



1220 L Street, Northwest
Washington, DC 20005-4070
Phone: 202/682-8116
Fax: 202/682-8426
E-mail: rubinm@api.org

Mark Rubin
Upstream General Manager

37

October 5, 2000

DOCKET NUMBER
PROPOSED RULE PR 71
(65 FR 44360)

'00 00 11 11 21

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555
Attn: Rulemaking and Adjudications Staff

RE: Comments on Issues Paper "Major Revision to 10 CFR Part 71: Compatibility with ST-1—
The IAEA Transportation Safety Standards" - (request for comments published 65 FR 44359 July
17, 2000)

Dear Ladies and Gentlemen:

The American Petroleum Institute (API) appreciates the opportunity to comment on the issues paper concerning proposed revisions to the Nuclear Regulatory Commission Regulations (10 CFR 71) pertaining to the transportation of radioactive materials as discussed in 65 FR 44360. API's more than 500 members are involved in all facets of the petroleum industry including exploration and production, transportation, refining and marketing. Transportation of Naturally Occurring Radioactive Material (NORM) waste occurs as a result of the production of oil and natural gas. While NRC does not directly regulate our NORM, these regulations will be adopted under agreement state rules and will affect us as the agreement states do regulate NORM. As such, API has a direct interest in this proposal.

The American Petroleum Institute filed comments on DOT's Proposed Rule "Hazardous Materials Regulations; Compatibility With the Regulations of the International Atomic Energy Agency" which was an action similar in some aspects to NRC's proposed action. The DOT comments are attached as an appendix to these comments.

Summary of API's DOT Comments

API's comments to DOT included a brief description of current shipping and handling practices of NORM in the oil and natural gas industry and focused on several areas of concern, including the lack of a cost-benefit analysis for these proposed rules. First, the proposed re-definition of radioactive material as it pertains to hazardous shipments was unjustified and provided no public health benefit over the demonstrated safety of the current rule. Second, the proposed rule regarding mixtures of radionuclides must give full effect to the exemption permitted under Section 107(e) and the lower A2 values for some radionuclides were also not justified. Third, the comments addressed several impacts on shipping and how the proposed rules preempt existing state NORM regulations. Finally a disposal site issue was discussed and an overall impact was summarized.

An equal opportunity employer

Template = SECY-067

SECY-02

Shipping and Handling Practices of NORM in the Oil and Natural Gas Industry

The production of oil and natural gas is occasionally accompanied by the deposition of naturally occurring radionuclides (predominantly radium 226 and radium 228 and/or progeny) in scales, sludges, tank bottoms, equipment and other materials. This naturally occurring radioactive material occurs at various concentrations, varying from only slightly in excess of the concentrations found in natural rock formations to levels one hundred to one thousand times these values. A very small portion contains concentrations of these radionuclides of as much as 1000 times the threshold of being termed radioactive under the current definition of radioactive material.

Typical field operations involve moving material about for maintenance, clean up and disposal. NORM will be included in equipment (which is often shipped as Surface Contaminated Objects - SCO and/or as Limited Quantity items if it meets the appropriate criteria) or as drums or other containers of solid wastes such as soil, scales and sludges. These may be shipped as Limited Quantity, LSA-I or as unregulated material. Very rarely material may require shipment as LSA-II.

Petroleum industry shipments of NORM impacted material consist of either contaminated equipment (most frequently steel piping) or soil which has small amounts of NORM mixed with it in the course of routine operations. Much of what is shipped currently falls below the DOT definition of radioactive material and is too low in concentration to meet state definitions of radioactive material as well. Thus it is shipped as ordinary solids and requires no special handling for disposal. Most of the material has concentration and isotopes similar to (or less than) uranium or thorium ores, but without the uranium and thorium-232, and is usually chemically less available than the uranium progeny in ores.

The current Radioactive Material Definition threshold of 2000 picoCuries per gram (all nuclides) has been in effect for many years and has worked well to protect the public health. There has been no finding that this standard fails to adequately protect the public, so there appears to be no benefit from making the threshold more stringent. However, it will certainly have a significant detrimental impact upon our operations.

Comments on Specific Issues in NRC Issues Paper

Issue 1: API Objects to the SI unit only provision

The purpose in supplying data on shipping documents is to communicate information. Most NORM work is done using Rad, REM and Curies - SI Units are often unfamiliar to those in the industry. Keeping the alternative of listing data in the currently used system of units allows meaningful information to be conveyed. While SI Units should be included in international shipments in addition to the conventional units, disallowing the use of the conventional units seems contrary to safety and hinders information exchange. We urge NRC to allow the use of dual unit systems for international shipments and the use of the conventional system for domestic shipments for the foreseeable future.

Issue 2: Radionuclide exemption values

While the adoption of exposure based limits for radionuclides is laudable, for some of the radionuclides we manage, the effect of the change is to greatly reduce the threshold definition of radioactive material. Lowering the basic definition of radioactive material will result in more shipments being classified "RADIOACTIVE". Note the number of shipments will not increase, merely the number that would require a radioactive placard. Simply because of the increase in the number of radioactive shipments, there will inevitably be more accidents involving these shipments, thus requiring an increase in special response personnel to manage any incidents. Because of the fact that the shipments which will be labeled "RADIOACTIVE" are currently being made as non-hazardous shipments, many of these responses will be to minimal hazard materials representing insignificant risks that do not warrant such special response. The change will not improve safety but will instead divert response personnel from other, significant, tasks.

Issue 3: Revisions of A1 and A2

Our greatest concern here is the lowering of the definition of radioactive material. The A1 and A2 values for some of the nuclides of concern to us have gone up and that suggests an overdue relaxing of a too-tight classification. However with the revision of the other rules, it results in a reduction in the lower threshold of RADIOACTIVE material for us by a factor of ~10 for some nuclides (thorium-228 as an example). Most of these classifications were made using conservative assumptions in modeling scenarios, which include considering the radionuclides in their most biologically hazardous chemical and physical form, an instance which would rarely or never occur in transport conditions, especially in our industry.

Issue 12: Special Package Approvals.

Many units in oil field operations are large. Offshore platforms contain large tanks used to hold oil in which NORM may accumulate. Long lengths of tubing and piping, which may also contain NORM are managed and moved. These may require special approvals as they are impossible to package. These shipments should be exempted from transportation requirements outside of the current regulatory requirements and industry practices. Some floating offshore platforms themselves are considered maritime vessels and the application of radioactive material transportation rules for them may be problematic.

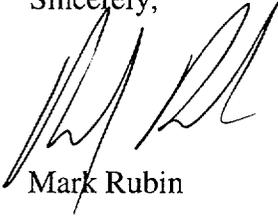
API appreciates NRC's consideration of our specific comments. While there are aspects of the envisioned proposed rules that would be beneficial, there are portions that would be overly burdensome without adding any improvement in public health, and may even do harm. No cost-benefit analysis has been presented that demonstrates the envisioned change in the rules is justified. However, when the proposed rule is formulated, it can be developed to achieve the goals of NRC while improving public health and safety. One solution is to retain the current

U. S. Nuclear Regulatory Commission
October 5, 2000
Page 4 of 4

2000 picoCurie per gram radioactive material definition for shipments within the US and to determine shipping categories based on external gamma flux readings.

If you should require any additional information on API's comments, please contact Jonathan Jordan of API staff at (202) 682-8147. We look forward to working with you on development of these rules.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Rubin', written over a horizontal line.

Mark Rubin

Attachment: API Comments on DOT Proposed Rule

c: Richard Boyle, U.S. Department of Transportation (w/o attachment)