

March 17, 1999

MEMORANDUM Executive Director for Operations  
TO:

FROM: Annette Vietti-Cook, Secretary /s/

SUBJECT: STAFF REQUIREMENTS - AFFIRMATION SESSION, 11:30 A.M., WEDNESDAY, MARCH 17, 1999,  
COMMISSIONERS' CONFERENCE ROOM, ONE WHITE FLINT NORTH, ROCKVILLE, MARYLAND (OPEN TO  
PUBLIC ATTENDANCE)

I. SECY-99-046 - Radiological Criteria for License Termination of Uranium Recovery Facilities

The Commission approved a final rule amending [10 CFR Part 40, Appendix A](#), Criterion 6(6), to provide radiological criteria for building surfaces and radionuclides other than radium in soil, for termination of uranium recovery licensees.

Following incorporation of attached changes, the Federal Register notice should be reviewed by the Rules Review and Directives Branch in the Office of Administration and forwarded to the Office of the Secretary for signature and publication.

(EDO) (SECY Suspense: 4/9/99)

Attachment: [As stated](#)

cc: Chairman Jackson  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
EDO  
OGC  
CIO  
CFO  
OCAA  
OCA  
OIG  
OPA  
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)  
PDR - Advance  
DCS - P1-17

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[ATTACHMENT](#)

## Changes to SECY-99-046

Changes to the Federal Register notice:

1. On page 8, last line insert 'radioactive' after 'occurring' so that the sentence reads: "The 5 pCi/g radium value has also been recommended as an exemption level by the Board of Directors of the Conference of Radiation Control Program Directors (October 1998) for the Suggested State Regulations on technologically enhanced naturally occurring **radioactive** materials.
2. On page 9, change the first sentence as follows: "The NRC staff's preliminary dose modeling , **using realistic parameter values and the RESRAD code**, indicates that at typical UR facilities, where the background radiation results in doses of over 200 mrem/yr (2.0 mSv/yr), the Ra-226 standard of 5 pCi/g (0.19 Bq/g) could typically result in a potential **peak annual** dose on the order of 20 to 35 mrem/yr (0.2 to 0.35 mSv/yr) **to the average member of the critical group**.
3. On page 9, paragraph 2 line 4, insert a new sentence prior to the start of the third sentence as follows: " **Also, EPA modeled a much smaller fraction of time an individual would spend outdoors (0.02 versus 0.25) and used a less conservative root depth value (0.9 versus 0.25 meters) which generally decreases the calculated potential dose.**
4. On page 10, change the next to the last sentence in the first partial paragraph as follows: "The rule text and guidance also stipulate that the total effective dose equivalent limit is based on the ~~maximum~~ **peak** annual dose within a 1000 year period **to the average member of the critical group**.

5. On page 12, paragraph 2, line 3, delete the 'm' in '0.1 mSv/yr'.
6. On page 18, change the last sentence to read: "**The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the Commission after consideration of the recommendation of the NRC staff.**"

#### Changes to the Public Announcement

7. On page 1, paragraph 3, revise the first 2 sentences as follows: "The new dose criteria are based on the existing **Environmental Protection Agency (EPA)** soil standard for radium. The ~~EPA Environmental Protection Agency~~ previously set standards requiring that the concentration of radium at uranium mills after decommissioning may not exceed ~~the natural~~ **background level s of radiation** by more than 5 picocuries per gram in the first 6 inches of soil, and 15 picocuries per gram for every subsequent 6-inch layer."
8. On page 1, paragraph 4, change the first sentence as follows: "The new standard for uranium and thorium uses the radiation dose from radium **in oil** as a benchmark." In line 2, change 'facility' to 'facilities'.
9. On page 2, line 2, add the following new sentence at the end of the paragraph: "**The staff recently calculated that the potential dose to an individual from applying the benchmark approach may range between 22 and 34 millirem per year.**"
10. On page 2, revise the last paragraph as follows: "In the unlikely event that application of this benchmark would result in a dose exceeding 100 millirems per year, the **staff will consult with and receive the approval of the Commission before approving the decommissioning plan.** ~~Commission will specifically review the situation.~~ The 100-millirem dose is the NRC annual limit for members of the public. The average annual dose to an individual in the United States from natural ~~sources~~ **background radiation** is about 300 millirems."

#### Changes to the Congressional letters

11. In line 1, insert 'U.S.' prior to 'Nuclear' so it reads: "The **U.S.** Nuclear Regulatory Commission (NRC) has sent to the Office of the Federal Register for publication ..."
12. In the last line, insert 'unique' before 'issues' so it reads: "... and instead request additional public comment so as to provide full consideration of the **unique** issues involving decommissioning of UR facilities."

#### Changes to the Letters to Gore, Murphy, and Hastert

13. In line 2, insert 'U.S.' prior to 'Nuclear' so it reads: "... the **U.S.** Nuclear Regulatory Commission (NRC) is submitting a final rule regarding decommissioning ..."