



GE Security

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(71 FR 002175)

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March 20, 2006

March 20, 2006 (3:04pm)

Secretary, U.S. Nuclear Regulatory Commission

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Washington, DC 20555-0001

Attention: Rulemakings and Adjudications Staff:

Re: Comments on Proposed Rule, "Exemptions from Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements (RIN 3150-AH41)," 71 Federal Register 275 (January 4, 2006).

Dear Sir or Madam:

GE Security ("GES" or the "Company") is a division of the General Electric Company. GES manufactures ionization chamber ("ion") smoke detectors at its Pittsfield, Maine manufacturing facility. These products are distributed under a license issued by the NRC and a Device Registration Certificate. The Company has reviewed the proposed rule changes to 10 CFR Parts 30, 31, 32, and 150 - "Exemptions from Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements (RIN 3150-AH41)," which were published in the *Federal Register* on January 4, 2006 (71 FR 275), and hereby submits the following comment.

The exemption for Ionization Chamber Smoke Detectors should allow for small variations in the amount of Am-241 in exempt smoke detectors in order to reflect normal variability in the manufacturing process.

The proposed rule would establish a specific exemption from licensing requirements for ionization chamber smoke detectors containing no more than 1 μCi of Am-241 in the form of a foil and designed to protect life and property from fires. See proposed rule §30.15(a)(7) at 71 Fed. Reg. at 284.

The ionization chamber smoke detectors produced by GES are designed to contain 1 μCi of AM-241. Accordingly, GES believes its ionization chamber smoke detectors were intended to be covered by the proposed exemption. However, the process for manufacturing the radioactive foil has a tolerance of 10% in the amount of Am-241 used in each detector. This means that a detector can contain between 0.9 μCi and 1.1 μCi of Am-241. Under a literal reading of the proposed rule, approximately half of the smoke detectors manufactured would not be exempt from NRC licensing requirements. This is clearly an undesirable outcome. Another possible option is to modify the manufacturing process for such smoke detectors. At the least, this would entail significant cost for manufacturers. It is not at all clear, however, that such a modification would be feasible. The Company designed its Ion detectors to use the lowest amount of byproduct material possible. Recently we submitted units for the UL fire room test with a lower amount of byproduct material, but the manufacturing windows established to pass the test were too small to replicate in real-life manufacturing. In other words, practical limitations in the manufacturing process do not allow for the manufacture of smoke detectors that will always contain less than 1.0 μCi of Am-241. GES believes that this issue would also affect ionization smoke detectors manufactured by other companies.

GES does not believe the Commission intended this result. More importantly, GES does not believe this result is justified by the complete lack of potential health, safety, or security risks posed by the incremental amount of byproduct material that may be present under GES' current manufacturing process. The nominal variation of 0.1 $[\mu\text{Ci}]$ does not result in any increase in threat to public health and safety. GES estimates that an extra 0.1 microcuries of Am-241 positioned one meter from an individual, completely exposed *without shielding*, for an *entire year* straight would result in a dose equivalent to flying in an airplane for a half-hour.

For these reasons, GES respectfully requests that the proposed rule be modified to allow for such inherent variability in the manufacturing process. More specifically, GES would like to propose that a statement be added to the rule similar to the recently written exemption in 10 CFR § 30.21, "Radioactive drug: Capsules containing carbon-14 urea for 'in vivo' diagnostic use for humans." As a result of a comment submitted on the proposed rule, the words, "(allowing for nominal variation that may occur during the manufacturing process)" were added into the regulation after the quantity (activity). Such a statement allowing for nominal variation would clearly exempt these detectors as intended, while protecting human health and the environment.

GES is committed to minimizing and managing all environmental, health, and safety risks with the utmost responsibility. We feel confident that we would never suggest an expansion of a safety threshold that we concluded would bring an increased potential for harm to the public or our workforce. It is in our opinion that the suggested changes will help clarify the proposed rule and be all-inclusive to the Ion detector manufacturing sector without compromising human health and safety in any way.

SECY-02

March 20, 2006

Thank you for the opportunity to comment on this subject. If there are any questions, please feel free to contact me.

Sincerely

Steven J. LaMarre
Radiation Safety Officer
GE Security – Pittsfield / ME

From: Carol Gallagher
To: Evangeline Ngbea
Date: Mon, Mar 20, 2006 2:33 PM
Subject: Comment letter on Proposed Rule - Exemptions from Licensing, General Licenses, and Distribution

Attached for docketing is a comment letter from Steven J. LaMarre, GE Security, that I received via the rulemaking website on 3/20/06.

His address is:

Steven J. LaMarre
5 North Main St
Pittsfield ME 04967

Carol

Mail Envelope Properties (441F0364.8A6 : 3 : 886)

Subject: Comment letter on Proposed Rule - Exemptions from Licensing, General Licenses, and Distribution
Creation Date: 3/20/06 2:32PM
From: Carol Gallagher
Created By: CAG@nrc.gov

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