

August 14, 2003

Mr. Michael Mulligan  
P. O. Box 161  
Hinsdale, NH 03451

Dear Mr. Mulligan:

This letter responds to your e-mail dated July 23, 2003, to Ms. Mindy Landau at the U.S. Nuclear Regulatory Commission (NRC). You asked several questions related to the leaking fuel at the Quad Cities plant. You also inquired about radiation levels due to a stuck-open relief valve recently experienced at Unit 2. As indicated in Ms. Landau's e-mail response dated July 24, 2003 (enclosed), your e-mail was forwarded to my office because your concerns relate to a reactor.

Your first question discussed the amount of fuel damage at the Quad Cities plant and the extent to which the fuel damage issue is addressed in NRC inspection reports. You asked "why this problem isn't completely characterized - and explained in the inspection reports." The licensee found a few leaking fuel bundles at the Quad Cities plant, and as a proactive measure, replaced all fuel bundles from a certain manufacturer and batch with fuel from a different manufacturer during May and June 2003. The licensee plans to examine the replaced fuel, determine the root causes of the problem and decide whether any additional action is needed. The amount of fuel damage was very small. During the time the fuel bundles were leaking, the licensee continued to meet the technical specification limits on reactor coolant activity level and activity level in the effluent releases. Additionally, the NRC did not have a regulatory performance issue or safety concern specific to leaking fuel. Because no regulatory or safety concerns existed and the plant was in compliance with the applicable regulations, the licensee's actions to resolve the leaking fuel were not addressed in detail in our inspection reports. We will review the licensee's root cause report once it is completed to determine if any followup action should be taken.

Regarding your second question on operational changes, when fuel defects are discovered, licensees frequently insert select control rods near the leaking fuel assembly to suppress the neutron flux in the area in order to minimize problems associated with the fuel defect. This was done by the licensee for the Quad Cities fuel defects. We will review the licensee's root cause report to ensure the licensee has taken actions to correct any operational problems that may have led to the fuel damage or may affect plant safety or regulatory performance.

Your third question was whether more contamination problems inside piping systems and throughout the plant (as a result of leaking fuel) will lead to slower and more expensive outages. NRC regulations require licensees to meet the as-low-as-reasonably-achievable (ALARA) standard for radioactive contamination and resulting radiation doses to the workers. Without a regulatory performance issue, the length and cost of the outage are not within the NRC's jurisdiction. However, we are aware of the potential for higher-than-normal radiation doses to the plant workers at Quad Cities due to the existing high radiation levels. We also realize that the leaking fuel, to some degree, may have aggravated the situation. We have

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been and will continue to monitor the licensee's efforts to reduce the radiation and contamination levels and to keep the doses to workers ALARA while conducting work activities.

You also asked if there were any abnormal radioactive problems during the Quad Cities Unit 2 stuck-open main steam relief valve event, and stated that the licensee event report (LER) on this event indicated a radioactive concern near the downcomer. The radiation level observed during this event was within the bounds of the expected level at Quad Cities. Thus, there were no abnormal radioactive problems during this event. We also want to point out that the subject LER 265/03-002, dated June 12, 2003, did not indicate any radioactive concerns.

There was also a statement in your e-mail that could be interpreted to mean that the NRC is trying to keep the leaking fuel issue a secret and may be protecting the industry. To the extent possible within the confines of national security and the proprietary nature of the technology, the NRC tries to communicate openly with the public. Therefore, your question regarding secrecy and protection of the industry will be forwarded to the Office of the Inspector General for further review.

Thank you for informing us of your concerns. If you have any additional questions, please do not hesitate to contact Ms. Maitri Banerjee at 301-415-2277 (e-mail: [mxb@nrc.gov](mailto:mxb@nrc.gov)) of my staff.

Sincerely,

*/RA/*

Richard W. Borchardt, Deputy Director  
Office of Nuclear Reactor Regulation

Enclosure: E-mail from M. Landau  
dated July 24, 2003

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Thank you for informing us of your concerns. If you have any additional questions, please do not hesitate to contact Ms. Maitri Banerjee at 301-415-2277 (e-mail: [mxb@nrc.gov](mailto:mxb@nrc.gov)) of my staff.

Sincerely,

*/RA/*

Richard W. Borchardt, Acting Director  
Office of Nuclear Reactor Regulation

Enclosure: E-mail from M. Landau  
dated July 24, 2003

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