

NOTE TO: Document Control
Room 016

FROM: J. J. Henry, TPSB: ES: SD

Please place the attached document in the PDR using the following file and file points:

PDR File
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Related Documents
(Enter if appropriate)

Proposed Rule (PR) 30, 32, 70, 150
Reg. Guide _____
Draft Reg. Guide _____
Petition (PRM) _____
Effective Rule (RM) _____

ACRS Minutes No. _____
Proposed Rule (PR) _____
Draft Reg. Guide _____
Reg. Guide _____
Petition (PRM) _____
Effective Rule (RM) _____
Federal Register Notice 45 FR 70874
SD Task No. TP 710-1
NUREG Report _____
Contract No. _____

Subject: Questions on Proposed
Exemption of Smelted Alloys
(w/o encl.)

Response to comment (2)

8012160

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

DEC 2 1980

Ms. Linda Atamian
20 Pond Street
Wakefield, Rhode Island 02879

Dear Ms. Atamian:

Subject: Questions on Proposed Exemption of Smelted Alloys

This responds to your letter of November 15, 1980, expressing your deep concern about our proposal to exempt alloys from licensing requirements.

In your first question, you asked what is meant by "...it is hoped to reduce the contamination..." that appears in News Release No. 80-193 of October 27, 1980. The quoted words relate to an early NRC staff decision that any proposed action must cover scrap metal melted or fused into smelted metal. Smelting provides a decontamination procedure for uranium in addition to the procedures for prior decontamination of the scrap and disperses the residual contamination throughout the smelted metal. This eliminates the possibility that exempt persons could receive scrap with loosely adhering, easily separable radioactive material in cracks, crevices, and other recesses.

In more technical language, the specifically licensed person who smelts scrap or initially transfers smelted alloys must be able to certify to any interested person that the smelted alloy initially transferred has been smelted, sampled, and analyzed using procedures sufficient to provide reasonable assurance that the technetium-99 or low-enriched uranium are minor constituents less than 5 parts per million or 17.5 parts per million, respectively, of representative samples of billets, ingots, or other smelted alloy products.

Your second question asked what is meant by "...has estimated that less than one health effect would result from the radiation doses received from recycled uranium enrichment plant scrap." The quoted statement summarizes the end result of a comprehensive, detailed estimation of the relative risks of cancer to the population exposed to radiation from technetium-99 and low-enriched uranium during one year of unrestricted use of smelted alloys. These risks are believed to be representative of those for a multitude of products made of smelted alloy. The estimate is that the risk of causing any cancers at all in the total exposed population is 0.003, i.e., less than one. This means that it is highly unlikely that recycled enrichment plant scrap would cause even one cancer in one person in the total U. S. population. I trust that this discussion has resolved your concern about our attitude towards the health of people.

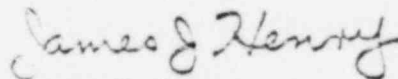
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In response to your request to be kept informed about this regulation, I am enclosing a copy of the proposed rule published in the Federal Register on October 27, 1980, and a copy of the draft environmental impact statement prepared in connection with the proposed rule. These documents contain detailed discussions of my responses set out above.

Radioactive materials appear in many products other than smelted alloys. To help place our proposal in perspective, I am also enclosing a copy of a book on radioactivity in consumer products. You should find the book both useful and interesting.

Sincerely,



James J. Henry
Transportation & Product Standards
Branch
Office of Standards Development

Enclosures:

1. 45 FR 70874
2. NUREG-0518
3. NUREG/CR-0001