



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555 - 0001**

December 8, 2022

The Honorable Christopher T. Hanson  
Chair  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: RESPONSE TO NRC STAFF LETTER ON ACRS LETTER REPORT, "DRAFT  
SECY WHITE PAPER ON LICENSING AND REGULATING FUSION ENERGY  
SYSTEMS"

Dear Chair Hanson:

During the 701<sup>st</sup> meeting of the Advisory Committee on Reactor Safeguards (ACRS), November 29 – December 2, 2022, we discussed the staff response to our subject letter report on Licensing and Regulation of Fusion Energy Systems. We are encouraged to see the staff thinking about the need for decision criteria in developing a regulatory infrastructure for future fusion energy systems as discussed in our original letter and in the recent Commission meeting on the subject. The decision criteria should be based on the anticipated inventories of radioactive materials (activation products and active tritium) in the fusion energy facility, which are a function of power level and accumulated neutron fluence. Because of the wide range of hazards in anticipated fusion energy systems, establishing an upper hazardous inventory limit when the Title 10 of the *Code of Federal Regulations* (10 CFR) Part 30 framework would need to transition to a utilization framework tailored to the unique hazards of fusion is appropriate. We look forward to engaging with the staff on this subject going forward.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joy Rempe", is positioned above the typed name.

Signed by Rempe, Joy  
on 12/08/22

Joy Rempe  
Chairman ACRS



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Sincerely,

Joy Rempe  
Chairman ACRS

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**Publicly Available (Y/N):** Y

**Sensitive (Y/N):** N

**If Sensitive, which category?**

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