Exelon’s History of Radiation Leaks and Hiding it from the Public

Exelon has a history of leaking large amounts of radioactive water and not reporting it to regulatory agencies or the public. Tritium, a radioactive form of the element hydrogen, is produced in nuclear reactors and forms radioactive water. Prolonged exposure to even low doses of tritium is known to cause cancers and birth defects.¹

Three of Exelon’s seven nuclear power plants in Illinois have a history of accidental tritium leaks – referred to as “incidents” by the nuclear power industry. There is irrefutable evidence that Exelon knew there were tritium leak “incidents” well before they reported them to the public.² Exelon’s record of unaccountability to the public in Illinois could indicate the kind of corporate citizen it would be in Victoria, Texas.

The three Exelon plants with known radioactive leaks in Illinois are Braidwood Generating Station, Dresden Generating Station, and Byron Nuclear Generating Station. Here are the facts we know.

**Braidwood**
- Location: 60 miles southwest of Chicago, Illinois
- December 6, 2005 – the Nuclear Regulatory Commission (NRC) was informed that workers had detected tritium in a drinking water well at a home near the plant.
- Further sampling of offsite wells showed tritium levels at 34,000 picocuries per liter; the Environmental Protection Agency (EPA) allows 20,000 picocuries per liter
  - 1996: **250,000 gallons of tritiated water (water containing tritium)** leaked near plant
  - 1998: **3 million gallons leaked**
  - 2000: another **3 million gallons leaked**
  - Dates not known: several leaks occurred, one which migrated offsite into a forest preserve
  - 2006: tritium released from a temporary storage area
  - A total of **22 leaks** have been discovered³⁴
- The **leaks occurred between 1996 and 2000, but were not reported to state officials until November 2005 (9 years after the first leak).** The public was not informed until the following month.
- Residents from the area filed a class action law suit against Exelon over potential health problems and loss in property values.
- March, 16, 2006 – state of Illinois filed a lawsuit against Exelon seeking $36.5 million in fines for both the company’s failure to properly maintain the underground pipeline that leaked and their delay in notifying state officials.⁵

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Dresden
- Location: Grundy County, Illinois
- Tritium leaks occurred in 2004 and 2006, reported to the public only after the Braidwood leaks caused Exelon to start testing.
- October 2004 – pipeline leak of 650,000 gallons of tritiated water was found in three off-site private wells; tests revealed that groundwater tritium levels were over 500 times the federal limit.
- February 12, 2006 – second leak discovered; follow-up tests found tritium levels at 25 times higher than the EPA safe drinking water level.

Byron
- Location: 25 miles south of Rockport, Illinois
- February 2006 – tritium leak discovered
- Tritium levels were more than four times the federal standard in vaults along pipes that transport waste.
- April 12, 2006 – Violation notice issued to the plant, specifically identifying violations of state environmental regulations relating to impairment of resource groundwater. Exelon is also cited for discharging waste-containing contaminants in areas not allowed by its permit, as well as violating other operational and reporting requirements of its water discharge permit.

Tritium’s Health Effects
- Can be ingested in food and water, inhaled, or absorbed through the skin
- Has a half-life of 12.5 days, making it dangerous for 120-248 years
- Is taken up by plants and animals in the environment and increases in concentration as it goes from one organism to another (bioconcentrates)
- Causes tumors and cancer in the lungs and digestive tract
- Shrinks the testicles and ovaries even at quite low doses and causes birth defects, mental retardation, decreased brain weight, loss of reproductive abilities of offspring, and stunted, deformed fetuses
- After entering the body, is found in body fluids, organs and tissues, and is uniformly distributed through all biological fluids within one to two hours.

References:
2 Dardick, Hal. 4/6/07. Suit says Exelon avoided water test: Chemical spilled outside plant. Chicago Tribune.
3 Ibid.
6 Dardick, Hal. 2/16/06. More leaks at nuclear sites: Exelon discloses 2 additional tritium spills. Chicago Tribune.
7 Ibid.
10 Dardick, Hal. 5/1/06. Weller says Exelon’s water offer falls short. Chicago Tribune.
11 Dardick, Hal. 4/7/06. New tritium leak at Exelon: Tainted steam escapes at Braidwood plant. Chicago Tribune.
12 Dardick, Hal. 5/26/06. NRC hits Exelon response to leaks: Federal agency may increase inspections at Braidwood facility. Chicago Tribune.
13 U.S. Senator Dick Durbin (D-Ill.) announced that Braidwood residents have identified a “cancer cluster” and “significant increases in low birth-weight babies” in the area.