



OFFICE OF THE  
SECRETARY

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

March 29, 2002

COMMISSION VOTING RECORD

DECISION ITEM:       SECY-00-0201

TITLE:                   PROPOSED RULE - 10 CFR PART 40  
                              AMENDMENTS TO REQUIRE NRC APPROVAL  
                              FOR TRANSFER FROM LICENSEES TO  
                              EXEMPT PERSONS

The Commission (with Chairman Meserve and Commissioner Merrifield approving, Commissioners Dicus and Diaz approving in part and disapproving in part, and Commissioner McGaffigan disapproving) acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of March 29, 2002.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette L. Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook  
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc:     Chairman Meserve  
          Commissioner Dicus  
          Commissioner Diaz  
          Commissioner McGaffigan  
          Commissioner Merrifield  
          OGC  
          EDO  
          PDR

VOTING SUMMARY - SECY-00-0201

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. MESERVE	X				X	3/23/01
COMR. DICUS	X	X			X	10/5/00
COMR. DIAZ	X	X			X	3/12/01
COMR. McGAFFIGAN		X			X	1/23/02
COMR. MERRIFIELD	X				X	2/27/01

COMMENT RESOLUTION

In their vote sheets, Chairman Meserve and Commissioner Merrifield approved the paper, Commissioners Dicus and Diaz approved in part and disapproved in part, and Commissioner McGaffigan disapproved the paper. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on March 29, 2002.

**AFFIRMATION V O T E**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook  
Secretary of the Commission

**FROM:** CHAIRMAN MESERVE

**SUBJECT:** SECY-00-0201 - PROPOSED RULE - 10 CFR PART 40 --  
AMENDMENTS TO REQUIRE NRC APPROVAL FOR  
TRANSFERS FROM LICENSEES TO EXEMPT PERSONS

Approved  X with comment  Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_ Request Discussion \_\_\_\_\_

**COMMENTS:**

See attached.



SIGNATURE

March 23, 2001

DATE

Entered on "STARS" Yes  X  No \_\_\_\_\_

## CHAIRMAN MESERVE'S COMMENTS ON SECY-00-0201

I approve the staff's request to publish a proposed rule to amend 10 C.F.R. § 40.51 to require NRC approval for transfers of "unimportant quantities" of source material to exempt persons, subject to the following comments.<sup>1</sup> I also approve the staff's recommendation to add the word "dispose" to the list of exempted activities in 10 CFR § 40.13(a) as part of this rulemaking.

Material falling within the exempt material category could contain as much as 339 pCi/g of natural uranium or 116 pCi/g of natural thorium. Recent analyses show that the individual effective dose equivalents arising from exempt materials could range up to 4,000 mrem/yr for workers (zircon flour handling) and up to 200 mrem/yr for a member of the public (from pavement and building construction from phosphate slag). NRC, Systematic Radiological Assessment of Exemption for Source and Byproduct Materials, Table 3.2.19 (Dec. 1999) (Draft). These are substantial doses and the revisions proposed by the staff are to ensure that releases from licensed sites pursuant to § 40.51 include consideration of the dose consequences. I agree with the thrust of the staff's proposal with two modifications.

Dose limit. Staff indicates in the draft statement of considerations that it would (1) expect to approve transfers of less than 0.05 percent source material if the radiation dose to any individual is not expected to exceed 1 mSv/yr (100 mrem/yr) and (2) notify the Commission in cases in which the individual dose is expected to exceed 0.25 mSv/yr (25 mrem/yr). Like Commissioner Dicus, I am concerned about consistency of this guidance with the approach to radiation protection reflected elsewhere in NRC regulations. Our license termination rule includes a 25 mrem/yr limit to members of the public for unrestricted release (10 C.F.R. § 20.1402), and our regulations for low-level waste disposal impose similar limits (10 CFR § 61.41). It is difficult to justify radically different limits for releases of material by licensees under § 40.51(f).<sup>2</sup>

Consideration of NCRP and ICRP guidance leads to the same conclusion. Both NCRP and ICRP provide a public dose limit of 1 mSv/yr (100 mrem/yr). NCRP, in its latest recommendations on this subject, has a per-source or set-of-sources limit of 0.25 mSv/yr (25 mrem/yr) to ensure that total man-made exposure (excluding medical exposures) does not exceed 100 mrem/yr. NCRP, Limitation of Exposure to Ionizing Radiation, 47 (1993) (NCRP Rept. No. 116). ICRP similarly recommends a 0.3 mSv/yr (30 mrem/yr) constraint for prolonged doses from a single source, with assessments to

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<sup>1</sup> The phrase "unimportant quantities" of source material refers to "any chemical mixture, compound, solution, or alloy in which the source material is by weight less than one-twentieth of 1 percent (0.05 percent) of the mixture, compound, solution, or alloy." 10 C.F.R. § 40.13(a). Although the phrase is defined in terms of a concentration rather than a "quantity," it reflects the authorization in the Atomic Energy Act not to require licenses "for quantities of source material which, in the opinion of the Commission, are unimportant." AEA § 62, 42 U.S.C. § 2092. Staff explains that the concentration limit was derived many years ago based on economic considerations, rather than health concerns. SECY-00-0201, Att. 2 at 3.

<sup>2</sup> I am aware that materials outside the NRC's regulatory control (e.g., TENORM) may receive far more lenient treatment than materials subject to NRC control. The disparity in treatment would seem to justify an effort to bring all radiation risks under a common system of controls rather than to weaken the requirements for those materials that are appropriately regulated.

verify compliance.<sup>3</sup> ICRP, Protection of the Public in Situations of Prolonged Radiation Exposure, 30, 32 (1999) (ICRP No. 82). See also ICRP, Radiation Protection Recommendations as Applied to the Disposal of Long-lived Solid Radioactive Waste, 17 (1998) (ICRP No. 81)

In light of the Commission practice in related areas and the NCRP and ICRP guidance, I would modify the statement of considerations to provide that exemptions would normally be granted if a dose limit of 0.25 mSv/yr (25 mrem/yr) is satisfied. Because some flexibility may be appropriate, I would not necessarily foreclose approval of transfers in circumstances in which a dose limit in excess of 0.25 mSv/yr (25 mrem/yr) is estimated. However, like Commissioner Merrifield, I would expect Commission involvement in processing such requests through negative consent or a notation vote. Cf. 10 CFR § 20.1404(b) (Commission approval required for use of alternate criteria to terminate a license). Factors that might be considered in determining whether to allow such transfers would include whether the dose arises from an occupational exposure (albeit not to a nuclear worker), whether the exposed individual is informed of and consents to the exposure, the duration of exposure, the numbers of exposed individuals, and other appropriate considerations.

Disposal. Commissioner Merrifield has appropriately noted that the context for the Commission's consideration of this matter is in connection with releases of material for disposal in appropriate facilities (e.g., a RCRA Subtitle C facility authorized for such material). The discussion of the tolerable dose limits in the Statements of Consideration should be modified to reflect this constraint. If releases of exempt material for other purposes are sought (e.g., recycle), the staff should evaluate the acceptability of the potential dose on a case-by-case basis until the Commission's approach to the release of solid material is resolved. The dose limits described above may not be appropriate in contexts other than disposal.

\* \* \*

These comments, if accepted by a majority of the Commission, will require modification of the Federal Register notice. The Regulatory Analysis also should be revised (at page 4, 1<sup>st</sup> bulleted paragraph) to remove any implication that all Subtitle C RCRA facilities are not equipped to protect against radiation hazards.

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<sup>3</sup> Where verification is not feasible, ICRP recommends that prolonged exposures be constrained to 10 mrem/yr during the operational lifetime of the source. Id. at 32.

NOTATION VOTE

2000 SEP 27 AM 7: 47

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER DICUS  
SUBJECT: **SECY-00-0201 - PROPOSED RULE - 10 CFR PART 40  
AMENDMENTS TO REQUIRE NRC APPROVAL FOR  
TRANSFERS FROM LICENSEES TO EXEMPT PERSONS**

Approved   x   <sup>In part</sup> Disapproved   x   <sup>In part</sup> Abstain       

Not Participating       

COMMENTS:

See attached comments.

  Peta Joy Dicus    
SIGNATURE

  October 5, 2000    
DATE

Entered on "STARS" Yes   x   No

## *Comments of Commissioner Dicus Regarding SECY 00-0201*

I commend staff for doing an excellent job in preparing the subject SECY paper in line with the direction set forth by the Commission in the SRM for SECY 99-259. Consistent with my vote on SECY 99-259, I approve staff's/SRM recommended approach to proceed with rulemaking to amend 40.51(b)(3) and (4) to require prior Commission approval for transfers of unimportant quantities of source material (SM) to exempt persons under 40.13(a), as well as the modification of 40.13(a) to incorporate "disposes" into its language. Additionally, and also consistent with my position as reflected in COMSECY 98-022, I continue to support transfer and/or disposal of this material as long as such transfers/disposals do not result in doses to the public in excess of doses applicable to low-level waste (LLW) disposal. Therefore, I disapprove usage of the 100 mrem defacto approval criteria as detailed in the Statement of Considerations, and I recommend usage of the 25 mrem limit plus ALARA as the expected approval criteria.

I believe that the issues and circumstances surrounding unimportant quantities of SM, as well as the transfer and/or disposal of this material to exempted persons, is better suited and consistent with what the Commission has set forth both in policy and regulation with respect to decommissioning (i.e., unrestricted release) and LLW disposal (i.e., 25 mrem TEDE and ALARA), and not with the 100 mrem public dose limit. Of specific note, when the 100 mrem limit is considered during site decommissioning, it is done so with respect to restricted release, and is based on the 100 mrem as being ALARA.

I do recognize that the proposed amendment, if implemented, would require NRC approval of all transfer and disposal requests from specific licensees to exempted persons, thereby, creating a review and evaluation checkpoint process. Once approval is granted, the licensee is then allowed to transfer and/or dispose of the SM. Based on the **Metcoa-WCS** disposal situation, the material at issue was sent to a RCRA permitted disposal facility, whereby the site's EPA or State permit requirements created the regulatory compliance basis for material receipt, handling, and disposal. As long as the exempted person(s) for where the SM is destined for disposal is controlled by the EPA or the State, there is a reasonable level of assurance that appropriate controls have been put in place and are appropriately functioning, which would provide adequate protection of the worker, the public, and the environment.

With respect to the transfer of this material to exempted persons, safety and health controls similar to those in-place at EPA or State permitted disposal sites may not be readily available or even required. This area of possible concern presents a level of conservatism that should be factored into the defacto approval criteria. Since site decommissioning criteria for unrestricted release promulgates a 25 mrem limit plus ALARA, and LLW disposal criteria promulgates a 25 mrem limit for radioactivity releases to the general environment plus ALARA for effluent releases, then I support including similar criteria in the Statement of Considerations for material transfers to exempted persons, which at the time of transfer, will be exempted from any NRC licensing and/or regulatory requirements. This approach also follows the philosophical lines and language of the 1997 draft Oak Ridge National Laboratory report entitled, *Systematic Radiological Assessment of Exemptions for Source and Byproduct Material*.

For example, the report clarifies the 100 mrem public dose limit as pertaining to all man-made sources and practices and not just from one source or one practice. It also clarifies the use of the ALARA principle as being a requirement applying to the reduction of doses below any authorized limits for specific practices or sources.

However, I do support providing staff with the necessary flexibility to evaluate on a case-by-case basis, whether or not to approve transfers and/or disposals for material that lies within the 25 mrem to 100 mrem range plus ALARA. Such approvals should be premised on disposal sites having in-place the appropriate EPA or State permit requirements, as was the case involving Metcoa and WCS. With respect to material transfers not directed toward direct disposal, staff should verify both its interim (i.e., storage, recycling, alternate feed processing) and ultimate usage status (i.e., continued storage or eventual disposal). Additionally, the Commission should be kept informed of transfer and disposal requests that the NRC receives for evaluation of material within this range, as well as its resolution status.

I believe that the application of the 25 mrem limit plus ALARA further builds on the Commission's progress in demonstrating regulatory consistency across all appropriate and applicable areas and moving towards the risk-informed regulatory setting. Of critical importance, is the necessity to demonstrate our regulatory consistency to the general public whose safety and health is our first priority. If our licensed operations and activities warrant specific quantitative and qualitative health and safety protection limits, and our license termination process requires equivalent levels of protection for unrestricted release, then I support providing these same thresholds for the transfer and/or disposal of low-concentration SM to exempted persons. This approach only further enforces the Commission's interest in providing adequate protection to the public, as well as in promulgating consistent and predictable radiation protection regulatory requirements.

Additionally, I found the disposal cost comparison information for industrial solid waste, hazardous waste, LLW, and mixed LLW disposal facilities to be very informative and useful, and I complement the staff for a very good job. As you are aware, the voting and SRM process was recently completed for SECYs 99-011, 99-012, 99-013, and 99-277. With specific reference to SECY 99-012, "Use of Uranium Mill Tailings Impoundments for the Disposal of Waste Other than 11e.(2) Byproduct Material and Reviews of Applications to Process Material Other than Natural Uranium Ores," the Commission approved the use of uranium mill tailings impoundments for the disposal of waste other than 11e.(2) byproduct material, as well the processing of alternate feed material.

Based on this determination, I suggest that staff also develop cost information for disposing of material at uranium mill tailings impoundments. I believe that since this option is now available, that providing associated cost estimates will complement and complete the existing data. Unless this information is readily available and/or staff believes that it should be immediately included in SECY 00-0201, staff should proceed with generating the data as part of the rulemaking effort.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER DIAZ  
SUBJECT: **SECY-00-0201 - PROPOSED RULE - 10 CFR PART 40  
AMENDMENTS TO REQUIRE NRC APPROVAL FOR  
TRANSFERS FROM LICENSEES TO EXEMPT PERSONS**

Approved XX <sup>in part</sup> *hw* Disapproved XX <sup>in part</sup> *hw* Abstain \_\_\_\_\_  
Not Participating \_\_\_\_\_

COMMENTS:

See attached comments.

*[Handwritten Signature]*  
\_\_\_\_\_  
SIGNATURE

3.12.01  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

FORM BY 105

SEP 0 11 02

COMMENTS OF COMMISSIONER DIAZ ON SECY-00-0201,  
PROPOSED RULE - PART 40 AMENDMENTS TO REQUIRE NRC APPROVAL FOR  
TRANSFERS FROM LICENSEES TO EXEMPT PERSONS

At this time, I disapprove staff's recommendation to publish a proposed rule that would amend Part 40 to require NRC approval for transfers of unimportant quantities of source material from licensees to persons exempt under § 40.13(a), and would amend § 40.13(a) to add "dispose" to the list of exempted activities under this paragraph.

Until the issue is resolved in a more effective manner, I approve staff continuing their current practice of reviewing licensees' requests for transfer or disposal of unimportant quantities of source material under § 40.13(a), and, when justified, issuing case-specific exemptions. This is consistent with my 1998 recommendation that the staff develop and issue a case-specific exemption under § 40.14(a).

I have long been a strong proponent of consistent and reasonable radiation protection regulations that provide for the health and safety of both the public and workers. Therefore, I recommend that we use a dose-based approach for approval of transfers and disposal of unimportant quantities of source material to persons exempt under § 40.13(a).

First, I continue to support the use of the 25 mrem/year limit for NRC-licensed sites that are decommissioned and released for unrestricted use.

Second, I continue to support use of the 100 mrem/year public dose limit in Part 20 for transfers of unimportant quantities of source material from licensees to persons exempt under § 40.13(a), as approved by the Commission in the March 9, 2000 SRM on SECY-99-259, "Exemption in 10 CFR Part 40 for Materials Less than 0.05 Percent Source Material - Options and Other Issues Concerning the Control of Source Material."

Third, for a limited number of scenarios that do not apply to the general public, but do address workers or individuals who routinely handle the low-level radioactive material at unlicensed facilities that process the transferred material or workers at waste disposal sites, I would recommend that we consider approval for doses to individuals up to 500 mrem/year, consistent with the dose limits specified by 10 CFR 20.1301(c).<sup>1</sup>

Lastly, if staff's future reviews show that there are scenarios where significant numbers of members of the general public could exceed doses in excess of the 100 mrem/year public dose limit, I believe that we should then consider rulemaking so that the limits for control of the distribution of source material to exempt persons and to general licensees are consistent with our radiation protection framework.

If the Commission approves the above dose-based approach, I strongly believe that there should be no concern about health and safety consequences when "unimportant quantities" of source material are released for either transfer or disposal under § 40.13(a).

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<sup>1</sup> Note that the Commission has recently approved a revision of Part 35 that allows a licensee the discretion, on a case-by-case basis, to permit visitors to receive up to 500 mrem in a year from exposure to hospitalized radiation patients, if approved by the authorized user.

NOTATION VOTE

RESPONSE SHEET

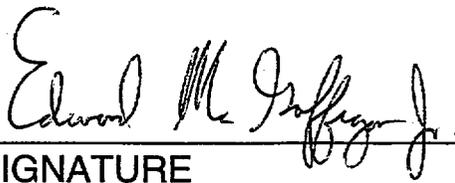
TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MCGAFFIGAN  
SUBJECT: **SECY-00-0201 - PROPOSED RULE - 10 CFR PART 40  
AMENDMENTS TO REQUIRE NRC APPROVAL FOR  
TRANSFERS FROM LICENSEES TO EXEMPT PERSONS**

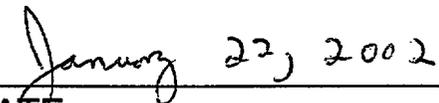
Approved \_\_\_\_\_ Disapproved  <sup>w/comments</sup> Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS:

See attached comments.

  
\_\_\_\_\_  
SIGNATURE

  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

## Commissioner McGaffigan's Comments on SECY-00-0201

I have been troubled by this paper since receiving it for reasons that I will outline in detail below. I join Commissioner Diaz in opposition to proceeding with the proposed rule and agree with him that we should continue the review of licensee transfer requests for unimportant quantities of source material on a case-by-case basis by applying the Commission's guidance on previous papers (SECY-99-259, COMSECY-99-007, COMSECY-98-022, and SECY-98-284), which I continue to support.

I do not believe that we are ready for this rulemaking. This judgment is based partly on the paper, partly on the slow progress being made by the Part 40 jurisdictional working group because of the complexity of the issues under consideration, and partly on dealing with specific cases that have arisen over the past year and a half.

What would this proposed amendment to 10 CFR 40.51 do? It would require approximately 114 specific licensees under 10 CFR Part 40 (and other current non-licensees with licensable source material) to apply to the Commission for approval to transfer unimportant quantities of source material (source material less than 500 parts per million by weight uranium or thorium) to persons exempt from licensing under 10 CFR 40.13(a). These licensees (and potential licensees) would have to demonstrate that members of the public would not receive an annual dose of more than 100 millirem total effective dose equivalent before being allowed to transfer the material.

These are very unlucky people. Because they have possessed, however briefly, specifically licensed source material (above 500 parts per million by weight thorium or uranium in quantities of more than 150 pounds in any year), they face potentially very large costs in disposing of their unimportant quantities of source material. There are many other entities, of which we are well aware, who possess unimportant quantities of source material outside our regulatory framework. Those entities will dispose of their unimportant quantities or leave them in place with no NRC oversight.

Unimportant quantities of source material are ubiquitous. The staff noted in an earlier paper (SECY-99-259) that any attempt by the Commission to regulate unimportant quantities by changing the 500 parts per million threshold to a lower limit would involve the Commission in regulating almost the entire minerals extraction industry in this country. It would potentially involve us even in regulating such materials as coal ash. According to a recent European Union document, coal ash typically contains about 5 picocuries per gram (pCi/gm) uranium or thorium, but levels up to 270 pCi/gm have been reported.<sup>1</sup> Such coal ash could be non-exempt source material today.

Arguably, to the extent such materials need regulation, they already come under the regulatory framework of the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT) and the States. That is why we set up the Part 40 jurisdictional working group. In considering regulations for naturally occurring radioactive material (NORM) and technologically enhanced naturally occurring radioactive material (TENORM), these entities have had to confront the ubiquitous presence of uranium and thorium and daughters, such as radon and radium. EPA's standard for radon in indoor air translates to hundreds of millirem per year effective dose equivalent. EPA's draft "Federal Radiation Protection Guidance for Exposure of the General Public" of December 1994

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<sup>1</sup> The 500 parts per million, by weight, source material exemption in Part 40 translates to approximately 339 pCi/gm for natural uranium and 116 pCi/gm for natural thorium.

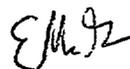
included a Recommendation 3 that found that public doses of 100 millirem per year and as high as 500 millirem per year in certain circumstances, including exposure from milling and mining operations, are acceptable. The States, through the Conference of Radiation Control Program Directors (CRCPD), evaluated whether to regulate the zircon sand industry and determined that such regulation was not necessary in their draft Part N – TENORM - Suggested State Regulations. Such a judgment by CRCPD is consistent with the findings in an article published in the January 2001 edition of Health Physics. According to that article Australian workers in the zircon sand industry were estimated to receive annual doses less than 100 millirem per year, using International Commission on Radiation Protection (ICRP) Publication 68 methodology, because of the sound worker protection practices used in that industry. But the CRCPD judgment is not consistent with Oak Ridge's draft report, cited in the proposed rule's regulatory analysis, which claims annual worker doses in the zircon sand industry could potentially range from 250 millirem to 3,500 millirem. I suspect that the Oak Ridge study is wildly conservative in its dose estimates and I personally support the CRCPD proposal.

In dealing with NORM and TENORM and unimportant quantities of source material, the radioactive material is often of lesser concern than other heavy metals with which they naturally occur. For example, EPA in considering whether coal ash needed additional regulation in the late 1990s was much more concerned about the mercury, arsenic, etc., found in coal ash than the uranium and thorium. Our staff (on page 4 of its regulatory analysis) seems to be concerned about radiation hazards in disposing of unimportant quantities of source material in hazardous waste facilities or solid waste facilities regulated under Subtitle C or D, respectively, of the Resource Conservation and Recovery Act (RCRA). Yet, EPA found coal ash could continue to be disposed of as Subtitle D material and we know many RCRA subtitle C facilities are licensed to receive NORM or TENORM, for example from the oil and gas industry, with radioactive material concentrations up to 2000 pCi/gm. We have testified before Congress that such facilities can safely dispose of DOE FUSRAP materials. And they certainly can safely dispose of unimportant quantities of source material.

The proposed rule, according to its own regulatory analysis, appears to be a "major rule," as defined in the Small Business Regulatory Enforcement Fairness Act of 1996. Therefore, if we proceed, we will need to so report it to the Office of Information and Regulatory Affairs at the Office of Management and Budget and to the Congress. Although I could not find the issue of whether this is a major rule dealt with explicitly either in the statements of consideration or in the regulatory analysis, the regulatory analysis estimates an increased annual incremental cost to licensees in the so-called high scenario of \$166,750,000. This is well above the major rule threshold of \$100,000,000. I see no benefits in the proposed rule that would justify costs of this magnitude. I believe that the high scenario is a much better estimate than the low scenario that finds trivial incremental costs because it assumes only three transfer requests per year, all approved. Indeed, the Commission is well aware of current non-licensees with small amounts of licensable source material, to whom this rule can be applied. So the rule could extend well beyond the approximately 114 licensees mentioned in the regulatory analysis. Indeed, if this proposed rule does go forward, I would strongly encourage entities not currently within NRC's source material regulations to consider the potential impacts on them and to comment on the rule.

I do find one attempt to mitigate the rule's potential reach in the rule's fine print. The amendment introduces the concept of "source material derived from (emphasis added) specifically licensed material." If I am a Part 40 licensee because I briefly utilized monazite sands as a source of zirconium, but otherwise have used exempt zircon sands, presumably I can transfer without NRC approval the unimportant quantities of source material that derive from my use of the exempt material. The rule would only apply to unimportant quantities derived from the monazite sands. But what if I did not keep meticulous records of what happened to the unimportant quantities derived from the monazite sands? What if all the unimportant quantities are mixed together? Do all the unimportant quantities then come under the proposed rule? If I as a non-licensee have a site with some licensable source material (because it is above 500 parts per million by weight uranium or thorium) in a few locations, is it only the unimportant quantities co-located with the licensable material that would come under this rule? Could I deal with the rest of the site consistent with any applicable State or EPA regulations?

The image of Swiss cheese comes to mind as I think about the proposed rule. The staff wants to fill one hole in the Swiss cheese framework of NORM/TENORM/exempt source material regulation with the proposed rule. All the other holes would remain and new ones would potentially be created after the rule change. I believe that it would be better to continue to work in the Part 40 jurisdictional working group to identify a more holistic national regulatory scheme for these materials, a scheme that takes into account their ubiquity in the environment and sets reasonable dose limits, a scheme that has reasonable costs compared to health benefits, and a scheme that is not based on worst case dose analyses.

A handwritten signature in black ink, appearing to be 'E.M.G.' or similar, located in the lower right quadrant of the page.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MERRIFIELD  
SUBJECT: **SECY-00-0201 - PROPOSED RULE - 10 CFR PART 40  
AMENDMENTS TO REQUIRE NRC APPROVAL FOR  
TRANSFERS FROM LICENSEES TO EXEMPT PERSONS**

Approved  Disapproved  Abstain

Not Participating

COMMENTS: *See attached comments.*

  
SIGNATURE

*2/27/01*  
DATE

Entered on "STARS" Yes  No

Comments from Commissioner Merrifield on SECY-00-0201:

I approve, with modifications provided in subsequent paragraphs, the publication of proposed amendments (1) to 10 CFR 40.51 to require NRC approval for transfers of source material from licensees to exempt persons<sup>1</sup> and (2) to 10 CFR 40.13(a) to allow non-NRC licensees possessing unimportant quantities of source material which are exempt from the NRC regulations to dispose of the material without NRC control. This proposed rulemaking was provided in response to Commission direction provided in the SRM for SECY-99-259. However, before the proposed rule is published, significant revisions should be implemented in the Statement of Considerations (SOC) which more clearly describes the basis and justification for the proposed rule changes. When the staff has implemented the revisions to the SOC, the staff should make appropriate revisions to the proposed rule language to be consistent with the SOC. At that time, the staff can publish the proposed rule for comment. The basis for my suggested modifications as well as a general description of the desired modifications are discussed in the following paragraphs.

A past practice of the NRC has been to use the existing wording in 10 CFR 40.51 to state that once source material is under a NRC license then the material always remains under NRC control and must eventually be disposed as low-level radioactive waste. One result of this practice was that licensees had no incentive to intentionally dilute licensed source materials to concentrations defined as unimportant quantities solely for the purpose of reducing disposal costs. There is an existing provision in 10 CFR 40.51(b)(7) which would allow a transfer from a licensee to any individual if authorized by the Commission; but in the past, this provision was not pursued. However, in late 1998 a request was raised to the Commission to allow disposal of licensed but unimportant quantities of source material in a RCRA Subtitle C facility. This request eventually resulted in the Commission requesting additional information concerning the control of low concentrations of source material, which was submitted by the staff in SECY-99-259.

In the SRM for SECY-99-259, the Commission directed the staff to take several actions regarding low concentrations of source material, referred to in the regulations as unimportant quantities of source material.<sup>2</sup> Most of the staff actions are fairly long range interactions involving the appropriate regulators (both State and Federal) of material with equivalent risk to the public and environment. Hopefully, these interactions will eventually result in modifications to 10 CFR Part 40 to allow a consistent approach for regulating materials with equivalent levels of risk. These long-term activities are in progress. However, there were two short term issues associated with Part 40 that the Commission believed it needed to address on an interim basis until a long-term solution was developed and implemented. The first issue is can a licensee transfer unimportant quantities of source material in their possession to a non-NRC licensed

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<sup>1</sup>To provide clarification, an exempt person is an individual who is exempt from NRC regulations or regulations issued under the NRC Agreement State Program. They may also be referred to as non-NRC licensees. Their activities may be regulated by other agencies at the State or Federal level.

<sup>2</sup>In most instances, unimportant quantities of source material is essentially soil with low concentrations of radioactive elements. Equivalent material is readily found in nature or some industrial applications (not regulated by the NRC) and is referred to as NORM or TENORM.

entity? The second issue is are exempt persons (non-NRC licensed individuals) who are authorized to possess unimportant quantities of source material also allowed to dispose of that material? The SRM contained several explicit instructions on the content of a proposed rule to be developed. In addition, the staff was directed to discuss the proposed interim regulatory changes with the same regulators addressing the longer term issues and submit a proposed rule to the Commission by September 8, 2000. The staff submitted the proposed rule on schedule.

In my opinion, the proposed rule submitted by the staff in SECY-00-0201 follows the explicit instructions by the Commission in the SRM for SECY-99-259. However, the proposed rule, as written, is not acceptable to me because it misses an important point which, in my opinion, was implied in the previous guidance. Specifically, the important subtlety missed in the SRM is that it referenced examples where restricted release was authorized for disposal at a RCRA Subtitle C facility. I am not faulting the staff for this omission, but I believe the rule requires modification before publication.

A plain language reading of the current rulemaking package (both rule and SOC) is that the NRC will consider allowing a licensee to dilute licensed source material to unimportant concentrations and then transfer the material to an exempt person (non-NRC licensee) for unrestricted release (including disposal) as long as the expected exposure to the general public is less than 100 mrem per year. The SOC discusses analyzing potential results of the transfer; but once the material is under the custody of an exempt person, NRC would no longer regulate the material. This interpretation is certainly not my position regarding the purpose of this rulemaking; and I can certainly understand, and to some extent agree with, the negative comments received from some Agreement States. First, I am strongly opposed to the notion that source materials can be diluted with non-source material to achieve unrestricted release criteria. I recognize and accept that some dilution resulting from the mixing of source materials can occur as part of an approved process. But once the process is complete, I do not generally support the notion that the waste product can be intentionally diluted in an attempt to bypass more strict disposal requirements. Second, I am not comfortable in establishing a general unrestricted release criteria for low levels of source material without additional discussions with regulators of material with equivalent risk.

Expanding on the second point, I recognize that the regulation of materials containing low levels of radioactivity is very inconsistent on a national level. The level of radioactivity associated with unimportant quantities of source material is equivalent to and sometimes less than the level of radioactivity associated with NORM and TENORM, which the NRC does not regulate. There are no national standards for the regulation of NORM or TENORM, and it is regulated very inconsistently across the United States. Some States have no regulatory control and other States have some fairly detailed regulations, including the regulation of TENORM disposal facilities. In addition, unimportant quantities of source material held by persons exempt from NRC regulations may be treated as TENORM or may be unregulated in some States. Although it is not explicitly stated in the current regulations, it is arguably true that an exempt person can dispose of unimportant quantities of source material without NRC control. (This point will be clarified with this proposed rule change.) The NRC License Termination Rule allows unrestricted release of an entire site for license termination, but the NRC does not have generic regulations for the unrestricted release of low levels of contamination from an operating site or licensee. However, for an NRC licensee with source material, our past practice has been to

treat the material as low-level waste even if the process resulted in concentrations equivalent to unimportant quantities of source material. All of these various standards and practices (or non-practices) address radioactive material with essentially the same level of risk.

I fully support the notion that there should be some consistency on a national basis in the regulatory control of materials with equivalent levels of risk. But until agreement is reached with the other regulators on an acceptable level of consistent regulation for low levels of radioactivity, I am unwilling to unilaterally remove NRC regulatory control where it has been traditionally maintained. However, in the interim, while these negotiations are in progress with the other regulators, I support authorizing alternatives to a low-level waste disposal facility for low concentrations of source material, provided the public health and safety and environment are adequately protected. Once these negotiations are completed, I am willing to consider modifications to our regulations to achieve a consistent national standard for materials with equivalent levels of risk and recognize that this may result in appropriate regulatory controls which may be less strict than current NRC standards for such material.

Therefore, I supported the Commission vote in SECY-99-259 which would allow the transfer of low concentrations of source material from our licensees to exempt persons (non-NRC licensees) under certain circumstances where the public health and safety and the environment are adequately protected. The proposed rule change should acknowledge that this is a change from previous practice and more clearly define the circumstances under which the practice is acceptable. From my perspective, there are a series of steps which must be satisfied before the transfer can be approved. For example, I believe such transfers should be specifically approved by the NRC (or appropriate Agreement State). The transfers should be for disposal at a RCRA Subtitle C facility authorized to receive radioactive materials of the amounts and concentrations under consideration.<sup>3</sup> Before the transfer can occur, the licensee must receive approval of the regulator of the receiving facility. For transfer to an appropriate RCRA Subtitle C facility, I have no problem indicating that the staff can approve the transfer without Commission review if the calculated exposures to a member of the general public are less than or equal to 25 mrem/year. However, the Commission should be informed of such transfers either through an information paper or other informal mechanisms. In addition, the Commission should be consulted by either a negative consent paper or notation vote paper if the results are between 25 and 100 mrem/year. The SOC should clearly indicate that these exposure limits apply to members of the general public. However, if the requested transfer is for unrestricted release to non-NRC licensed personnel for any purpose, including recycle, then the release of solid material criteria, which is currently implemented on a case-by-case basis using specific approved guidelines, will be applied. Also, the draft rulemaking should request comment on how the rule language could be modified to indicate that diluting source material with non-source material solely to reduce disposal costs is still not acceptable. At a minimum, the SOC

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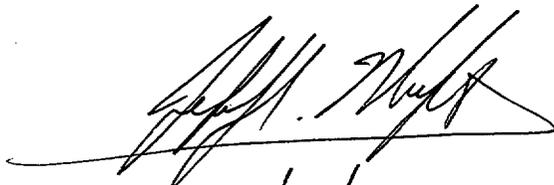
<sup>3</sup>This specific proposed rule change addresses transfer of source material to a non-NRC licensee or exempt person and, in my version, for disposal as an alternative to a low-level waste disposal facility. Another alternative for disposal of the source material is to transfer it to a uranium mill tailings site with sufficient capacity to receive additional material if it is equivalent to the mill tailings. The Commission has already established guidelines for the transfer of other material to a uranium mill tailings site. The transfer of material from one NRC licensee to another NRC licensee (or Agreement State licensee) is already authorized in § 40.51 and this specific provision is not affected by this proposed rule change.

should be modified to more clearly state the intent of the Commission and this revision may require specific changes in the proposed rule language as well. Overall, I view this rulemaking as an interim solution while the larger problems previously discussed are addressed.

Moving to a separate issue in the proposed rulemaking, 10 CFR 40.13(a) could be interpreted as authorizing exempt (non-NRC licensed) personnel to possess, but not necessarily dispose, unimportant quantities of source material. Another interpretation of the regulation is that since the individual is exempt (non-NRC licensed), the NRC has no control over what the individual does with the material. I approve the current proposed rule that would clarify the ambiguity as far as disposal is concerned. However, I fully recognize that this rulemaking does not address the relative risk of the unimportant quantities of source material to the equivalent levels of NORM or TENORM and the appropriate controls that should be placed on all of this equivalent material. This larger activity is the focus of the long-term interagency activity discussed previously in my vote and will possibly be addressed in a future rulemaking.

I agree with the staff recommendations concerning Agreement State compatibility. Section 40.13 should remain compatibility B and the proposed revisions to 40.51(b)(6) should remain compatibility C. For compatibility B regulations, Agreement States are required to adopt identical or essentially identical language to the NRC regulations. Agreement States are required to adopt the essential elements of compatibility C regulations and must be at least as stringent as NRC regulations. I believe the Agreement States should be allowed, if they so choose, to implement more strict requirements or prohibit the transfer of low-concentrations of source material to non-licensees.

Finally, the staff revised all of section 40.51 as part of the government's plain language initiative. However, in 40.51(b) staff will need to change "in his license" to either "in his or her license" or "in the license" to make the wording gender neutral.



2/27/01