... research and development facilities, ~~people who use licensed gauges in their business, etc.~~ **and industrial use of various devices including gauges, measuring devices, and radiography.**'
12. On page 7, paragraph b), line 2, replace 'hospital' with 'health care facilities including' so it reads ' ... larger educational or ~~hospital~~ **health care facilities including** laboratories ....'
13. On page 7, paragraph 1), line 1, insert 'solid' before 'material' so it reads 'the **solid** materials in these areas ....'
14. On page 8, paragraph A.1.3, line 6, delete 'complies with the requirements of Part 20 by' and replace 'evaluating' with 'evaluates' so it reads 'The NRC ~~complies with the requirements of Part 20 by evaluating~~ **evaluates** requests for release ....'
15. On page 8, paragraph A.1.3, line 8, insert before the period 'for compliance with Part 20 requirements' so it reads ' ... or other case-specific criteria **for compliance with Part 20 requirements.**'
16. On page 8, paragraph (a), line 6, insert 'detection' before 'capabilities' so it reads ' ... which were based principally on the **detection** capabilities of readily available ....'
17. On page 8, paragraph (a), line 7, insert a new sentence after the period which reads 'The surface contamination levels were not based on the potential dose to an individual that may result from coming in contact with the released materials although such exposure is estimated to be low.'
18. On page 9, paragraph (b), line 6, delete the first two commas.
19. On page 9, paragraph (c), line 5, revise the next to last sentence so it reads ' ... and evaluation of the situation , **which in the past has been used to authorize various releases of contaminated material.**
20. On page 9, paragraph (c), delete the last sentence.
21. On page 10, paragraph A.2.1, delete the first 3 lines and revise the beginning of the 4<sup>th</sup> line as follows ' **Based on the issues and concerns described in Section A.1, the** Commission, on June 30, 1998, directed ~~the~~ **the** staff to consider ....'
22. On page 10, paragraph A.2.1, lines 5 and 6, delete 'of,' after 'considerations' and replace the comma after 'review of' with 'the' so it reads ' ... so that licensee considerations ~~of,~~ and NRC review of, **the** disposition of slightly contaminated ....'
23. On page 11, paragraph (1), last line, insert 'release for' prior to 'unrestricted' so it reads ' ... this issues paper, the term " **release for** unrestricted use" is generally used.'
24. On page 12, paragraph 2, line 3, spell out Environmental Protection Agency and Department of Energy.
25. On page 12, paragraph 2, line 4, insert 'on behalf of the U.S.' after 'review' so it reads ' ... provide input and review **on behalf of the U.S.** in development ....'
26. On page 12, paragraph 3, lines 8 and 9 should be revised to read ' ... constraint of **0.01 millisievert (mSv) per year (1 millirem [mrem] per year )** (~~mrem/yr~~) of exposure ~~of~~ **to an individual** members of the public from 'likely' exposure scenarios and **0.1 mSv/yr (10 mrem/yr )** from 'unlikely' scenarios.'
27. On page 12, paragraph 4, the staff should mention other international and individual country efforts (e.g., CEC draft standard and France, Germany, Sweden, Taiwan, and U.K.).
28. On page 13, paragraph 2, line 1, the staff should provide additional information to aid in locating Section B.1.
29. On page 13, paragraph 2, the staff should include a reference to ISCORS.
30. On page 13, revise the end of paragraph 2 to read ' ... throughout the rulemaking process **and has invited EPA to be a member of the NRC working group.**'
31. On page 13, paragraph 3, line 2, replace 'those' with 'some' so it reads ' ... range of materials, including ~~those~~ **some** which contain ....'
32. On page 13, paragraph 3, line 4, revise the end of the sentence to read ' ... has concentrated levels of **radioactive materials (e.g., uranium , radium, thorium).**

33. On page 13, paragraph 3, line 5, replace 'concentrated uranium' with 'radioactive material' so it reads ' ... used in building materials; the ~~concentrated uranium~~ **radioactive material** in the coal ash can result ....'
34. On page 13, paragraph 3, the staff should define what EPA standard is being referred to in the last sentence.
35. On page 14, paragraph 1, line 1, replace 'standards' with 'screening guidelines' so it reads ' ... active in the development of ~~standards~~ **screening guidelines** for import into the U.S. of ....'
36. On page 14, paragraph 1, revise the 2<sup>nd</sup> sentence to read 'EPA has been working with **the NRC and other Federal and international agencies** ~~the International Atomic Energy Agency (IAEA) and the U.S. Department of State in these efforts.~~
37. On page 14, add a new sentence at the end of paragraph 1 as follows 'The importing of contaminated materials cleared by other countries into the U.S. which does not have in place generally applicable standards for this purpose, raises questions about the regulatory status of such materials after they enter the U.S.'
38. On page 14, paragraph 2, line 2, insert 'generally' after 'Although' so it reads ' ... Although **generally** not licensed by the NRC, the DOE ....'
39. On page 14, paragraph 4, line 2, insert 'by DOE' after 'made' so it reads ' ... would have to be made **by DOE** as to whether DOE ....'
40. On page 14, paragraph 4, line 2, revise the sentence to read ' ... as to whether DOE would **in the interest of consistency** adopt the standards ....'
41. On page 14, paragraph 4, the staff should address whether there is a corollary such that if DOE decides to release RAM into general commerce, would the NRC be required to authorize distribution of that material.
42. On page 14, paragraph 5, the staff should insert a new first paragraph under 'State Governments' as follows:
 

States face the same issues and needs that the NRC does and must also consider issues associated with release of naturally-occurring and accelerator produced materials (NARM). The Conference of Radiation Control Program Directors (CRCPD), an organization of state radiation agencies that develops suggested regulations, has established a committee to look into issues associated with release of solid materials

The staff should add a new subsection as follows:

Other standards setting bodies - Various other organizations are involved in setting standards which can impact decisions related to alternative courses of action for release of solid materials.

One of those organizations is the National Council on Radiation Protection and Measurements (NCRP). The NCRP is a nonprofit corporation chartered by the U.S. Congress to review current significant studies made by other health research bodies, to develop and disseminate information and recommendations about protection against radiation, and to cooperate with national and international organizations with regard to these recommendations. The NCRP has made recommendations in its report NCRP No. 116 regarding acceptable levels of radiation exposure to the public, including levels considered to present trivial health risk.

In addition, various industry groups (e.g., the American National Standards Institute) set standards regarding a variety of areas including equipment design and operation, facility maintenance, and contamination levels in radioactive effluents. NRC must be cognizant of activities in these areas because Public Law 104-113 (passed by Congress in 1995) requires Federal agencies to use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical.
43. On page 15, paragraph 2, line 3, insert a new sentence after the period as follows: 'BRC was an approach proposed by NRC to address a Congressional directive in the Low-Level Radioactive Waste Policy Amendments Act of 1985.'
44. On page 16, paragraph 1, lines 5 through 8, delete the sentence 'Also, unlike the BRC Policy ... Procedures Act (APA).'
45. On page 16, paragraph 1, lines 10 and 11, delete 'as a supplement to the normal APA process,' so it reads ' ... addition, ~~as a supplement to the normal APA process,~~ the NRC would enhance ....'
46. On page 16, paragraph 1, last line, insert 'and' after 'rulemaking' so it reads ' ... made through rulemaking **and** not through a policy ....'
47. On page 16 paragraph 2, revise the 1<sup>st</sup> sentence to read ' ... in rulemaking is ~~for~~ the NRC staff ~~to~~ develop **ment of**

- a proposed rule , for Commission consideration ... preparation of a final rule , for Commission **review and** approval ....'
48. On page 18, paragraph 2, revise the 1<sup>st</sup> sentence to read ' ... NRC **generally** uses the ~~criteria on~~ public dose limits ....'
  49. On page 20, 1<sup>st</sup> full paragraph, line 5, replace 'evaluation with 'analyses' so it reads ' ... an environmental ~~evaluation~~ **analyses** under NEPA and an ....'
  50. On page 21, insert a new item 3 as follows (and renumber items 3 and 4):
    - (3) To what extent would such a rule contribute to maintaining public safety, enhancing the effectiveness and efficiency of the NRC, building public confidence, and reducing unnecessary regulatory burden?
  51. On page 22, last paragraph, revise line 5 to read ' ... use of the material could include doses of **0.1 mSv/yr** (10 mrem/yr ), **0.01 mSv/yr** (1 mrem/yr ), and **0.001 mSv/yr** (0.1 mrem/yr ) above background ....'
  52. On page 22, last paragraph, revise lines 8 - 11 to read ' ... country where people live , **lifestyle, and other factors**, and is on average s about **3 mSv/yr** (300 mrem/yr ) **but may vary from 1 to 10 mSv/yr (100 to 1,000 mrem/yr)**; (b) NRC's public dose limit is **1 mSv/yr** (100 mrem/yr ) (c) the dose from ... natural background (about **0.1 mSv/yr or** 10 mrem/yr), (d) a person receives **0.1 mSv** (10 mrem ) on a round-trip ....' The staff should verify the value in (d) to determine if it should be 4-5 mrem.
  53. On page 23, line 1, insert 'and Measurements' after 'Protection so it reads ' ... Council on Radiation Protection **and Measurements** (NCRP) considers ....'
  54. On page 23, line 2, insert 'for release for' after 'considered' so it reads ' ... the level being considered **for release for** unrestricted use ....'
  55. On page 23, paragraph (3), in lines 1 - 2, replace 'had radioactive service in the facility' with more common terms to clarify the meaning.
  56. On page 23, paragraph (4), add an '(s)' to 'alternative'.
  57. On page 23, add a new paragraph (5) as follows:
    - (5) Other decision making factors, i.e., non-dose based criteria.
  58. On page 23, in the section on "Factors in decision-making:", line 1, 'in' should start with a lower case letter and delete 'could'.
  59. On page 23, in the section on "Factors in decision-making:", line 2, after 'considerations' insert 'impacts on other industries, resource conservation,' so it reads ' ... cost benefit considerations, **impacts on other industries, resource conservation**, the capability to ....'
  60. On page 24, line 1 at the top of the page, revise the sentence to read ' ... processing and disposal impacts, impacts on biota, land use impacts, **impacts on radiation sensitive industries**, and ....'
  61. On page 24, paragraph 1, line 6, revise the sentence to read ' ... example ~~the those non-radiological~~ impacts associated with mining, **fabrication**, and transport ....'
  62. On page 24, as part of the factors NRC will use in decision-making, insert 2 new paragraphs as follows:
 

NRC recently published a draft report for comment on radiological assessments for clearance of equipment and materials from nuclear facilities, NUREG-1640 (2 volumes). The report provides dose factors for both surficial and volumetric radioactivity and compares them with results from Regulatory Guide 1.86 and from EPA values, European Community recommended clearance levels and IAEA draft clearance levels.

Most of the aforementioned policies, guidelines, recommendations and standards are dose based and thus are intended to be protective of public health and safety. In addition to protection of public health and safety, the U.S. Atomic Energy Act, as amended, also charges the NRC with protection of property. Some industries may be adversely affected by materials that are cleared based upon dose based standards because of sensitivity to radiation effects from the cleared material, e.g., the film and electronic industries and the metal recycling industry which performs radiation monitoring of metal scrap to detect and protect itself from radioactive sources accidentally mixed with the scrap.
  63. On page 24, last paragraph, lines 2 - 3 from the bottom, insert 'and' after 'analysis' and replace 'of' with 'in' so it reads ' ... some of the analysis **and** approaches ~~in of~~ the EPA report are ....'

64. On page 25, paragraph 1, revise lines 7 - 9 to read ' ... courses of action, including surveys at ~~licensed the nuclear~~ **licensed facilities, as well as surveys at non-licensed facilities that may use or receive released solid materials,** to verify ... for having to respond to **and verify radiation detection or contamination** ~~"false positives"~~ alarms at ~~scrap~~ facilities **handling released materials** (3) ....'
65. On page 25, paragraph 2, insert a new sentence after the 1<sup>st</sup> sentence as follows: 'The ability to measure radioactivity depends on both the amount and type of radioactive material.'
66. On page 25, paragraph 2, line 5, insert ', if not impossible,' after 'difficult' so it reads ' ... could be extremely difficult , **if not impossible,** to implement ....'
67. On page 25, paragraph 2, lines 5 and 6, insert 'limited' before 'capability' and insert 'field' before 'survey' so it reads ' ... natural background and the **limited** capability of **field** survey instruments ....'
68. On page 25, paragraph 3, line 2, insert 'requirements, guidelines,' after consider and add a comma after 'policies' so it reads ' ... the NRC would also consider **requirements, guidelines,** policies , and precedents set by ....'
69. On page 26, paragraph (A)(1), line 1, insert 'individual' after 'What' so it reads 'What **individual** dose level is ....'
70. On page 26, paragraph (A)(1), revise line 3 to read ' ... dose level (for example, **0.1, 0.01, or 0.001 mSv/yr** [10, 1.0, or 0.1 mrem/yr ], or no dose ....'
71. On page 26, paragraph (A)(1), revise lines 5 and 6 to read ' ... solid materials not be permitted if they **are potentially contaminated from the use of** ~~had been used for radioactive service or been in areas where licensed radioactive material was used or stored?~~
72. On page 26, paragraph (A)(2)(i), line 2, replace 'in addition to' with 'such as' so it reads ' ... exposure to people, **such as** ~~in addition to~~ those already considered ....'
73. On page 27, top paragraph, line 2, delete 'expect to' so it reads ' ... member of the public could reasonably ~~expect to~~ be exposed.'
74. On page 27, paragraph (3), add a new sentence at the end as follows: 'To what extent is there a potential that a single scrap facility would handle inputs of released solid materials from several different licensed facilities?'
75. On page 27, add a new paragraph after paragraph (4) as follows:
- (5) How should the impacts upon industries that have special concerns about the presence of radioactivity in materials, e.g., film, electronic, and metal recycling, be considered and factored into decision making?
76. On page 28, paragraph (B)(1), line 1, correct the Executive Order number to '12291'.
77. On page 28, paragraph (B)(4), line 3, insert 'radiation' before 'survey' so it reads ' ... or scrap yard based on a **radiation** survey at that point?'
78. On page 29, paragraph (C)(1), revise line 1 to read 'What is the capability ~~to~~ **of survey ing** materials ....'
79. On page 29, paragraph (C)(1), after the 1<sup>st</sup> sentence, add two new sentences as follows: 'Are these survey capabilities readily available to licensees? Should there also be provisions for survey capability at receiving facilities and what should be the nature of those provisions?'
80. On page 29, after paragraph (C)(2), add a new paragraph as follows:
- (3) How should criteria for release of solid material be incorporated into NRC's regulations, i.e., should they be expressed as a dose criteria and/or be expressed as concentration values in different media based on specified dose objectives and standard models for exposure?
81. On page 30, paragraph (D)(1)(a), revise the last sentence to read 'How should efforts by the ~~U.S. Department of State and the EPA~~ to set import **screening guidelines standards** be considered?'
82. On page 30, paragraph (D)(1)(b), revise the 2<sup>nd</sup> sentence to read ' **To what degree** ~~How~~ should standards set by **the** NRC be consistent with other ~~generally applicable~~ EPA standards, **such as for example as related to** those for recycled ....' In line 4, insert 'could occur' after 'problems' so it reads ' ... what potential problems **could occur** if EPA later issues ....'
83. On page 30, paragraph (D)(1)(d), add a new sentence to the end as follows: 'Are industry standards currently available, or anticipated during the time frame for this rulemaking, that could be adopted in lieu of or in addition to

NRC requirements on release of solid materials?'

84. On page 31, paragraph (f), insert 'and other' after 'economic' so it reads ' ... are the economic **and other** impacts of ....'
85. On page 31, paragraph (g), line 5, replace 'that' with 'to which' so it reads ' ... the extent ~~that~~ **to which** Agreement State ....'
86. On page 31, paragraph (g), revise line 6 to read ' ... to ensure that a **n adequate and** coherent ....'
87. On page 31, paragraph (2), revise line 1 to read ' ... public dose limit of 100 mrem/yr (**1 mSv/yr**) in 10 CFR ....'
88. On page 31, paragraph (2), revise line 2 to read ' ... a dose criterion of 25 mrem/yr (**0.25 mSv/yr**) for release of ....'
89. On page 31, paragraph (2), revise line 6 to read ' ... and land at a site to 25 mrem/yr **0.25 mSv/yr**).'.
90. On page 32, paragraph (1), line 3, replace 'for some' with 'in an' so it reads ' ... could be recycled for use ~~for some~~ **in an** industrial product ....'
91. On page 33, paragraph (2), line 1, insert 'slightly contaminated' before 'solid' so it reads ' ... restrict the release of **slightly contaminated** solid material from ....'
92. On page 33, paragraph (2), insert a new sentence after the 1<sup>st</sup> sentence as follows: 'Solid material with higher levels of radioactive contamination would continue to be handled as radioactive waste and be disposed of at licensed facilities.'
93. On page 33, last paragraph, line 4, insert 'and local governments' after 'States' so it reads 'Several States **and local governments** currently have ....'
94. On page 33, last paragraph, revise line 7 to read ' ... landfill under a **use restricted ion use**, but ~~that~~ it could be removed ....'
95. On page 33, last paragraph, add 'or reused' at the end so it reads ' ... from the landfill and sold as scrap **or reused**.
96. On page 34, paragraph (1), line 2, delete 'that which was done for' so it reads ' ... use (similar to ~~that which it was done for~~ the license termination ....'
97. On page 34, paragraph (2), revise the sentence to read 'If so, ~~for~~ what types of restricted uses **should could the material** be considered?'
98. On page 34, paragraph (3), revise the 1<sup>st</sup> sentence to read ' ... controls could ~~reasonably be placed on the process of restricting~~ use to ....'
99. On page 34, paragraph (3), add a new sentence after the 1<sup>st</sup> sentence as follows: 'Would these controls be reasonable?'
100. On page 34, paragraph (4), revise the 1<sup>st</sup> sentence to read 'How long would the **use material be able to** be restricted?'
101. On page 34, paragraph (5), line 2, insert 'or tracking' after 'regulation' so it reads ' ... continued in regulation **or tracking** of the material?'
102. On page 35, paragraph (6), revise the 1<sup>st</sup> sentence to read 'What type of public involvement **should there be** in decisions concerning restricted use of materials ~~should there be~~?
103. On page 35, paragraph (6), revise the 2<sup>nd</sup> sentence to read ' ... affected parties when **proposing placing** a site ~~into~~ **for** restricted use?'
104. On page 35, paragraph (6), line 9, add 'and uses' before the period so it reads ' ... for restricted use in different areas **and uses**.
105. On page 35, paragraph (6), revise the last sentence to read 'Can ~~this potential problem be addressed so as to include~~ a **meaningful** public involvement process **be developed** for setting restrictions ....'
106. On page 35, revise paragraph (7) to read 'How should considerations and predictions of future public **uses usages** of

materials and the restrictions on those materials, which could be difficult to make, be developed so as [SAJ deletion] to provide credible approaches for restricted use?'

107. On page 35, add to the end of paragraph (8) 'provided the controls remain effective' so it reads ' ... same as for unrestricted use , **provided the controls remain effective.**'
108. On page 36, paragraph (1), revise lines 4 and 5 to read ' ... become available and **also** to ~~also~~ represent most of the volume of **slightly contaminated** material available for release from NRC-licensed facilities into the public sector , **other than soil.**'
109. On page 37, revise the 1<sup>st</sup> paragraph (3) to read ' ... completed for other **slightly contaminated** materials ~~needing disposition and~~ potentially available for release.'
110. On page 37, revise the last paragraph to read ' ... at a later time for certain ~~of the~~ [SAJ deletion] materials if the impact **to all affected parties including the regulators** is too great **or the analyses too complicated or time consuming?**
111. On page 38, revise paragraph (1) i) to read:
  - i) Is it appropriate to proceed with ~~just~~ certain materials, including steel, aluminum, copper, concrete, and soil, so that rulemaking can be done in a timely manner using the information developed for these materials in NUREG-1640 , **and associated analyses as described above**, as input to the environmental analyses and regulatory analyses, ~~needed to support a rulemaking?~~ Would experience gained with the rule on steel, aluminum, copper, concrete, and soil, be useful in **evaluating requirements for release of** ~~dealing with~~ other materials later?
112. On page 38, paragraph (1) ii), revise the last sentence to read ' ... actually requesting release for today **or are anticipated over the next decade?**'
113. On page 38, paragraph (2), revise the last sentence to read ' ... these materials currently exist **or are they under development?**'
114. On page 39, top paragraph, add a new sentence at the end as follows: 'If the rulemaking establishes dose objectives for release and implements these objectives through tables of values for specific materials, should the dose objective also be used to guide case-specific release of other materials through licensing actions or exemptions?'
115. On page 39, revise paragraph (4) to read 'What ~~are the implications for Alternatives 1, 2, and 3, i.e.,~~ what would be **the** associated costs, effective survey methods ~~for different materials,~~ and dose impacts of the alternatives?'
116. On page 39, paragraph (5), revise the first sentence to read ' ... extended to cover materials **at that may be released from nuclear facilities operated by the DOE** ~~facilities?~~' Delete the last question (If so, how should that be done?).

### Changes to the Press Release

1. At the end of the 1<sup>st</sup> paragraph, add 'from licensed facilities' so it reads ' ... amounts of residual radioactivity **from licensed facilities.**'
2. In paragraph 2, revise line 1 to read ' ... revising its regulations **in 10 CFR Part 20** to establish requirements ....'
3. In paragraph 2, revise the 2<sup>nd</sup> sentence to read 'The NRC currently ~~decides on~~ **evaluates** licensee requests for release of solid materials on a case-by-case basis **using existing guidance.** ~~Although it already~~ **NRC** has release limits in ~~place~~ **Part 20** for air and liquid emissions **from licensed facilities.**'