

JANET R. SCHLUETER
Sr. Director, Fuel and Materials Safety

1201 F Street, NW, Suite 1100
Washington, DC 20004
P: 202.739.8098
jrs@nei.org
nei.org



March 26, 2014

Ms. Marissa G. Bailey
Director
Office of Nuclear Materials Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Dermal and Ocular Quantitative Exposure Standard – Current Industry Programs are Adequate and NRC Proposed Approach is Impractical, Unnecessary, and Constitutes an Unanalyzed Backfit

Project Number: 689

Dear Ms. Bailey:

On behalf of the fuel cycle industry, the Nuclear Energy Institute (NEI)¹ has appreciated the recent public interactions with the U.S. Nuclear Regulatory Commission (NRC) staff on October 3, 2013, and March 5, 2014. Specifically, our discussions regarding the feasibility of developing quantitative standards for dermal and ocular chemical exposure events involving workers at NRC-regulated fuel cycle facilities. The industry's goal is the same as NRC's, to fully resolve this matter in the very near future.

It has been six years since this issue was first raised. Since then, we have mutually expended resources to conduct a detailed and thorough review of the regulations, related guidance, NRC's recent research, national standards, industry work practices and in-depth discussions with and research by industrial hygienists. As a result, we believe that NRC must reconsider its position that would require licensees to develop dermal and ocular quantitative exposure standards for workers. We recognize that the staff has been directed by the Commission to issue draft guidance for comment. However, industry believes that our collective attention and resources should be focused on issues that are of higher significance. Such a step would be consistent with the NRC's Principles of Good Regulation and the on-going cumulative effects initiatives.

¹ The Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

We found the staff's October 2013 draft white paper on this topic to be complete in its references and discussion. However, the fact remains that no scientifically-credible dermal and ocular quantitative exposure standard for workers exists or can be established absent extensive primary research including both animal and human studies for each chemical of concern. The NRC staff's research, as well as the industry's supports the following conclusions:

- 1) the facility-specific worker protection programs in place today are adequate to protect workers and meet the intent of the rule;
- 2) there are no existing scientifically-credible standards available to implement; and
- 3) requiring licensees to develop new quantitative dermal and ocular exposure standards is impractical, unnecessary and constitutes an unanalyzed backfit.

The attachment provides additional details and the basis for industry's conclusions and position, and is based on the following fundamental tenets:

- Part 70 does not explicitly require the development of dermal or ocular quantitative exposure limits for workers.
- Rather, the facility-specific Integrated Safety Analyses (ISAs) established quantitative inhalation exposure standards for workers. Dermal and ocular exposures are addressed via strong demonstrated historical licensee chemical safety programs consistent with chemical industry practices. During the fall 2009 NRC public meeting, OSHA indicated that this is their approach and practice as well.
- Through the ISA development process, NRC accepted the industry's position that dermal and ocular exposures for the public were not credible, and thus only inhalation standards were developed for members of the public as well.
- The performance-based approach to demonstrate compliance with the Part 70 performance objectives is consistent with the intent of the original Part 70 rule promulgated in 2000.
- Any further guidance provided by the NRC via letters to NEI (2008-2010) and NUREG-1520, Revisions 0 and 1 (2002; 2011) were developed and issued after the rule went into effect and after the facility-specific ISA methodologies and summaries were submitted to and approved by NRC.

Industry's Recent Research

Both prior to and after the October 3, 2013, public meeting, industry representatives have spent considerable time working with senior facility experts (e.g., industrial hygienists) to determine the feasibility of developing quantitative dermal and ocular standards for workers exposed to all chemicals in a facility's inventory (over 20 chemicals at some sites). More specifically, the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS) categories do not easily translate to the Part 70

event consequence categories since they were developed for a different purpose. Further, all the chemicals mentioned in the staff's white paper were acids. Acids behave differently than many other chemicals used at fuel facilities due to the mechanisms of interaction with body tissues (e.g., acids destroy tissue so dermal absorption modeling is impractical). Finally, while we recognize that a few facilities have a quantitative worker exposure standard in place for hydrofluoric acid; this standard may not be bounding for other chemicals in use today at all fuel facilities.

Related Part 40 Rulemaking

During the proposed Part 40 rulemaking, industry suggested that NRC modify Part 40 and make conforming changes to Part 70 to full resolve the issue of the appropriate exposure standard for workers.² Specifically, the industry suggested that proposed 10 CFR 40.81(b)(4) and (c)(4) be modified to read: "an acute chemical exposure from inhalation" and that conforming changes be made to Part 70.61(b)(4) and (c)(4) to clarify and acknowledge that the appropriate exposure pathway for the worker is inhalation, not the dermal or ocular exposure pathway. Industry continues to support this suggestion if NRC were to opt to resolve this issue through rulemaking.

We trust that we can continue these discussions in the near future and reach a mutually acceptable resolution. If you have any questions, please feel free to contact me or Andrew Mauer (202-739-8018; anm@nei.org).

Sincerely,



Janet R. Schlueter

Attachment

c: Ms. Catherine Haney, NMSS, NRC
Mr. Anthony T. Gody, Jr., R-II/DFFI, NRC
Mr. Geary S. Mizuno, OGC/GCLR/RMR, NRC

² Letter from J. Schlueter, NEI to A. Vietti-Cook dated September 9, 2011, Industry comments on Domestic Licensing of Source Material.