Reactor Roulette

VERMONT YANKEE — 62 Cracks

BRATTLEBORO, Vermont — The Vermont Yankee reactor has, at last count, 62 cracks in its steel steam "dryer," a filter that removes moisture from steam inside the reactor vessel. Entergy, the owner, wants to boost power production by 100 megawatts in spite of the cracks and is waiting for NRC approval. The NRC says the reactor is safe to operate and approved a restart after an October 24 refueling outage. Senator James Jeffords, Senator Patrick Leahy and Representative Bernard Sanders, all of Vermont, sent a message to NRC Chairman Nils Diaz asking for a full investigation into the cause of the cracks. Other GE-designed reactors have experienced failures because of cracking in their steam dryers. But the NRC and Entergy claim the cracks have been there since 1972, and don't pose a structural problem.

— *Rutland Herald*, Nov. 11, 2005

ARKANSAS 2 — Dropped Control Rod

RUSSELLVILLE, Arkansas — The Arkansas 2 reactor was operating at full power Sept. 8 when a control rod — used to slow the uranium-based nuclear chain reaction — was accidently dropped during maintenance. Energy output was lowered to 66 percent following the incident to allow for control rod tests. — Reuters, Sept. 9, 2005

CONNECTICUT YANKEE — Leaking

HADDAM, Conn. — The former Connecticut Yankee rector has been leaking radioactive water from its waste fuel cooling pond. Authorities claim that the public is safe since the contamination never, "left the property." However, no one knows when the leak began. Workers digging near the building discovered the contamination. The NRC can only estimate the rate at, "several gallons per day for some time." The leak is under investigation. The cooling pond, formerly full of waste reactor fuel, was cleared of the fuel during its decommissioning, begun in 1996. Completion is expected next year. Soil and concrete in the area are being tested for contamination.

— *The Hartford Courant*, Nov. 3, 2005

The Connecticut Yankee cooling pool has been leaking several gallons per day for an unknown amount of time.

INDIAN POINT — Cooling Pond Leak Initially Kept Secret

BUCHANAN, New York — The two Indian Point reactors, 35 miles north of New York City, are plagued by safety and management problems that now include an uncontrolled radioactive water leak.

Crews digging up the floor of the Indian Point 2 fuel storage building — in advance of a dry cask storage project — discovered radioactive moisture on the outside wall of the irradiated fuel rod cooling pool. The contamination was found along two horizontal cracks on the outside of the 4-to-6 foot thick wall of the pool that is lined with a quarter-inch of stainless steel. The pool cools the extremely hot waste fuel by keeping it submerged.

Area politicians and the state of New York are demanding an investigation of the leak. Westchester County Executive Andrew Spano said he was concerned about the delayed admission (Sept. 20) of the ongoing leak by the NRC, which has known about it since August. "It has left us questioning the effectiveness of the NRC as an industry regulator. How can we continue to assure our citizens that the NRC is closely monitoring the licensee and plant operations?" Spano said.

NRC spokesman Neil Sheehan said notification of public officials was not immediate because of the need to find out "the extent of the leakage and its potential impact."

U.S. Representatives Eliot Engel and Nita Lowey, both Democrats, blasted Entergy, the reactor operator. Engel said the problems never seem to end at Indian Point. "It seems to me that year after year, we find something else that happens that lends credibility to the fact that this power plant may not be safe and it ought to be shut down," he said. Lowey said the leak illustrates once again that "this facility is not safe for the residents of our region." She, too, called for the decommissioning of the plant for the health and safety of all New Yorkers. Eighty-two thousand people live within 10 miles of the reactor complex.

Unable to find the leak, Entergy lowered a camera into the waste pool. Then they hired a commercial diver, Tim Fisher, 39, of Tucson, to actually go into the pool and look at a few cracks. Fisher examined three spots, none of which were said by the company to be leaking.

Project manager Don Leach, admitted there is no guarantee that the leak(s) can be fixed. Much of the pool was inaccessible to Fisher, so another camera will be submerged. Even if a source is found, "it is not clear how they would repair it," the *New York Times* reported.

— *New York Times*, Nov. 26; *Journal News*, Sept. 21 & 30; *Hudson Valley News*, Sept. 20, 21 & 26; & *Newsday*, Sept. 21, 2005

INDIAN POINT, Continued "No Danger to the Public"

Lying and the broadcast of dubious claims, that are refuted by the facts, are standard operating procedure for nuclear utility public relations. The latest breakdowns, leaks and cover-ups at Indian Point near New York City are a perfect case study.

Radioactive water leaking from the cooling pond that stores the fantastically radioactive waste fuel rods at Unit 2 is being "captured" in a plastic sheet and then "channeled into a plastic bottle for disposal." The operators don't know if the pool is leaking one quart or two every day.

Federal officials and the plant's owners say, "there is no danger from the leak[s]" which contains radioactive tritium.

Of course, "No danger to the public" is always the first thing reactor operators say when their pollution makes the news. One observer, Susan Tolchin, a spokeswoman for Westchester County, pointed out that there may be more than one leak.

The reactor owners had the nerve to publicize that the reactor "already legally discharges into the Hudson River every year an amount of tritium 18,000 times greater than what is now leaking." In fact, the owners can't tell exactly how much is now leaking, nor do they know how long the leak has been on going.

Indeed, Entergy, the owners, cannot find the source of the leak(s), even though they've been looking for over two months.

Another couple of doozies: "The offsite dose is essentially zero," said Entergy engineer Don Mayer, referring presumably to human exposure to the tritium. And NRC spokesman Neil Sheehan said in September there was little likelihood that enough water had leaked to make it into nearby water supplies. It is not only that the company and the government don't have enough information to verify their safety assurances, but no mechanism is even in place to detect or measure cooling pond leakage. Mayer and Sheehan dared to make their claims even as the company began drilling wells to try and discern the extent of the contamination.

PALISADES — Hydrogen Leak

SOUTH HAVEN, Mich. — The Wisconsin-based Nuclear Management Company shut down CMS Energy Corporation's 767-megawatt Palisades nuclear power station in Michigan on Sept. 1 due to a main generator hydrogen leak. The reactor was then operating while at 100 percent power. The company said the source of the hydrogen leak was a cracked weld the operator could not fix with the reactor on line. Palisades is located about 60 miles southwest of Grand Rapids, Michigan and is operated by Nuclear Management Company.

— Reuters, Sept. 2, 2005

MIHAMA — Cooling Water Leaking

TOKYO, Japan — A reactor at the Mihama nuclear site, 320 kilometers west of Tokyo, was shut down in September after radioactive water leaked from the cooling system. Shortly before the leak, the reactor had a radioactive steam leak. According to the Russian news agency *Itar-Tass*, the Mihama site suffered similar incidents throughout the year. In August of 2004, five people were killed at Mihama by high-pressure steam leak that blew apart a large pipe.

— *ITAR-TASS*, Sept. 30, 2005

PALO VERDE — Flaw Undetected for 19 Years

PHOENIX, Arizona — The Palo Verde nuclear reactor outside Phoenix, Arizona was shut down in October due to the discovery of a design flaw with the emergency reactor cooling system. The flaw went undetected since 1986 when it began producing power. The emergency cooling system in each of the three units is designed to replace the water that cools the reactors in unusual situations. Engineers at Palo Verde found that the pumps that provide emergency cooling water may not sense that a storage tank is getting low on water and switch to another source. Failure of an emergency cooling system would result in a core meltdown. The three reactor units will be shut down until the problem is solved. Palo Verde is one of the nation's largest nuclear power stations.

— Associated Press, Oct. 14, 2005

PLUM BROOK — Radiation Found in River

TOLEDO, Ohio — On October 18, officials from the U.S. Space Agency, NASA, revealed that soil samples taken from a Lake Erie tributary contain a number of radioactive isotopes. The radioactive cesium-137 and Cobalt-60 are byproducts of NASA's Plum Brook nuclear test reactor, located four miles south of Sandusky, Ohio. The nuclear reactor operated between 1967 and 1973 and is currently being decommissioned. State health officials are not sure if the radioactivity discovered off-site is significant enough to warrant cleanup or warning signs.

— *Waging Peace*, newsletter of the Nuclear Age Peace Foundation, Oct. 2005

BROWNS FERRY — Nuclear Worker Killed

ATHENS, Alabama — On October 1, Richard Haynes of Killen, Alabama, was struck by heavy equipment while working inside the Unit 1 reactor at the Browns Ferry nuclear reactor. Haynes died from his injuries Oct. 6. The reactor has been out of service since 1985 when it was shut down amid safety concerns following the accidental death of another worker. Haynes was part of a team working to bring Unit 1 back on-line. Officials hope to restart the reactor by 2007.

— *Waging Peace*, newsletter of the Nuclear Age Peace Foundation, Oct. 2005

LOUISIANA, TEXAS, FLORIDA — Reactors Affected by Recent Hurricanes

Hurricanes and other severe weather events pose serious risks to nuclear power reactors, as seen by the string of hurricanes this fall — Katrina, hitting the Gulf Coast, Rita in Texas and Wilma passing over Florida. If there is a loss off offsite power, which is needed to power vital safety systems, the reactors must rely on diesel generators for power. If the generators are not functioning, a set of on-site batteries are supposed to power the most essential safety systems for approximately four hours.

With each hurricane, nuclear reactors were monitored closely and some were shut down within hours of the storms' arrival. On Aug. 29, Waterford 3, near Taft, Louisiana, was shut down two hours before Katrina's hurricane-force winds were expected to hit. Offsite power was lost due to instability in the region's electrical grid, and Waterford had to rely on diesel generators for four days to circulate water that cools waste fuel rods, preventing a meltdown.

Despite initial projections that hurricane Rita would directly hit the South Texas Project I and II reactors in Bay City, Texas on September 24, the storm veered northward and no shutdown was ordered.

On Oct. 25 in Florida, three reactors — Turkey Point near Miami and two units at St. Lucie in Ft. Pierce — were shut down prior to hurricane Wilma's arrival. On Oct. 31, after the hurricane caused widespread electrical outages, an "unusual event" was declared at Turkey Point when electrical grid instabilities caused a loss of off-site power. Once again diesel generators were relied upon for power.

The history of emergency diesel generators demonstrates how vulnerable reactors are to the loss of off-site power. As recent as Aug. 5, 2005, all four of a South Carolina nuclear power station's emergency diesel generators were discovered to be inoperable.

— Nuclear Regulatory Commission, Event Notification Reports, Aug. 5, Aug. 29, Oct. 24; Nuclear Information and Resource Service, Sept. 22, 2005

GEORGIA & FLORIDA — Three Fires at Reactor Sites

In the span of one week, there were fires at three separate nuclear reactors. On Oct. 25 at the Turkey Point reactor near Miami, officials reported a small fire on the Unit 3 High Pressure Turbine. The fire was caused by oil soaked insulation and lasted 13 minutes. On Oct. 29, a fire was reported in the main transformer area of the Hatch reactor in Baxley, Georgia. The fire lasted more than 10 minutes and the reactor was forced to shut down. The site chemistry dept. had notified the Coast Guard a few hours later that the site had discharged an unknown quantity of oil into the Altamaha River and was implementing site spill control procedures. On Oct. 31, officials at the St. Lucie reactor in Ft. Pierce, Florida, reported a fire in the Unit I reactor containment building. Eight people had to be hospitalized for smoke inhalation. The fire, caused by slag from metal work contacting a ventilation hose, was extinguished in a matter of minutes.

— NRC Event Notification Reports, Oct. 25, 29 & Nov. 1, 2005