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US Department of Transportation (DOT)
Research and Special Programs Administration (RSPA)
67 FR 83:21328-21388 4/30/2002
Docket No. RSPA-99-6283 (HM-230)
Hazardous Materials Regulations;
Compatibility with the Regulations of the International Atomic Energy Agency DOT Dockets
Unit, US DOT Room; PL-401
400 7th Street SW Wash, DC 20590-0001 Fax: 202 366-3650

Comments to US Nuclear Regulatory Commission (NRC) 10 CFR 71
67 FR 21390-21484 4/30/2002
RIN 3150-AG71
Compatibility With IAEA Transportation Safety Standards (TS-R-1) and
Other Transportation Safety Amendments Secretary US NRC ATTN: Rulemaking and
Adjudications Staff Wash, DC 20555-0001 FAX 301-415-1101

Dear Secretaries:

The United States Department of Transportation (DOT) and Nuclear Regulatory Commission (NRC) are proposing to weaken radioactive transport regulations at a time of potentially massive increases in nuclear waste shipments and the threats of deliberate terrorist attacks on shipments and use of radioactive materials for "dirty bombs."

Both agencies have stated that they will not address the issues that have arisen since September 11, 2001 as part of this rulemaking despite the obvious need. NRC is proposing 19 changes and DOT is proposing 10 changes , many of which should be fully evaluated in light of September 11th and heightened security.

Neither DOT nor NRC believes that the enormous expected increase in the number of shipments needs to be considered in making these changes that will inevitably affect those shipments and the thousands of communities through which they will pass in the decades to come. In fact they are satisfied to use twenty year old data to justify "updated" rule changes, some of which reduce public safety. I argue that the real world situation and updated data must be used to estimate the impacts of the rule change. DOT and NRC should use more current data and future projections including the expected increases in actual nuclear shipments.

Rather than address and improve the inadequacy of existing design requirements for irradiated fuel containers in this rulemaking, the US Nuclear Regulatory Commission is carrying out a separate Package Performance Study, but that appears to be delayed, thus unable to instruct this rulemaking. That study and real cask tests should be done

first and the results incorporated into this rulemaking.

I oppose the weakening of existing standards, the failure to strengthen existing deficiencies, and failure to fully evaluate the risks in light of the enormous increases in various types of shipments that can be expected in the near future.

Political Concern:
I also oppose the process that has evolved for the United States' development of new radioactive transportation standards through the United Nations International Atomic Energy Agency. The process is not democratic. The documents are not easily or freely available. The deliberations and negotiations are neither widely noticed nor easily accessible to the general public.

The International Atomic Energy Agency, chartered as a promoter of nuclear industry technology around the world, developed the recommendations without general public knowledge or input. The regulations were transferred to other UN agencies, the International Civil Aviation Organization and International Maritime Organization. IAEA and these Organizations have agreements and routines for accepting IAEA's rules into the UN Recommendations which member nations are obliged to adopt for international regulatory "harmony."

"Harmonization" (international conformity) is a poor excuse for accepting the nuclear power industry's desires to weaken nuclear transport regulations, yet this is the primary justification given in both the NRC and DOT proposed rules for accepting changes that weaken protections.

Technical Concerns:
Old data, lack of data, reliance on ICRP, reliance on computer model scenarios that may not be realistic to project doses, no calculations for more than 350 radionuclides.

Reliance is placed on unchallenged assumptions from the International Commission on Radiological Protection (ICRP) on the risk of each of hundreds of radionuclides.

ICRP does not represent the full spectrum of scientific opinion on radiation and health. Even though its most current risk estimates are used in this rulemaking, they do not take into consideration important information on the health impacts of radiation such as
A) synergism with other contaminants in the environment and
B) the bystander effect, in which cells that are near cells that are hit but are not themselves hit by ionizing radiation exhibit effects of the

exposure. Other organizations are now formed to independently assess various aspects of radiation and health, so ICRP can be questioned and challenged.

The realism of the exposure models used to justify certain exposure scenarios is inadequate.

The stated motive for changing the transportation regulations, including adopting the Radioactivity Exemption Tables is to 1) facilitate nuclear transportation and 2) harmonize international standards. Neither of these objectives should supercede protecting public health and safety nor do they justify reducing existing protections. The technically significant motive for the adopting exemption values is to facilitate radioactive "release" and "recycling" or dispersal of nuclear waste into daily commerce and household items. I oppose this action and the motive.

These comments address some of the proposed changes. Silence should not be interpreted as agreement with the unaddressed issues.

I specifically oppose:

1-Legalizing the exemption of varying amounts of radionuclides from transportation regulatory control (raising allowable exempt concentrations for majority of radionuclides and allowing exempt quantities of radioactive materials in transit, not permitted before)

2- Allowing certificate holders for Dual Purpose Containers (irradiated fuel casks used for both storage and transport) to make design changes without NRC approval or notification.

3-Removing the US requirement that plutonium be shipped in double shelled containers.

4- Allowing greater contamination on surfaces of irradiated fuel and high level radioactive waste containers (NRC says it will not adopt this change and we support NRC in refusing to do so.)

Detailed Concerns with Exempting Radionuclides from Transport Regulations:

I ask DOT to remove DOT Issue #1 and NRC to remove NRC Issue #2, the Radioactivity/Radionuclide Exemption Tables, and accompanying change in the definition of "radioactive materials" (part of Issue #9) from the proposed rules on nuclear transportation regulations (10 CFR 71 and 49 CFR 171 et al).

Due to daily reminders about the danger of radioactive "dirty bombs," the government has been supplying detection equipment to watch for and prevent nuclear materials getting out of regulatory control. Absurdly,

the US DOT and NRC are proposing to EXEMPT some of every radionuclide, including plutoniums, strontiums, cesiums, and hundreds of others, at various amounts and concentrations, from regulatory control. It is already enormously difficult and expensive to detect and find radioactive materials that might be used for dirty bombs. What sense does it make now to intentionally exempt shipments of radioactive wastes and materials from the existing controls, tracking and regulations that have been in place for decades? If the regulations are changed, various levels of radioactive wastes and materials would be considered no longer radioactive and free to be shipped as if uncontaminated.

The Nuclear Regulatory Commission has admitted that the proposed increases in exempt concentrations of radioactive materials will reduce public health and safety.

The Department of Transportation and Nuclear Regulatory Commission should be tightening controls on radioactive materials, not taking steps that will open the door to deliberately dispersing them into unregulated commerce.

If or when NRC and DOT adopt the Radioactivity Exemption Tables and redefine "radioactive materials," they remove a significant barrier to the purposeful release of radioactive materials, from nuclear power and weapons production, into raw materials that can be used to make daily items that come into intimate contact with unsuspecting members of the public.

The public opinion is quite clear that nuclear power and weapons wastes should remain sequestered from the environment and the public for as long as they remain hazardous.

The assumptions and scenarios used to justify the adoption of the Exempt Radioactivity (Radionuclide) Concentration Tables do not prove that exempting radionuclides from regulatory control will have no effect or an insignificant effect. Neither DOT nor NRC (nor the international promoters) have developed and pursued actual transport exposure scenarios for every radionuclide to justify exempt quantities and concentrations, yet they plan to exempt hundreds of them at individually selected levels.

The DOT definition of "radioactive material" changes in the new rules. It is now defined as "any material having a specific activity greater than 70 Bq per gram (.002 microcurie per gram)." The current exempt concentration for all radioactivity is 70 becquerels per gram per square centimeter or 70 radioactive disintegrations (alpha or beta particles or gamma rays) per second/gram. Currently there are no exempt quantities. The new definition of "radioactive material" would change to "any material containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified

in.[the Exemption Tables]." Since the tables enable much more radioactivity to be exempt, more radioactive material can move unregulated in commerce on our roads, rails, and other transport pathways.

DOT and NRC appear not to have carried out calculations for transportation scenarios for over 350 of the radionuclides listed, yet individual exempt concentration and quantity values are assigned each radionuclide. DOT and NRC appear to be assuming, without technical support for transportation scenarios, that exempting radionuclides poses no risk to the public. DOT describes calculations done for 20 of the 382 radionuclides listed which come within a couple of orders of magnitude to the numbers proposed in the European Union (Euratom 96/29) for "recycling" radioactive waste into everyday consumer goods, which lead the department to conclude that all the radioactive "recycling" numbers can be used for transportation exemptions.

For the minority of radionuclides whose exempt values decrease lower than the existing 70 bq/gm, I could accept reducing the amount of material that would be exempt from regulation. However, this does not justify increasing the exempt levels for the majority of radionuclides in the Exempt Concentration Table and accepting the Exempt Consignment Table.

The exempt levels in the new tables don't appear to reflect the longevity in the environment and hazard to living creatures.

The new regulations (TS-R-1) are being adopted to relax protections and let more radioactive waste out into commerce unregulated. I ask that DOT and NRC remove the Exemption Tables and redefinition of "radioactive materials" to help prevent more and more radioactive waste from being deregulated-treated as if not radioactive-and deliberately dispersed into commercial items we come into contact with routinely.

I also ask that NRC reject the proposal to allow plutonium to be shipped in single shelled containers, when double shells have been required for 30 years. Thousands of plutonium shipments are projected to go to the WIPP dump in New Mexico. The original WIPP shipping containers, TRUPACT-I were rejected because they only had single containment. Current and proposed WIPP containers have double containment. Reducing the required containment on plutonium shipments increases public exposure risk and the release risk from containers. The Environmental Evaluation Group at WIPP has documented that double containers are significantly safer than single. I oppose any weakening or indefensible substitutions in cask design requirements.

I ask NRC to reject the provisions that would allow changes to be made

to irradiated fuel casks, dual purpose-storage and transport casks, without notifying or getting permission from NRC. Some groups opposed this provision when it was being adopted for storage casks (into Part 72 of the NRC regulations) and many of us continue to oppose it for the transport aspect of the dual purpose cask regulations. The public has a right to know if design changes are being made and NRC should evaluate those changes.

I oppose the adoption of new transport regulations that reduce the protection to the public from transporting nuclear wastes. Thank you for the opportunity to bring these remarks to your attention.

Mindful of the responsibilities which stand before you, I am,

Yours sincerely,
Robert E. Rutkowski

cc: Andrew H. Card, Jr.

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