NUCLEAR ENERGY INSTITUTE

Felix M. Killar, Jr.
SENIOR DIRECTOR
FUEL SUPPLY/MATERIAL LICENSEES
NUCLEAR GENERATION DIVISION

September 8, 2008

Mr. Daniel H. Dorman
Director, Division of Fuel Cycle Safety and Safeguards
U.S. Nuclear Regulatory Commission
Mail Stop T3 A5M
Washington, DC 20555

Subject: Chemical Exposures at Fuel Cycle Facilities

Project Number: 689

Dear Mr. Dorman:

The Nuclear Energy Institute (NEI) was recently made aware of a current licensing matter concerning chemical exposures at fuel cycle facilities. Historically, the industry has addressed internal chemical exposure specifically; however, external exposure has been characterized with other upset conditions such as fires, explosions, or acts of nature. NEI understands that the NRC has raised the external chemical exposures as a specific issue which must be addressed. Therefore, we consulted with industry representatives and have provided the following comments and concerns for your consideration. Industry is interested in engaging the NRC in the near term to discuss this matter and develop a mutually acceptable approach to resolving the matter.

One licensee is currently engaged in a license amendment process that has resulted in a "Request for Additional Information" (RAI) from NRC. As part of the RAI process, NRC has requested that the licensee modify its Integrated Safety Analysis (ISA) to include an evaluation of dermal exposure due to liquid hydrofluoric acid and other chemicals that could cause a skin "burn" to a worker. As part of its license amendment, the licensee evaluated hydrofluoric acid liquid releases using inhalation modeling and known consequences standards. This evaluation was included in the ISA, and this ISA methodology has been approved by NRC on more than one occasion.

Further, the revised Part 70 required licensees to submit their ISA methodology to NRC, which defined intermediate and high consequence criteria and specified how Items Relied on for Safety (IROFS) was selected. However, recently, NRC cited 10 CFR 70.61(b)(4) and (c)(4) to now require dermal chemical exposure evaluations in quantitative terms, as well as inhalation exposures, in the absence of any scientifically-based or regulatory-endorsed standard, methodology, requirement, or

1776 I Street, NW | Suite 400 | Washington, DC | 20006-3708 | P: 202.739.8126 | F: 202.533.0157 | fmk@nei.org | www.nei.org

guidance to perform this type of evaluation. In addition, NRC staff has stated that they consider such dermal exposures as potentially "high consequence" events, yet industry is unaware of the basis for this determination. We would be interested in gaining an understanding of the basis for this determination. Also, we are not aware of any NRC definition of, or mutually agreed upon definition of, a serious long lasting health effect which would help establish high consequence event criteria.

Similarly, at another licensed fuel cycle facility, a worker was splashed with a chemical as a fuel assembly was being removed from a cleaning tank. The licensee handled this as an OSHA type of event; however, NRC took issue with this approach.

As a result, industry is concerned that NRC appears to be addressing the issue of chemical dermal exposure at fuel cycle facilities on a licensee-by-licensee basis without regard for the established chemical safety programs and practices regulated by OSHA and without the benefit of industry input, a transparent process, scientific input or existing requirements and guidance. As such, industry is interested in engaging NRC in the near term since NRC's current position on this matter is impacting an ongoing licensing action. If after these discussions with industry NRC determines that guidance development is warranted, industry representatives are willing to participate as members of a working group to develop such guidance. NRC issued guidance would facilitate a consistent, industry-wide acceptable approach to addressing chemical skin exposures at fuel cycle facilities if needed.

We appreciate your timely attention to this matter. If you have any questions or concerns regarding this matter, please feel free to contact me at 202.739.8126; fmk@nei.org.

Sincerely,

Felix M. Killar, Jr.