NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER MCGAFFIGAN

SUBJECT: **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**

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS:

See attached comments.

SIGNATURE

February 10 2000

DATE

Entered on "AS" Yes X No ____

Commissioner McGaffigan's Comments on SECY-99-259

First, I apologize for my delay in voting. This paper raises a host of issues, but I should have formulated my views more promptly.

Second, I commend the authors of the paper and its attachments for an excellent preliminary discussion of the broad range of issues and options before the Commission and those agencies, State and Federal, who regulate naturally-occurring radioactive material (NORM). This paper will serve as a good starting point for the discussions which the staff recommends having with the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA) and the States.

Interaction with Other Agencies

Let me take the recommendations in order. I certainly approve the staff proposal to initiate interactions with other Federal agencies and the States to delineate Federal and State government responsibilities for regulation of exempt source material. I would strongly recommend that the Department of Energy (DOE) be included in such discussions because of the potential implications for its self-regulated activities. The Army Corps of Engineers (because of its responsibilities for DOE FUSRAP sites), the Department of Interior (because of its involvement in mineral mining), and the Department of Transportation (DOT) (because of its involvement in the regulation of transport of materials) also should be consulted.

As the paper repeatedly points out, many of the options discussed in attachment 2 have profound implications. As the paper also repeatedly points out, source material in "unimportant," currently exempt, quantities, i.e., below 500 parts per million by weight uranium or thorium, is ubiquitous. Indeed, depending on the definition of "ore," much material discussed in this paper is by definition not source material. (The definition of source material in 10 CFR 40.4 does not include ores which contain below 500 parts per million by weight uranium or thorium.) Our definition of source material in Section 40.4 and our exemption for unimportant quantities of source material in Section 40.13(a) are part of a fabric of exemptions in the area of NORM and technologically enhanced NORM (TENORM). The paper points to the DOT definition of radioactive material (2000 picocuries/gram), which we know has been used to define exempt NORM at RCRA sites in various States, and to EPA's consideration of 2000 picocuries/gram as a rough dividing line for defining diffuse NORM in developing its regulatory framework for such materials. The 500 parts per million, by weight, source material limit in Part 40 is by comparison conservative in that it translates to 339 picocuries/gram for natural uranium and 116 picocuries/gram for natural thorium. I would also note that EPA in its proposed December 23, 1994, "Federal Radiation Protection Guidance for Exposure of the General Public" asked for public comment on its Recommendation 3 which would allow temporary exposures to members of the public as high as 5 mSv/yr (500 mrem/yr). Two rationales were offered for this higher limit; one involving family members of medical patients, the other involving individuals

living near radioactive contamination, "almost invariably involving naturally-occurring materials," often from mining or milling operations. So it strikes me that it makes little sense for us to consider tightening the Section 40.13(a) exemption or the Section 40.4 definition with their potentially profound implications (for NRC regulation of much of the mineral extraction industry in this country, phosphate processing, and even coal ash[1]), without understanding how other agencies and the States are dealing with similar material.

The paper points out that in certain exceptional circumstances individuals, for example, an industrial worker handling bulk zircon sands, could receive doses significantly higher than 1 mSv/yr (100 mrem/yr) from exempt source material. Arguably materials such as zircon sands or coal ash already come under the regulatory framework of EPA, OSHA, DOT, and the States. If this potential health and safety issue is to be addressed, it needs to be part of an overall attempt to deal rationally with the risks of NORM and TENORM.

Rulemaking on licensee transfers of large volumes of "unimportant quantities" of source material to exempt persons

It strikes me that this proposed rulemaking is designed to plug one hole in a Swiss cheese regulatory framework. In the Metcoa, Shieldalloy and Lake City cases over the past 14 months the Commission has put in place a framework regarding licensee transfers of unimportant quantities of source material to exempt persons and for permanent disposal. I have no problem capturing that framework in a rulemaking of the sort proposed. However, non-licensees with either exempt source material or material which by definition is not source material (although it contains thorium and uranium) will still not come under that framework. There will still be no NRC approval required for transfers of, or for disposal of, similar material (coal ash, zircon sand, etc.) among non-licensees. I would suggest that the staff use the meetings with other Federal agencies and the States, discussed above, to get a sense of the possible number and type of material transfers for similar material that would remain outside our purview and see if the other potential regulators see merit in our approach. The staff should be free to discuss its proposed rule in these interagency interactions.

As for the details of the proposed rule, I offer the following:

> Regarding transfers of unimportant quantities of source material to exempt persons, in view of the February 2, 1999 Staff Requirements Memo (SRM) issued on SECY-98-204 (Shieldalloy), the statement of considerations (SOC)

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[1]According to "The Need for Nuclear Power" by Richard Rhodes and Denis Beller, Foreign Affairs, January-February 2000, in the early 1950s the Atomic Energy Commission investigated the use of coal ash as source material. This would make sense only if the price of uranium were far higher than today.

accompanying the draft proposed rule should state that the staff would: 1) expect to approve transfers under this provision if the individual radiation dose is not expected to exceed 1 mSv/yr (100 mrem/yr); and 2) inform the Commission in cases where the individual dose is expected to exceed 0.25 mSv/yr (25 mrem/yr). I recognize that it is premature to codify such criteria, but I believe that interested and affected parties should be made aware of NRC's current practice with regard to such transfers.

Regarding transfers of unimportant quantities of source material for permanent disposal, in view of the December 17, 1998 SRM on COMSECY-98-022 (Metcoa) and the April 6, 1999 SRM on COMSECY-99-007 (Lake City Army Ammunition Plant), the SOC for the draft proposed rule should state that the staff would expect to approve transfers for disposal if the proposals meet the guidance contained in the December 17, 1998 SRM. Also, in order to address the complex issues carefully considered by the Commission in the Metcoa case, the staff should identify the pros and cons of revising 10 CFR 40.13(a) to explicitly allow for the transfer of unimportant quantities of source material to exempt persons for the purpose of permanent disposal. This discussion could be included in the staff paper transmitting the proposed draft rule. The staff should also propose draft language to modify 10 CFR 40.13(a) in the paper if the staff determines that rulemaking is indicated. I believe that RCRA facilities should be routinely permitted to receive unimportant quantities of source material if they are already licensed to receive exempt NORM.

Risk-informed and coherent regulations for the licensing of source material

The staff proposes the development of a rulemaking plan for a rule that would (a) establish a simple exempt source material distribution license with limited requirements including annual reporting of material transfers, (b) establish a distribution license for those who distribute to Section 40.22 general licensees along with a requirement for material transfer reports, and (c) consider further restrictions on the general license and/or removal of the exemption from Parts 19 and 22 in Section 40.22(b) as part of resolving the Petition for Rulemaking (PRM-40-27) submitted by the State of Colorado and the Organization of Agreement States (OAS). This rulemaking plan would be coordinated with the Agreement States and submitted in 12 months.

I am uncomfortable with the part of the recommendation that would incorporate resolution of the Colorado/OAS rulemaking petition in this rulemaking. It may make sense, but the staff appears to envision a long, complex rulemaking while the petitioners were seeking prompt action on what they see as an urgent matter. I would prefer to make a decision about incorporating the resolution of PRM-40-27 in this rulemaking only after we have initial Agreement State feedback. If that feedback is to not entangle PRM-40-27 in a complex, comprehensive rulemaking, I would be willing to deal with the narrow issue raised in the petition separately.

Fees

The resources to carry out activities contemplated in this paper (2.5 FTEs per year) are significant for current source material licensees. Yet current specific licensees will derive no benefit from the effort to rationalize the exemptions and the treatment of general licensees in Part 40. We are dealing here with our source material regulatory framework and how it in turn interacts with the regulatory framework for NORM and TENORM of the States and other Federal agencies. I would suggest that the resources to carry out these activities be treated as an overhead cost, like the Commission, carried by all licensees and not be attributed to the source material licensees. To the extent that they are carried as an overhead cost, they should also be placed in that part of our budget, which for fairness and equity reasons we are striving to get off the fee base over the next five years.