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From: William Huffman NRR
To: Daniel Barss, Diane Jackson, Falk Kantor, Georg... NRR
Date: Thu, Sep 7, 2000 5:17 PM
Subject: Questions for FEMA related to decommissioning EP rulemaking

Based on comments received by Bob Palla and Tim Collins, I have revised the previous draft questions. Please see the attached for the new and improved revision 1 version of questions for which we would like to have FEMAs views regarding decommissionin EP.

Thanks for your input.....Bill

CC: Glenn Tracy, Richard Dudley, Stuart Richards

Q/270

Mr. Russ Salter
FEMA

SUBJECT: EMERGENCY PLANNING FOR DECOMMISSIONING NUCLEAR POWER PLANTS

Dear Mr. Salter:

On August 30, 2000, you and other members of your staff representing the Federal Emergency Management Agency (FEMA), met with representatives of the Nuclear Regulatory Commission (NRC) to discuss emergency planning (EP) for decommissioning nuclear power plants. During the meeting, we explained that the agency is considering changes to the emergency planning regulations for nuclear power plants that are decommissioning. We have previously provided you with our draft technical study on the accident risk posed by spent fuel stored in the spent fuel pool (SFP) at decommissioning plants and have also provided you with a rulemaking plan that outlines the regulatory changes we are proposing for decommissioning EP.

During the meeting on August 30, 2000, you ask the staff to clarify its basis for EP relief at decommissioning plants and to better articulate what questions the NRC would like FEMA to address related to the EP changes being considered. The technical basis for the proposed regulatory changes to EP are contained in the draft risk study on accident risk at decommissioning SFPs which is expected to be finalized by the end of October 2000. The report concludes that, from a risk perspective, reduction in the level of EP maintained at a decommissioning plant could occur as early as 1 year after shutdown. Although a zirconium fire may still be possible, the frequency of event scenarios leading to fuel uncovery and a subsequent fire is low (<3 E-6 per year) and is dominated by an earthquake of such severity that structures in the surrounding community would likely be significantly damaged.

The staff proposed to maintain full EP for 1 year following final reactor shutdown for decommissioning because it was estimated that at 1 year following final shutdown, there would be approximately 10 hours delay after draining of the SFP before a zirconium fire might begin. The staff judged that the delay time would be sufficient to <u>initiate</u> mitigative or protective actions such that evacuation comparable to that expected with formal offsite emergency planning could be achieved.

In the decision-making process for revising EP at decommissioning plants, the NRC would like to understand FEMA's views on the following assumptions by the staff:

a) The dominant event scenario that could lead to a zirconium fire at a decommissioning plant SFP is a severe earthquake. The staff believes that an earthquake severe enough to drain a SFP would damage the surrounding community infrastructure to a significant extent (for example, electrical power to emergency siren would likely be unavailable, roads and bridges that are designated as evacuations routes may be impassible, and community resources that would normally be dedicated to assisting the plant would be diverted to other life-saving situations). The response to such an earthquake would likely have to be *ad hoc* in nature and result in the mobilization of numerous local, state, and federal resources that would have the capability to work around the impediments caused by the random and unpredictable destruction of an earthquake to the severity

postulated. Given that preplanning would have marginal benefit for severe earthquakes because of collateral offsite damage, the NRC believes that relaxation of the EP requirements for decommissioning nuclear power plants would not substantially change how the surrounding community would respond to such an event. The staff requests FEMAs views on the role and value of radiological emergency plans in such situations and a judgment as to whether elimination of offsite requirements as proposed in the rulemaking plan would substantially and adversely affect the emergency response to an earthquake of this magnitude.

b) What amount of additional time (e.g., such as the 10 hours discussed above) is sufficient in an *ad hoc* response scenario (excluding severe seismic events which are considered separately) to reasonably achieve evacuation effectiveness comparable to that expected when formal (existing) offsite radiological emergency planning is in place.

Your response to these questions will assist the NRC staff in amending its decommissioning EP regulations. Any response you provide will be used as a starting point for the regulatory improvements, it should be recognized that FEMA will be given the opportunity to formally communicate its official position during the rulemaking process when the proposed rule is submitted for public comment.

Sincerely,

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