



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

May 11, 2006

Edward McGaffigan Jr.
Commissioner
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**SUBJECT: NRC FINDING FOR GROUNDWATER CONTAMINATION AT
BRAIDWOOD**

Dear Commissioner McGaffigan:

At risk of being added to your “enemies list” or moved up higher on that list, I feel compelled to articulate why I disagree with your well-known and oft-stated perspectives on the significance of the repeated groundwater contamination events at the NRC-licensed Braidwood nuclear plant in Illinois.

It is my understanding that the NRC staff, adhering to the reactor oversight process developed via a public, transparent way, determined that the Braidwood events warranted the issuance of a White finding and that you strongly opposed this action on the grounds that the samples taken to date do not prove any member of the public received a radiation exposure exceeding federal limits. Apparently, you advocate a Green finding for the Braidwood event.

A White finding seems the only reasonable regulatory response to the Braidwood event. I recall vividly sitting in the audience during a Commission briefing during the ROP development when you, Chairman Jackson, and the other Commissioners at the time queried the NRC staff about the application of the proposed Red findings. That discussion helped me finally understand a point that the NRC staff and others had been making in various forums prior to that Commission briefing – namely, that a Red finding did not equate to an unsafe reactor but equated to unacceptable performance by that reactor’s owner. The ROP gauges licensee performance more than it reflects reactor safety levels.

Federal regulations governing releases of liquids to the environment prohibit uncontrolled and unmonitored releases. As applied to liquid releases from Braidwood, those regulations required Braidwood’s owner to analyze pathways such as that through the circulating water blowdown line to the river and apply administrative controls to ensure actual flows via that line remained within the bounds of the safety analysis. When the first leak occurred from a vacuum breaker on the blowdown line, Appendix B to 10 C.F.R. Part 50 required Braidwood’s owner to take corrective actions to prevent recurrence. Nevertheless, additional leaks occurred from vacuum breakers on the blowdown line. Hence, Braidwood’s owner violated, numerous times, the federal regulations embodied in Appendix B.

Furthermore, I am not aware of any analysis or evaluation performed by Braidwood’s owner shortly after any one of the many leaks to determine if the potential migration of the spilled contaminated water offsite would likely be above or below federal limits designed to protect the public.

Consequently, if the repeated leaks of radioactively contaminated water did not result in any member of the public receiving a radiation exposure exceeding federal limits, it is attributable more to luck than to any action undertaken by the Braidwood owner. Had this owner evaluated the first, or second, or even third leak and determined the unplanned, uncontrolled pathway could not result in radioactively contaminated liquids reaching the groundwater and local drinking wells in sufficient concentrations to expose members of the public to radiation exposures exceeding federal limits, reliance on luck would have been reduced. But this owner did not perform any such evaluation until long after the fact. Had this owner taken steps to prevent vacuum breaker leaks after the first, or second, or even third leak, reliance on luck would have been reduced. But this owner failed to perform effective corrective actions until long after the fact.

Assigning a Yellow finding to the Braidwood event would be too severe. Despite horrendously poor performance by the licensee, the event has not resulted in a measurable dose to any member of the public exceeding federal limits. Thus, a Yellow finding is inappropriate.

Assigning a Green finding to the Braidwood event would be too lax. While the event has not resulted in a measurable dose to any member of the public exceeding federal limits, that outcome was in spite of horrendously poor performance by the licensee in allowing repeated opportunities for uncontrolled and unmonitored pathways for radioactively contaminated liquids to get offsite. Thus, a Green finding is inappropriate.

Assigned a White finding to the Braidwood event is what Goldilocks would term, "just right." Poor performance by this licensee resulted in unnecessary elevated risk to members of the public. White findings warrant regulatory response. The NRC has already convened a lessons learned task force – response that is not linked with Green findings. The industry has already promised a fleet-wide program to better manage future leaks of contaminated liquids – response not linked with Green findings. Assigned a White finding to the Braidwood event would be entirely consistent and appropriate with the actions already taken and planned by NRC and industry.

The Braidwood event warrants and should receive a White finding. I think I understand your reservations about assigning a White finding to an event that did not result in a measurable dose to the public exceeding federal limits. But that approach would essentially reduce the ROP to two gradations – Green for events that don't harm people and Red for event that do (perhaps dark Red for events harming lots of people). That's unworkable and we should move away rather than towards that approach.

Sincerely,

A handwritten signature in dark ink, reading "David A. Lochbaum". The signature is written in a cursive, flowing style.

David Lochbaum
Director, Nuclear Safety Project