

# Longstanding Leakage of Contaminated Water Petition

April 5, 2006

The petition, the petition supplement, and today's slides do not show the UCS logo for the simple reason that this is not a UCS project. This truly is a coalition effort by nearly two dozen organizations and individuals.

The uncontrolled and unmonitored leakage of radioactively contaminated water from NRC-licensed facilities is extremely troubling to us. First, it is against federal regulations. But more importantly, it poses a very great threat to public health that warrants immediate action by the federal government. The NRC often talks about how well nuclear facilities are protected against unauthorized entries. It is long overdue to make sure that the nuclear facilities are equally well protected against unauthorized exits.

Our petition seeks to remedy the oversight and mitigate the undue threat to public health. And that threat may be very real. In a March 30, 2006, letter to the Illinois Governor, three doctors report that data for the period from the early to late 1990s show that "the 24 communities within 15 miles of the reactors experienced a rise in the leukemia rate by 43% and in the rate of cancers of the nervous system by 75%" the reactors being Dresden and Braidwood.

## Background

- Who has reported longstanding leaks:
  - Palo Verde (March 2006)
  - Byron (February 2006)
  - Braidwood (December 2005)
  - Haddam Neck (October 2005)
  - Indian Point (September 2005)
  - Dresden (August 2004)
  - Salem (September 2002)
  - BWX Technologies (September 2000)
  - Brookhaven (January 1997)

Two of the leaks were announced since we submitted our petition in late January.

We are aware that the first item on the NRC Lessons Learned Task Force is to review the leak history over the past ten years. We invite the NRC staff to read Appendix A to our petition that provides this history and save who knows how many FTEs.

## Background

- Who has done the homework necessary to determine no other leaks have occurred / are occurring:

**NOBODY!**

The decade of leaks listed on the prior slide are unlikely to be an abridged list for the simple reason that no one is looking for leaks. It would be irresponsible to believe that no other leaks have occurred, are currently occurring, or will not occur in the future.

If every nuclear facility in the United States had looked for leakage and only those reactors listed on the previous slide found any leaks, we would not be here today. But no one had formally looked for leaks and those on the prior slide were largely found by happenstance.

Public health deserves more than not looking for trouble and happenstance discoveries.

## Background

- What will the NRC Lessons Learned Task Force do to determine if other leaks have occurred / are occurring:

**NOTHING!**

We have reviewed the charter for the NRC's Lessons Learned Task Force and are less than impressed. Shuffling paperwork won't fix the levees around New Orleans and shuffling paperwork NRC-style won't protect the public from tritium leaks. Action is needed, not bureaucratic maneuvering.

## Foreground

- What MUST be done to determine if other leaks have occurred / are occurring:

Grant our petition and issue Demands For Information to all applicable licensees seeking answers to the following five questions.

The hazard to the public posed by uncontrolled and unmonitored leaks of radioactively contaminated water warrants substantive steps to identify potential sources of leakage and establish what monitoring is done to detect leakage from those sources into the surrounding grounds.

## Questions Needing Answers

- What are the systems and components that contain radioactively contaminated water?
- What methods are being used to monitor leakage of radioactively contaminated water from the systems and components identified in response to question 1?
- What is the largest leak rate that can remain undetected by the monitoring methods identified in response to question 2?

The sources of the leaks reported to date have been from effluent piping, from underground piping, and from spent fuel pools. These sources are not monitored for leakage as rigorously as systems and components containing reactor cooling water. The imprecise and informal inventory accounting for these sources is a factor in the longstanding nature of the leaks. Another factor is the fact that it's not gold in the water but radioactive trash. By analogy, I will almost certainly detect money missing from my wallet much, much sooner than I will miss garbage missing from my trash cans.

The answers to these three questions define potential sources of contaminated water leakage and the maximum leak rate that can remain undetected over an extended period of time.

The first question on systems and components containing radioactively contaminated water must include temporary systems. It is our understanding that Exelon seeks to deal with the mess it made at Braidwood by storing radioactively contaminated water in a temporary tank farm using plenty of duct tape. The NRC must not permit companies to deal with this problem on the cheap.

## Questions Needing Answers

- What methods are being used to monitor the grounds around the facility for potential leakage of radioactively contaminated water from the systems and components identified in response to question 1?
- What assurance is there against a leak of radioactively contaminated water into the ground around the facility from remaining undetected long enough to permit migration offsite in quantities exceeding federal regulations?

If a leak of contaminated water occurs and remains undetected, the answer to the fourth question establishes the onsite environs monitoring that might detect that leakage.

The final question seeks to ascertain if the integration of monitoring sources of radioactively contaminated water for leakage and monitoring onsite environs for contaminated water ensure that federal regulations will be met. If radioactively contaminated water can leak – even at a small rate – for a long period of time and there is no onsite environs monitoring in place to detect leakage, then it is luck and not skill that protects the public.

## Pandora's Box?

- Federal regulations (if enforced) prevent the uncontrolled and unmonitored release of radioactively contaminated water.
- Numerous longstanding uncontrolled and unmonitored releases demonstrate that NRC is not effectively enforcing its federal regulations.
- NRC must enforce regulations intended to protect the public. If not ...

The experience over the past decade strongly suggest that while federal regulations to protect the public from releases of radioactively contaminated water may be adequate, they are not being adequately enforced.

The American public will be much better served by an NRC putting more effort into enforcing federal regulations than into staffing Lessons Learned Task Forces.

The petitioners wish to emphasis that the regulations and standards are not higher today than in the past. The regulations and standards are exactly the same – no licensee is allowed to have uncontrolled and unmonitored releases of radioactive materials.

We do not advocate rulemaking. Instead we advocate an end to rule-breaking.

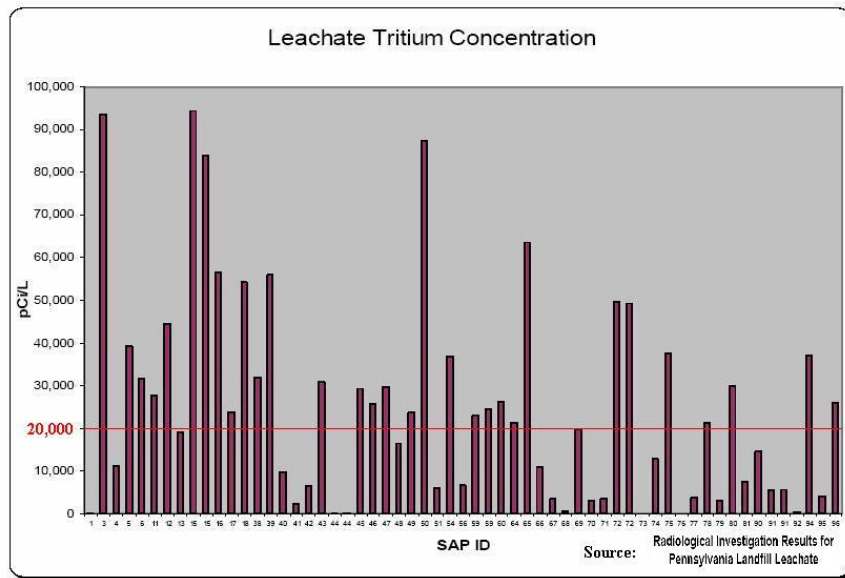
### **§ 20.1302 Compliance with dose limits for individual members of the public.**

(a) The licensee shall make or cause to be made, as appropriate, surveys of radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in § 20.1301.

*10 CFR 50 App A Criterion 64--Monitoring radioactivity releases.* Means shall be provided for monitoring the reactor containment atmosphere, spaces containing components for recirculation of loss-of-coolant accident fluids, effluent discharge paths, and the plant environs for radioactivity that may be released from normal operations, including anticipated operational occurrences, and from postulated accidents.



# Pandora's Box?



On January 17, 2006, the State of Pennsylvania's Department of Environmental Protection pleaded with NRC Chairman Diaz for help. Their survey of leachate from landfills in the state revealed tritium concentrations in 53% being above the EPA limit. The Pennsylvania DEP urged NRC to tighten up controls over disposal of exit signs containing tritium.

That threat to the public was not covered in our petition and we do not seek today to expand our petition to cover this threat.

Instead, we firmly believe that the NRC needs to grant our petition and heed Pennsylvania's warning. Not just because it's the NRC's job, but because it's the right thing to do to protect the American public with a clear and present danger.

We are here today to reaffirm our request for the actions requested in our petition. We do not believe the NRC's tritium posse provides equivalent measures. We want a prompt thumbs up / thumbs down decision on our petition. Putting our petition into NRC limbo land won't help. We need for you to grant our petition and begin steps to remedy this problem or deny our petition so we will have exhausted our agency options and can pursue this matter legally outside the NRC.