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# NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

THURSDAY, APRIL 7, 2011 7:00 AM EDT

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## NRC NEWS

### **NRC: Some Of Fukushima Reactor Core Probably Leaked.**

According to the New York Times (4/7, A8, Wald, Pollack, Subscription Publication, 950K), the NRC said that some of the core of Fukushima Dai-Ichi's unit 2 reactor "had probably leaked from its steel pressure vessel into the bottom of the containment structure," although the

NRC "underscored that its interpretation was speculative." NRC spokesman "Scott Burnell, said in an e-mail that a flow of core material out of the reactor vessel to the drywell did not necessarily indicate that the vessel had melted." The NRC released its statement after Massachusetts Rep. Edward Markey said "that the commission had told him that the core had melted through the vessel." Tokyo Electric spokeswoman Linda L. Gunter "dismissed the N.R.C. analysis."

Bloomberg News (4/7, Snyder, Efstathiou) reports that NRC deputy director for reactor and preparedness programs Martin Virgilio said "that the commission doesn't think the 'core has breached.'" He added that "he wasn't aware of an agency report, cited by the New York Times, that said water used to keep fuel from overheating at the Japanese plant makes containment vessels more vulnerable to rupture." Reuters (4/7, Rampton, Rascoe) reports that Virgilio said it wasn't clear that the vessel had been penetrated by the reactor. The Wall Street Journal (4/7, Obe, Nishiyama, Subscription Publication, 2.02M) also covers this story.

#### ***Workers Injecting Nitrogen Into Fukushima Reactor.***

The AP (4/7, Yamaguchi) reports that workers at the Fukushima Dai-ichi nuclear plant are injecting nitrogen into one of the reactors "to prevent more hydrogen explosions." When exposed to the water being pumped into the reactors, "superheated or damaged fuel rods can" produce hydrogen. Nitrogen reduces the possibility it will combine with oxygen explosively. "The injection will take six days and could release radioactive vapor into the environment." According to AFP (4/7, Ozawa), the task "underscored the fragility of the situation at the stricken plant."

The Los Angeles Times (4/7, Maugh, 657K) reports, "Engineers began injecting inert nitrogen gas into the containment vessel of reactor No. 1" on Wednesday, and "they will also inject nitrogen into reactors No. 2 and No. 3." Meanwhile, "Wolfgang Weiss, chairman of the United Nations Scientific Committee on the Effects of Atomic Radiation, said the Fukushima disaster was more severe than the incident at Three Mile Island three decades ago, but less of a problem than the 1986 accident at Chernobyl in Ukraine." According to the AP (4/6), Weiss added the caveat that "it's still too early to make a full assessment since the crisis at the Fukushima Dai-ichi plant is still ongoing."

Like most media reports on the progress at the plant, Bloomberg News (4/7, Nakayama, Suzuki, Inajima) reports that an NRC assessment written on March 26 "recommends ways engineers at the site should attempt to keep the reactors cool and minimize the risk of further explosions, such as by injecting nitrogen, an inert gas, into containment vessels." This story is also covered by the Wall Street Journal (4/7, Obe, Nishiyama, Subscription Publication, 2.02M), ABC News (4/7, Karlinsky, Hunter), Reuters (4/7, Negishi, Nishikawa), and WLTX-TV Columbia, SC (4/6, Santaella).

***Cable Television Covers NYTimes Article On NRC Assessment Of Japanese Nuclear Crisis.*** Cable news channels picked up the New York Times article detailing the NRC report on the possible issues and dangers at the Fukushima Dai-ichi plant. Most repeated what the Times covered, although CNN's John King USA also featured a former nuclear power plant operator answering questions about the report.

CNN's American Morning (4/6, 6:01 a.m. EDT, Romans) broadcast, "The US nuclear experts sent to help with the crisis in Japan are now warning of very serious new threats. ... 'The New York Times' got its hands on a report from the Nuclear Regulatory Commission. It warns that the containment structures now filling with radioactive water are under so much stress that they could crack in another aftershock. ... Engineers are also warning that the release of hydrogen and oxygen from the water could lead to new explosions. They're also warning about spent fuel pools." A similar segment aired on CNN's American Morning (4/6, 8:05 a.m. EDT, Chetry).

PBS' Newshour (4/6, 7:17 p.m. EDT) broadcast, "Japanese engineers turned their focus today to preventing new explosions at the destroyed Fukushima Daiichi nuclear plant. They began injecting nitrogen near the reactor to prevent more hydrogen explosions, like the ones that happened after a tsunami hit last month. That came as 'The New York Times' reported the United States Nuclear Regulatory Commission sees a host of new threats at the plant, including explosions and growing stresses on containment structures." A text version of the segment can be found the PBS website.

MSNBC's First Look (4/6, 5:02 a.m. EDT) broadcast, "A new assessment by the Nuclear Regulatory Commission is raising concerns that threats in Japan could, quote, persist indefinitely, that is according to the 'New York Times.' Among the worries, whether pouring water on nuclear fuel in the absence of a functioning cooling system can be sustained."

CNN's John King USA (4/6, 7:27 p.m. EDT, King) broadcast, "An alarming report from the Nuclear Regulatory Commission on Japan's crippled nuclear complex." Former US nuclear power plant operator and engineer Michael Friedlander said, "One of the roles at the NRC is playing in providing this type of analysis is actually – it's very important, because the guys at the plant today, they're basically dealing with the day-to-day, the minute-to-minute crises. And there really needs to be somebody who can sit back and ask the 'what if' questions. ... I think that they were pretty clear in saying that – these indications that they're seeing and some of the hypothesis's that they've put forth they're not actual plant conditions that they think happened. But there are some of the things that the officials at the nuclear plant need to consider in their planning."

Bloomberg News (4/7, Snyder, Efstathiou) also ran a story about the NRC document.

***Local Television.*** KITV-TV Honolulu (4/6, 5:12 p.m. HT) reported that, according to 'The New York Times', "a confidential assessment by the Nuclear Regulatory Commission found fragments of dangerous nuclear fuel were blown a mile from the reactors in the early days of the crises. They were simply bulldozed over as a make shift barrier."

Also covering the story are KFSN-TV Fresno, California (4/6, 6:43 p.m. PT) and KEZI-TV Eugene, Oregon (4/6, 6:38 p.m. PT). Thirty-six other stories were found on broadcasts nationwide.

**Experts Unsure What To Do With Water Used To Cool Daiichi Reactors.** The Los Angeles Times (4/7, Makinen, Vartabedian, 657K) reports the millions of gallons of water sprayed onto the Daiichi plant pose a problem. "The water being used to try to cool the reactors and the dangerous spent fuel rods is leaking through fissures inside the plant, seeping down through tunnels and passageways to the lowest levels, where it is accumulating into a sea of lethal waste." Experts do not know how to safely dispose of the contaminated water. A former NRC member, Victor Gilinsky, said the problems faced in Japan are more dire than waste issues related to the shutdown of the Hanford Nuclear Reservation. NRC spokesman Scott Burnell said that while the US has experience in diluting radioactive water, "though never at a plant that has suffered such damage."

**NRC Emails Said To Show Doubts About Nuclear Plant Safety Plans.** USA Today (4/7, Dorell, 1.83M) reports that emails obtained by the Union of Concerned Scientists through the Freedom of Information Act "revealed doubts within the organization about procedures for US plants in a Fukushima-style event." In the emails "NRC risk analysts questioned an exercise that simulated a catastrophic loss of power at a nuclear plant due to an earthquake, and whether operators should rely on equipment that was not certified to survive an earthquake." One "analyst questioned how NRC could rely on strategies "that have really not been reviewed to ensure that they will work to mitigate severe accidents." Deputy executive director of the NRC's reactor and preparedness programs Martin Virgilio said the questions "will need to be looked at," but "added that the exercise looked at an unlikely scenario — a major earthquake that knocks out power inside and outside the plant."

The Wall Street Journal (4/7, Tracy, Subscription Publication, 2.02M) reports that the State-of-the-Art Reactor Consequence Analyses study looked at Pennsylvania's Peach Bottom plant and a plant in Surry County, Virginia would deal with a prolonged power outage and offline cooling system. Virgilio said that the analysis examined "very unrealistic events."

Reuters (4/7, Malone) reports that the NRC says the Union of Concerned Scientists' analysis of the emails misunderstands the email exchange. NRC spokesman Scott Burnell said that the emails don't challenge the emergency measures at the plants, but rather are the risk analysts saying they were having trouble incorporating the measures into their models. Peach Bottom's reactor is a General Electric Co. design similar to those at Fukushima. This story is also

covered by the Financial Times (4/7, Subscription Publication, 448K), Dow Jones Newswires (4/7), the Lancaster (PA) New Era (4/7, Crable, 40K), and MSNBC (4/7),

**Local Television.** KNSD-TV San Diego (4/6, 6:11 p.m. PT) reported "according to internal emails obtained through the Freedom of Information Act, the Nuclear Regulatory Commission questioned the adequacy of backup plans to keep reactor cooling systems running if power was knocked out." KNSD-TV said that those "concerns differ from what we've been told since the disaster unfolded in Japan" and it "appears US regulators may not be as prepared as they said for nuclear disaster like the one playing out in Japan right now."

**Democrats Criticize NRC On Nuclear Safety.** Bloomberg News (4/7, Snyder, Efstathiou) reports that Democrats said NRC "accident models...raised questions about the Peach Bottom power plant," with Rep. DeGette saying an "analysis showed a two-day loss of power at Peach Bottom would put the plant within an hour of a meltdown." However, California Rep. Brian Bilbray (R) "said living along a coast was more dangerous than being near a nuclear power plant," considering the tsunami deaths, and Pennsylvania Rep. Tim Murphy (R) noted that "Peach Bottom is few hundred feet above sea level and wouldn't suffer water damage from a tsunami, which wiped out power systems at Fukushima, triggering the crisis."

Politico (4/7, Dixon, 25K) reports, "House Democrats hammered" the NRC, "casting skepticism on the Nuclear Regulatory Commission's assurances that plants here are safe despite the disaster unfolding in Japan." Massachusetts Rep. Ed Markey (D) said, "The Nuclear Regulatory Commission insists that our systems are safe, even before beginning, let alone completing, its review of our reactors and spent fuel pools." He also said that current regulations "don't fully account for the risk of earthquakes." Meanwhile, Colorado Rep. Diana DeGette (D) "invoked last year's BP spill to raise questions about assurances from the nuclear industry and its regulators." Committee Republicans defended the industry.

Greenwire (4/7, Voosen) reports that California Rep. Henry Waxman (D) said, "When a simulation purporting to determine the realistic consequences of a severe accident nearly results in a partial meltdown, Congress should be asking tough questions." However, Florida Rep. Cliff Stearns (R), the chair of the energy panel's oversight committee, said, "We should not make unsupported assumptions about risks or response measures or get ahead of the facts." Reuters (4/7, Rampton, Rascoe) also covers this story.

**NRC Advisory Committee Member To Testify Before Congress.** The AP (4/6) reports that University of Wisconsin engineering physics professor Michael Corradini will "testify in front of a congressional committee about

Japan's nuclear crisis." Corradini also holds a place on NRC's advisory board. "He's scheduled to testify before the House Energy and Commerce Committee's oversight and investigations subcommittee on Wednesday morning" and will discuss what lessons can be gleaned from the Japanese disaster.

**NRC Commissioners Split On Giving Yucca Report To Rep. Issa.** Reuters (4/7, Rampton, Rascoe) reports that the NRC commissioners were divided on releasing the incomplete, internal safety review of the proposed Yucca nuclear waste repository to House Oversight Committee chairman Darrell Issa, who is investigating the NRC's role in the project's end. While the report was sent to Issa, NRC Chairman Gregory Jaczko wrote the congressman a letter saying that giving him the report was against the agency's standard practice and criticized the request for the document.

The Las Vegas Review-Journal (4/7, Tetreault, 178K) reports that the incident demonstrates that the NRC is split at its highest levels on Yucca Mountain. According to the paper, all the commissioners but Jaczko voted to turn over the report, and NRC spokesman David McIntyre confirmed the vote.

**Rep. Shimkus Calls For Completing Yucca Mountain.** In an op-ed in the St. Louis Post-Dispatch (4/7, 232K), Illinois Rep. John Shimkus (R), chairman of the House Energy and Commerce Subcommittee on Environment and the Economy, calls for using the Fukushima Daiichi plant disaster "to look at our country's lack of a central storage facility for nuclear waste." The Obama administration "unilaterally halted work on Yucca Mountain," and Shimkus argues that the government should not "throw away the \$14.5 billion already spent on Yucca Mountain." Shimkus concludes, "In order to expand nuclear power, Yucca Mountain must become a reality."

**Former Senator: Dry Storage Safest Option For Nuclear Waste.** In an op-ed in the Reno News & Review (4/7, 26K), former Nevada Sen. Richard Bryan writes, "Nuclear industry spokespeople and some in Congress have been very of late suggesting that the nuclear accident in Japan requires restarting the defunct Yucca Mountain nuclear waste repository program." However, the assertion that it would make people safer "wrong and misleading," as all reactors need to cool spent fuel in a pool prior to being moved. "The answer to minimizing risks posed by cooling pools is simple and straightforward": require it be moved to dry storage. "Unlike a repository—at Yucca Mountain or elsewhere—dry storage can be done immediately, as opposed to waiting decades before a disposal or storage location could be ready." Bryan argues that this hasn't

already been done because leaving the fuel in the pools is cheaper for utilities.

**Group Petitions NRC To Stop Westinghouse Reactor Review.** The Pittsburgh Tribune-Review (4/7, Boren, Olson, 175K) reports that environmentalist group North Carolina Waste Awareness and Reduction Network (NC WARN) "filed a petition that raises safety concerns about Westinghouse Electric Co.'s proposed AP1000 nuclear reactor design and asks the Nuclear Regulatory Commission to halt its review" of the reactor "the wake of the disaster at Japan's earthquake-ravaged Fukushima Daiichi reactor." Jim Warren, NC Warn's executive director, said, "We believe industry pressure has rushed the long-delayed preliminary approval of the AP1000 that was announced in February by the NRC." However, Westinghouse spokesman Vaughn Gilbert said, "Based on conservative computer modeling, [AP1000 is] 200 times safer than Nuclear Regulatory Commission requirements."

In the "Power City" blog of the Charlotte (NC) Business Journal (4/6, Subscription Publication, 14K), John Downey writes, "Westinghouse spokesman Vaughn Gilbert says there is no need for a delay. He says the passive emergency cooling system that is a key part of the AP1000 design operates without backup power."

According to Reuters (4/7, Brumm), NC WARN argues that industry pressure lead the NRC to skip testing part of the reactor's design. The lead structural engineer in the NRC's evaluation of the building that shields the reactor, John Ma filled a dissent against approving the reactor.

The Augusta Chronicle (4/7, Pavey, 64K) reports that two AP1000s would be built at Plant Vogtle. "Southern Nuclear spokeswoman Beth Thomas said the company has no plans to postpone its Vogtle project." Facing South (4/7, Sturgis) also covers this story.

**Westinghouse CEO Touts Reactor's Design.** The Pittsburgh Tribune-Review (4/7, Olson, 175K) reports that Westinghouse Electric Co. CEO Aris Candris said that its AP1000 reactor "could have withstood the earthquake and tsunami that crippled a nuclear plant in Japan, and that disaster might help the company secure contracts to build them." The reactor has a passive cooling system, a design that "differs significantly from General Electric Co.-designed reactors ravaged by Japan's March 11 quake and tsunami."

**NRC Chairman Jaczko Profiled.** Reuters (4/7, Rampton) profiles NRC Chairman Gregory Jaczko. Reuters says that he isn't opposed to the nuclear power industry, and has no personal opinion on it. He testified before Congress, "I would like to see nuclear power that is safe and secure, and that's fundamentally my job as chairman." The GOP is seeking to have the industry advance, and has taken issue

with the NRC's ending the technical review of Yucca Mountain for waste storage. The NRC can expect additional scrutiny in the wake of the Japan accident over concerns that the safety review of the industry will delay licensing and set back financing of new plants.

### **NRC Commissioned Study On Cancer Risks Of Living Near Nuclear Plant.**

Nature News (4/6, Zakaib) reports that last year the NRC asked the National Academy of Sciences to examine the potential cancer risk from living near a nuclear reactor. Terry Brock, the NRC's project manager for the Analysis of Cancer Risk in Populations Near Nuclear Facilities study, said, "There are recurrent concerns among the public about increased cancer risks." While a 1990 study found no problems, the NRC wants to take "advantage of two decades of improvements in data and technology." While NAS is designing a study, "some researchers have questioned the study's feasibility and expressed doubt over whether it will produce meaningful results."

### **Entergy Reiterates Pilgrim Is Safe At Public Hearing.**

The AP (4/7) reports that Entergy Corporation reassured Massachusetts state lawmakers that the Pilgrim Nuclear plant remains safe during a Wednesday public hearing. Company officials acknowledged that Pilgrim's design resembles Fukushima's, but contains "backup systems," such as additional diesel generators, not found in Japan. "The comments came as Gov. Deval Patrick and top legislative leaders sent a letter to the US Nuclear Regulatory Commission urging that it hold off on Pilgrim's relicensing request." Massachusetts Attorney General Martha Coakley and Senate President Therese Murray testified that federal officials must "require the owners of Pilgrim to adopt a dry-cask method of storing spent fuel rod." Entergy officials explained that a \$65 million dry storage facility will be completed by 2013. Anti-nuclear activists protested prior to the meeting. The Quincy (MA) Patriot Ledger (4/7, Stewart, 42K) reports the story, as does the website of WMUR-TV Manchester, New Hampshire (4/6, 6K).

Likewise, "a long-muted antinuclear movement in New England regained its voice today as more than 75 people held a State House rally to protest the region's aging nuclear plants and the increasing stockpile of radioactive spent fuel rods at them," the Boston Globe (4/7, Daley, 244K) observes. The protest occurred before today's public hearing. State Rep. Lori Ehrlich commented, "It's not a time to panic but it's a great time to reconsider nuclear power's risk and our own safety. We need to make sure we can safely coexist with the energy generation on which we depend." WWLP-TV Springfield, Massachusetts (4/6, Lee) and WBUR-FM Boston (4/6) also covered the protests on their websites.

**Local Television.** WWLP-TV Springfield, MA (4/6, 6:02 p.m. ET, 62,028) reported that demonstrators rallied on Beacon Hill yesterday over concerns with the safety of aging New England nuclear facilities. Energy and Environmental groups are concerned that a nuclear disaster, similar to the one that took place in Japan, could also happen in New England due to the fact that the plants in "Plymouth, New Hampshire and Vermont are based on old and risky technology." WWLP-TV also reports that "Nuclear Power Plant Owners from Plymouth, Vermont Yankee and New Hampshire" testified yesterday "before lawmakers...on their safety procedures."

NECN-TV's Broadside With Jim Braude (4/6, 8:14 p.m. ET, 8,605) host Jim Braude said that "virtually every public official I've spoken to about nuclear power plants in New England has told me" that "other than what we do with the nuclear waste, I'm convinced the plants are safe." Braude seemed to question that answer given to him by the officials. Braude also applauded the actions of Massachusetts Attorney General Martha Coakley, who last week asked the NRC in a letter to look at the wet storage of spent fuel at nuclear plants, and Massachusetts Congressman Ed Markey who "filed legislation placing a moratorium on all licensing and re-licensing of plants." Braude concluded by saying "those who do not learn from history – or nuclear disasters – are condemned to repeat them."

### **NRC Performing Special Inspections On Two Illinois Plants.**

The AP (4/7) reports that the NRC is "conducting special inspections of equipment issues at" the Byron and Braidwood generating stations. "A special inspection team will review backup water pumps" as well as "the loss of alarms on control room equipment at the Braidwood plant during maintenance." In February NRC inspectors "raised concerns about whether the pumps would be able to cool the reactors if the normal system wasn't working." While plant operator Exelon Corp. "initially said the pumps would work," it "later concluded they wouldn't."

Reuters (4/7, Rampton) reports that the NRC said the issues at the plants were resolved and weren't an immediate threat to the public. WIFR-TV Rockford, Illinois (4/7) also covers this story.

**Local Television.** KWQC-TV Davenport, Iowa (4/6, 10:11 p.m. CT) reported that the Nuclear Regulatory Commission "says it's conducting special inspections of equipment issues" at the Byron and Braidwood generating stations in Illinois. KWQC-TV adds that a "special inspection team will review backup water pumps" at the stations based off of earlier reports in February that NRC inspectors were concerned "about whether the pumps would be able to cool the reactors if the normal system wasn't working." Exelon, the operators of both stations, said the "pumps would work but

later said they wouldn't." The NRC said that "none of the issue posed an immediate threat to the public and have since been resolved."

Also covering the story are WMAQ-TV Chicago (4/6, 10:10 p.m. CT) and WREX-TV Rockford, Illinois (4/6, 10:06 p.m. CT).

**NRC Holding Public Meeting On Peach Bottom Plant's Inspection Report.** Explore Harford County (4/7, Zumer) reports that the NRC will hold a public meeting on Peach Bottom nuclear power plant's inspection report April 13. Agency spokeswoman Diane Screnci said that the NRC "holds such meetings annually at all its power plants to update the community about safety status." The agency says that "Peach Bottom operated safely during 2010 and had no performance indicators other than 'green,' the safest level, and no inspection findings greater than green."

**NRC Cited Beaver Valley Plant For Submerged Cables.** The Beaver County (PA) Times (4/7, O'Shea, 35K) reports, "The Beaver Valley Nuclear Power Station was cited in a December report from the Nuclear Regulatory Commission for having electrical cables to safety systems the previous year in an environment where they could be submerged in water, which could cause the cables to fail." However, FirstEnergy Corp., which operates the plan, says it addressed the problem, "that the NRC reviewed the situation during the plant's most recent license renewal process and gave its approval."

**Cuomo Lacks Plan For Replacing Indian Point Electricity Once Plant Closes.** Politico (4/7, Dixon, 25K) reports, "For years, Andrew Cuomo has been part of a chorus urging the shutdown of the Indian Point nuclear power plant," and, as governor, he may see it retired. However, "he has yet to spell out a proposal for how the state would cope without Indian Point, which produces about 12 percent of the state's power and provides a quarter of New York City's electricity." The lack of a plan "is frustrating both supporters and opponents of Indian Point. It also leaves him just a brief window in which to propose serious changes to the state's energy portfolio or walk back his many years of opposition to the plant."

**Hudson River Sailing Trip Held to Discuss Indian Point.** Mid-Hudson (NY) News (4/7) reports, "Hudson River Sloop Clearwater, the organization, assembled environmentalists, scientists, public officials and students to take to the Hudson River aboard their famed schooner Clearwater and discuss the Indian Point nuclear power plant and alternative forms of energy production." Clearwater Executive Director Jeff Rumpf says that "the nuclear plant disaster in Japan is what brought the Indian Point safety issue

to the surface." He added, "There are real risks associated with Indian Point. Many of these risks are not even being considered by the NRC."

**NRC: Nuclear Power Output Falls To Lowest Level in Almost 17 Months.** Bloomberg News (4/7, McClelland) reports that the NRC said that "US nuclear-power output fell to the lowest level in almost 17 months," dropping "by 411 megawatts, or 0.5 percent, from yesterday to 75,774 megawatts, or 75 percent of capacity, the smallest amount since Nov. 9, 2009."

**NRC Holds Meeting On Fort Calhoun Plant.** KMTV-TV Omaha, Nebraska (4/6, 12:05 p.m. CT) reported that the Nuclear Regulatory Commission held a meeting in Omaha "to evaluate safety at the Fort Calhoun Nuclear Plant" which was "one of three US nuclear plants that need increased oversight, according to the NRC." KMTV-TV adds that "After a 2009 inspection, the NRC" told the Omaha Public Power District, operators of the Fort Calhoun plant, "to make a number of changes to protect the plant from severe flooding. Since then, OPPD has installed flood gates and increased sandbag protection at the plant."

**NRC Held Meeting On Quad Cities Nuclear Generating Station.** The Clinton (IA) Herald (4/7, Mitchell, 10K) reports that the Quad-Cities Generating Station in Cordova "continued its public relations effort Tuesday night with an open house at the Cordova Civic Center." Randy Gideon, vice president of the generating station, said "they wanted to show people how the plant along the Mississippi River is a safe and well-maintained facility." Additionally, NRC representatives were "on hand to answer questions and inform those within the plant's 10-mile radius what to do should an emergency at the plant occur." The agency "regularly comes to Cordova to hold public meetings." The NRC officials "reiterated their confidence in the plant's safety, and the extreme unlikelihood of a disaster like that of Japan's to hit Cordova."

KWQC-TV Davenport, Iowa (4/6, 12:11 p.m. CT) reported that a public safety meeting was held Tuesday night to discuss the safety of the Quad Cities Nuclear Generating Station in Cordova, Illinois and nuclear safety in general. NRC representatives were there to answer questions that the residents had.

**NRC Discusses Surry Safety Performance At Public Meeting.** On its website WAVY-TV Norfolk (4/7) reports the NRC "held a public meeting Wednesday night to discuss the safety performance of Dominion Virginia Power's Surry nuclear power plant. Officials say the agency found that both units at the Surry plant met all safety objectives in

2010 and was at a level that results in no additional oversight." NRC Region II Administrator Victor McCree said, "The inspections and oversight at Surry ensure that the plant is operated in a way that protects people near the plant as well as the environment." The article goes on to note the concerns about the facility of several local residents. The Newport News Daily Press (4/6) carried a link to this report on its website.

The Hampton Roads Virginian-Pilot (4/7, McNatt) reports, "Both of Virginia's nuclear power plants currently have a safety ranking code of 'green,' meaning they are at the safest of four levels. The most recent inspection at North Anna uncovered some concerns that briefly changed its safety ranking to 'white,' the second level."

**Local Television.** WAVY-TV Norfolk, VA (4/6, 11:00 p.m. ET, 53,713) reported that the Nuclear Regulatory Commission met with people living near the Surry Nuclear Power Plant in Surry County, Virginia in order to reassure them that their facility is safe and that "everything checked out ok." WAVY-TV adds that the NRC also said that "you can never totally prevent a disaster but they're working as hard as possible to try to do so." WAVY-TV also reports that the NRC said that "all nuclear plants have had extra inspections after what happened in Japan" and they have "also created a task force to study Japan and see what can be done differently here in the United States."

Also covering the story are WVBT-TV Norfolk, VA (4/6, 10:05 p.m. ET, 56,038).

**During Speech, Secretary Chu Discusses Nuclear Safety, Budget Cuts.** During his appearance April 1 as a guest speaker at a breakfast hosted by the Christian Science Monitor (4/7, 48K), Energy Secretary Steven Chu said of nuclear energy's future role in the US, "We still believe that that has to be part of our energy mix. ... We do not want to be generating our electricity from one source. ... We want to have a diversified source as the renewables pick up...steam, as the price drops and they become cost [competitive] without subsidy." Regarding the impact of proposed budgetary cuts, Chu said, "I would hope Congress would appreciate the fact that the research-and-development budget is vital for our future prosperity. ... This is a very competitive world out there. ... You turn off the spigot for this research and ideas, you will be saying, 'All right, United States, you are not in the race anymore.' And that would be tragic."

**Analyst Believes Vermont Yankee Will Continue Operation Past March 2012.** The Brattleboro (VT) Reformer (4/7, Audette) reports that investment advising company Jefferies believes "Entergy will continue to operate Vermont Yankee nuclear power plant in

Vermont beyond the March 2012 cut-off date," forcing the state to sue to shutdown the plan. "Entergy has a strong defense it can present in court, stated the report, in claiming that Vermont is attempting to pre-empt federal law and regulation." However, Patrick Parenteau, professor of law and senior counsel at the Environmental and Natural Resources Law Clinic at the Vermont Law School, says Entergy would be in a better position seeking a declaratory ruling from the court prior to the deadline. He added that if the plant keeps running, the state can just disconnect it from the power grid.

**Nuclear Power Opponents Concerned About Vermont Yankee Decommissioning Costs.** WCAX-TV Burlington, Vermont (4/6, Steimle) reports that opponents of nuclear power "led a discussion Tuesday night in Rutland focusing on the post-Yankee era." They "want to make sure Vermont Yankee sets aside enough money to safely dismantle the plant." Citizen's Awareness executive director Deb Katz said, "The funds for decommissioning for all the nuclear reactors are underfunded because the NRC doesn't require them to have fully funded decommissioning and they're underestimated."

**Nuclear Industry Blames Media For Raising Fears.** Reuters (4/7, Carey, O'Grady) reports that at the 2011 World Nuclear Fuel Cycle conference, Richard Myers, vice president for policy development at industry group the Nuclear Energy Institute, said that the media was raising fears about nuclear power using misinformation, but added that the industry must deal with those fears. He also praised the American people and President Obama for their responses to the crisis, comparing Germany's reaction negatively to the US's.

**San Onofre Plant To Hold Emergency Drill.** The San Onofre nuclear power plant in San Diego County, California, "will simulate an emergency next week in one of the largest drills of its kind, involving federal, state and local officials whose responses will be graded by the Federal Emergency Management Agency," the Orange County (CA) Register (4/6, Brennan) reports. The exercise "is one of several regularly scheduled drills held at the plant each year, according to spokesmen for Edison and the California Emergency Management Agency." Cal EMA spokesman Jay Alan said the simulation "is not something being precipitated by events in Japan. ... But obviously, it takes on added interest."

The San Diego Union-Tribune (4/7, Soto, 240K) reports "federal officials will be observing how community leaders react in the face of a potential catastrophe, said John Hamill, a spokesman with the Federal Emergency Management Agency. They will rate how they work and look for places to

improve." FEMA and the NRC "will discuss what they find at a public meeting" in San Juan Capistrano. The AP (4/7) also covers this story. The San Clemente (CA) Times (4/6, Galang, 20K) and the website of KPBS-TV San Diego (4/6, Brown) also report this.

ABS-CBN TV (4/6, Chavez) a channel for Filipino-Americans, reports that many Filipinos live and work near the San Onofre plant. Despite assurances, Jay Fermin worries about safety at the plant. "Fermin, a member of Los Angeles Fire Department's Community Emergency Response Team, attended the disaster preparedness seminar organized by the Philippine Disaster Relief Organization and the L.A. consulate."

**Northeast Begins Nuclear Attack Response Exercise.** An emergency preparedness drill simulating a nuclear terrorist attack began yesterday in New Jersey, New York, and Connecticut, DHS Secretary Janet Napolitano announced, according to the Newark (NJ) Star-Ledger (4/7, Khavkine, 235K). The DHS-led exercise will "evaluate and hone a program that guards against possible future threats of illicit radiological and nuclear weapons and materials, a department release said." Napolitano said the program, called "Securing the Cities," is a "key" part of her department's "efforts to protect the nation from terrorist threats." The "pilot program has helped build a capability among first responders to help detect illicit radiological and nuclear weapons or materials in a major metropolitan area that simply did not exist four years ago," she said.

**Columbia Generating Station Expected To Be Offline Until Late June.** The AP (4/7) reports, "A 78-day refueling outage that began Wednesday at the Columbia Generating Station will keep the Hanford nuclear power plant off line until the end of June." This will be "the largest and longest outage in the 26-year history of the plant" as 244 of 764 fuel assemblies and the condenser will be replaced. "Spring was selected for the outage because the Bonneville Power Administration is getting plenty of electricity from hydroelectric dams this time of year."

**San Luis Obispo County Board Of Supervisors Briefed On Emergency Plans.** The Santa Maria (CA) Times (4/7, Charlton, 16K) reports that San Luis Obispo County "Office of Emergency Services staff briefed the Board of Supervisors Tuesday on the county's emergency planning and management process," including plans for nuclear power plant crises. "A large portion of the Office of Emergency Services' presentation focused on how an emergency at Diablo Canyon Power Plant would be handled." Chairman Adam Hill "acknowledged it would be almost impossible to simulate a mass-scale evacuation in the county but noted

that's what people are most concerned about — getting to safety in the event of a disaster."

The San Luis Obispo Tribune (4/7, Sneed, 34K) reports, "Concerns about how and whether people would be able to evacuate if there were a radiation leak at Diablo Canyon nuclear power plant emerged at" the meeting. "Several members of the public agreed, saying that a radiation leak at Diablo Canyon would most likely be caused by an earthquake, which could damage roads as well."

**Missouri Bill Allowing Utilities To Pass On Nuclear Plant Costs Advances.** The St. Louis Business Journal (4/7, Volkman, Subscription Publication) reports, "The Missouri Senate Commerce, Consumer Protection, Energy and the Environment Committee approved legislation Tuesday that would allow...utilities to pass on to customers the \$45 million cost of a site permit for a new nuclear plant in Callaway County." However, "some consumer advocates and business customers blasted the measure, saying it does not contain enough protections against cost overruns and lacks any guarantee that a plant will be built."

**Activists Say Nuclear Waste Could Travel Through Western North Carolina.** The Asheville (NC) Citizen-Times (4/6, Shea, 37K) reported, "High-level nuclear waste could be transported through Western North Carolina if the Savannah River Site in Aiken, South Carolina "is used to store nuclear waste, experts told a crowd at UNC Asheville on Tuesday."

**NJ Officials: Oyster Creek Has Better Safety Features Than Japanese Plant.** Bergen (NJ) Record (4/6, Rizzo, 161K) reported, "Their blueprints may be similar, but New Jersey's Oyster Creek nuclear power plant can withstand a disaster better than Japan's troubled Fukushima Daiichi plant" because the plant has taken steps to upgrade its safety features, "state officials and energy industry executives told lawmakers Wednesday." The paper said "three Assembly committees jointly heard testimony from the state's top environmental officer, the state director of Homeland Security, and nuclear plant executives from Exelon and PSE&G," who said the nuclear crisis afflicting Japan "is unlikely to strike any of New Jersey's four nuclear plants."

The AP (4/6, Parry) reported, "The US Nuclear Regulatory Commission says nothing it has learned from the Japanese nuclear disaster warrants revoking the license of the nation's oldest nuclear power plant in New Jersey." The NRC submitted "its response Tuesday to a federal appeals court that had asked if the Japanese crisis should lead to a re-thinking of the Oyster Creek Nuclear Generating Station's current 20-year license that was awarded two years ago."

Notably, “the agency says that while it is studying the ongoing crisis in Japan, it remains confident of the safety of US nuclear plants.”

WPIX-TV New York (4/6) quotes the NRC as saying that though the Oyster Creek Nuclear Power Plant “is the oldest nuclear power plant in the country and its reactor is virtually identical those which exploded in Japan, the plant is safe to operate.”

### **More Fallout From Japan Detected In Tennessee.**

The Tennessean (4/7, 129K) reports that the Tennessee Department of Environment and Conservation indicated that “air monitoring in the state has shown slight amounts of a radioactive isotope linked to the nuclear power plant in Japan that was damaged by an earthquake and tsunami.” According to the report, “Routine monitoring detected the substance from air samples taken March 29 from near the Sequoyah and Watts Bar nuclear power plants, as well as a monitor in Dayton, Tenn.” The Tennessean notes that the “amounts of Iodine-131 are extremely low and don’t present a health risk, according to an agency email.”

The Knoxville News Sentinel (4/7, Munger, 96K) also covers the story. TDEC Commissioner Bob Martineau said in a released statement, “We can detect these isotopes at extremely low levels,” adding that “these levels do not indicate a health concern of any kind, and we will continue to monitor.”

The Chattanooga Times Free Press (4/7, Sohn, 78K) adds that “within hours of the announcement, state Health Commissioner Susan R. Cooper issued a news release, saying residents have no need to purchase or take potassium iodide.” Cooper further explained that “the state has a supply of [potassium iodide], but only to be used if there is an emergency or a risk of harm to Tennesseans.” Cooper indicated the present levels of radioactive isotopes presents “neither a cause of concern nor a risk to public or individual health.”

The Murfreesboro (TN) Daily News Journal (4/7) also reports that “Environment and Conservation’s air samples being reported” Wednesday “were collected on March 29 from fixed monitors near the Sequoyah and Watts Bar power plants, as well as a monitor in Dayton, Tenn.” The Journal sad “the results range from 0.044 to 0.089 picoCuries per cubic meter of air.” Still, the “levels are within the range expected and are far below levels of public health concern.”

***New Jersey Official Says Air, Milk Samples Don’t Show Signs Of Elevated Radiation.*** The AP (4/7) reports, “New Jersey’s top environmental official says samples of air and milk show no sign of elevated radiation from the Japan nuclear disaster.” State EPA chief Bob Martin says “rainwater samples show trace amounts of Iodine-131, but not enough to cause any concern.” Martin made the statement while

testifying “at a briefing on nuclear power plant safety and emergency preparedness at the Statehouse on Wednesday.”

New Jersey’s Daily Record (4/6, Method) reported, “DEP spokesman Larry Ragonese said in an interview Wednesday that minute traces of radiation were found in water collected late last week by the Middlesex Water Co. at a sampling site on the Delaware and Raritan Canal. After laboratory analysis, the DEP confirmed that find.” The paper also noted that “Deputy Assembly Speaker John F. McKeon said he was concerned about storage of spent fuel rods at the Oyster Creek nuclear power plant in Lacey,” which he said “had greater amounts than at the Fukushima Daiichi plant in Japan.”

### **Bellefonte Decision Won’t Be Made In April.**

The Scottsboro (AL) Daily Sentinel (4/7, Bonner, 5K) reports, “The Tennessee Valley Authority Board of Directors at its April 14 meeting in Chattanooga will not be asked to make a decision on completing a reactor at the Bellefonte Nuclear Plant near Scottsboro.” In an interview with The Daily Sentinel on Wednesday, TVA President and Chief Executive Officer Tom Kilgore said: “The good news is we’re not stopping on Bellefonte.” He added, “Our engineers are continuing their work at Bellefonte without pause.” Kilgore previously expected to seek formal nod from the TVA Board “to complete the Unit 1 reactor at Bellefonte.” The recommendation, however “is being delayed due to ongoing problems at the Fukushima Dai-ichi plant in Japan.”

### **Paper Assures Nuclear Is Safe, Applauds NRC Decision To Grant Permits.**

In an editorial, Springfield, Massachusetts’ Republican (4/6) applauds NRC’s decision to offer preliminary approval to plants in Georgia. The Republican worries that those with anti-nuclear agendas may prevail during the current crises. According to the Republican, nuclear power is a safe, reliable source of energy that also emits far less pollutants.

## **IN THE BLOGS**

### **Fukushima “Particularly Vulnerable” To Hydrogen Explosions.**

The “Green” blog of the New York Times (4/6, 950K), Matthew Wald writes that there are reasons “that Fukushima is particularly vulnerable” to hydrogen explosions. As seawater is heated, dissolved oxygen is released, so the seawater used for cooling increases the risks. Meanwhile, “hydrogen can also emerge from the zirconium metal used as fuel cladding” if it is in contact with steam. Meanwhile, “gamma radiation from the nuclear fuel in the reactor would continuously produce small

amounts of hydrogen and oxygen by breaking up water molecules.”

## **INTERNATIONAL NUCLEAR NEWS**

**Renewable Energy Agency Head Calls For Reconsidering Nuclear Power.** The AP (4/7) reports that the International Renewable Energy Agency's director-general, Adnan Amin, speaking at the organization's first assembly meeting, said “consumers are beginning to look again at alternative sources of power in the wake of Japan's nuclear crisis,” adding that “all countries need to examine their needs to determine whether nuclear plants should be part of their energy mix.” He also “made clear that the agency's clean-energy mandate does not include promotion of nuclear power.”

**IEA Official: Nuclear Power Should Stay In Energy Mix.** Australia's The National (4/7, Yee) reports that Richard Jones, the deputy executive director of the International Energy Agency, said that “Nuclear technology needs to remain part of the energy mix despite safety concerns following the disaster in Japan.” He added, “If you start betting on any one technology, then something can happen and derail that technology.”

**Iranian Lawmakers Criticize Saudis' Intervention In Bahrain.** The Washington Times (4/7, Birnbaum, 77K) reports, “About 200 members of Iran's parliament on Wednesday condemned Saudi Arabia's military intervention in Bahrain and urged the Persian Gulf kingdom to use its forces against Israel instead.” Iran “has backed the protesters” in Bahrain “since they took to the streets Feb. 14, though the regime's rhetoric has escalated in recent days.”

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# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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## **NRC NEWS**

### **Core Of Stricken Reactor Probably Leaked, U.S. Says (NYT)**

By Matthew L. Wald and Andrew Pollack

New York Times, April 7, 2011

WASHINGTON — The United States Nuclear Regulatory Commission said Wednesday that some of the core of a stricken Japanese reactor had probably leaked from its steel pressure vessel into the bottom of the containment structure, implying that the damage was even worse than previously thought.

The statement came as the Tokyo Electric Power Company, the operator of the Fukushima Daiichi plant, said it had succeeded in starting to inject nitrogen into the reactor containment vessel of unit No. 1 to prevent a possible explosion.

The Nuclear Regulatory Commission's statement regarded unit No. 2, and the agency underscored that its interpretation was speculative and based on high radiation readings that Tokyo Electric had found in the lower part of unit No. 2's primary containment structure, called the drywell. The statement said that the commission "does not believe that the reactor vessel has given way, and we do believe practically all of the core remains in the vessel."

The agency's statement was issued after Representative Edward J. Markey, Democrat of Massachusetts, told a House hearing on Wednesday morning that the commission had told him that the core had melted through the vessel.

He based that on a question his staff had asked the agency. But the agency responded to him by e-mail on Tuesday without directly addressing possible melting, saying only that it speculated that "part of the Unit 2 core may be out of the reactor pressure vessel and may be in the lower space of the drywell." After the hearing, in response to numerous questions, the agency said that "there are possible leakage paths from the reactor vessel into the drywell."

It did not say whether the fuel was molten or solid. If molten fuel has left the reactor's pressure vessel and reached the drywell in substantial quantities, it raises the possibility that the fuel could escape the larger containment structure, leading to a large-scale release of radioactive material.

A training manual developed by the companies that operate this type of reactor and dated 2009 refers to the possibility of "creep rupture," in which molten core material begins seeping through a hole in the vessel and creates a bigger hole as it works;

the document says the molten core material can “ablate” a bigger hole. It can then burn through the steel at the bottom of the drywell and interact with the concrete, producing carbon monoxide and hydrogen, which could react explosively.

Some engineers have theorized that if a core melted down and concentrated at the bottom of the vessel, it could melt through the vessel and then burn through the concrete of the foundation. One element of such an event would probably be a resumption of the nuclear chain reaction, in a molten mass in which no control would be possible because there would be no control rods to slide smoothly between neatly arrayed bundles of fuel.

Other experts say that a resumption of the chain reaction would be difficult or impossible with the type of fuel in use at Fukushima Daiichi.

Neither the commission’s response to Mr. Markey nor its public statement later in the day outlines such a serious turn of events.

A spokesman for the commission, Scott Burnell, said in an e-mail that a flow of core material out of the reactor vessel to the drywell did not necessarily indicate that the vessel had melted. The vessel, he noted, is penetrated by pipes, and a seal around one might have failed.

The agency did not say when the flow might have occurred. In an e-mail to Mr. Markey on Tuesday, the agency gave a figure for radiation levels in the drywell high enough to cause death within minutes. It is not clear if the radiation is a problem in the emergency efforts to keep the nuclear fuel cool, because that does not require workers to be near the area — but an eventual cleanup probably would.

The commission’s statement said that since it believed the reactor vessel had not given way, “Every available method should be used to add fresh water to the Unit 2 reactor vessel and to continue cooling the core.”

Meanwhile, Japan’s nuclear regulatory agency confirmed early Thursday morning that nitrogen injections had started, to reduce the risk of an explosion from hydrogen gas that might be building up in the plant’s No. 1 reactor. Agency officials said the step was being taken as a precaution, not because an explosion was deemed imminent.

“We do not believe there is a lot of hydrogen in the units,” Hidehiko Nishiyama, deputy director general of the regulatory body, the Nuclear and Industrial Safety Agency, told reporters Wednesday night. But he added that scientists did not know for sure.

This is the first injection of nitrogen into any of the reactors. The same approach might be tried later for the No. 2 and No. 3 reactors, but the No. 1 unit was chosen first because the pressures and temperatures there are higher than in the other two.

Hydrogen explosions occurred in some of the reactors in the days after the March 11 earthquake and tsunami that crippled the nuclear plant. The explosions damaged the outer buildings around the reactors. It was thought that the hydrogen was produced when zirconium from disintegrating fuel rods reacted with steam after cooling water was lost.

Mr. Nishiyama said a concern now was that as the reactors gradually cooled, there would be less steam in the containment vessels, leaving room for oxygen to enter, react with the hydrogen and cause explosions. Injecting nitrogen can reduce the amount of hydrogen and oxygen.

The injection of nitrogen was one of the steps recommended by the Nuclear Regulatory Commission in a confidential assessment dated March 26. Mr. Nishiyama said the recommendation “substantiated and reinforced” an idea already being discussed by the Japanese authorities.

Matthew L. Wald reported from Washington, and Andrew Pollack from Tokyo.

## **NRC Thinks Japan Unit Pressure Vessel Damaged, Markey Says (BLOOM)**

By Jim Snyder And Jim Efstathiou Jr.

Bloomberg News, April 7, 2011

The Nuclear Regulatory Commission thinks the reactor in unit 2 of Japan’s disabled power plant got so hot it “probably melted through the reactor pressure vessel,” U.S. Representative Edward Markey said.

Martin Virgilio, the agency’s deputy director for reactor and preparedness programs, told reporters after a House hearing today that the commission doesn’t think the “core has breached,” which would let radiation escape. The commission gets reports several times a day from agency staff in Japan and none mentioned a breach, he said.

The pressure vessel is one line of defense preventing a larger radiation leak from Fukushima Dai-Ichi’s crippled reactors, where workers have sought to reconnect power to provide a steady supply of water.

“After you lose the vessel, then you are down to one final barrier, that’s the containment,” Virgilio told reporters.

Markey, a Massachusetts Democrat, has pressed for new safety regulations in response to the crisis in Japan, triggered by the 9-magnitude earthquake and resulting tsunami on March 11. Virgilio said workers have yet to stabilize the damaged facility.

Giselle Barry, a spokeswoman for Markey, said information on the status of the unit 2 reactor came from correspondence between his staff and the Nuclear Regulatory Commission.

Markey and Virgilio spoke at a House Energy oversight and investigations subcommittee hearing today on the Japan crisis.

Virgilio said he wasn't aware of an agency report, cited by the New York Times, that said water used to keep fuel from overheating at the Japanese plant makes containment vessels more vulnerable to rupture amid aftershocks that have rattled the region since March 11.

The report raises the possibility of explosions inside containment structures from the release of hydrogen and oxygen in the seawater pumped into the reactors, according to the Times. The assessment doesn't speculate on the risk of new explosions or damage from an aftershock, events that may lead to a more serious release of radiation from the nuclear core, the newspaper reported.

The NRC report, dated March 26, offers a "snapshot" of what U.S. experts considered possible conditions inside the station, the agency said today in a statement. It isn't a reflection of the agency's "understanding of the current situation," according to the statement.

The agency offered recommendations to Tokyo Electric Power Co., owner of the crippled plant, which pursued "an alternative set of strategies to control the plants," according to the statement.

Republicans on the committee today said nuclear power plants are safe, as Democrats said accident models developed by the commission raised questions about the Peach Bottom power plant west of Philadelphia.

The analysis showed a two-day loss of power at Peach Bottom would put the plant within an hour of a meltdown, said Representative Diana DeGette, a Colorado Democrat. The model raises "grave questions about our nation's preparedness to address reactor accidents," she said.

Representative Brian Bilbray, a California Republican, said living along a coast was more dangerous than being near a nuclear power plant, given the deaths caused by the tsunami after the 9-magnitude earthquake.

Deaths in Japan exceeded 12,500 as of today with more than 15,000 people missing, according to website of the National Police Agency in Tokyo. None of those deaths have been linked to radiation releases, Bilbray said.

Representative Tim Murphy, a Pennsylvania Republican, said Peach Bottom is few hundred feet above sea level and wouldn't suffer water damage from a tsunami, which wiped out power systems at Fukushima, triggering the crisis.

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To contact the editor responsible for this story: Larry Liebert at [lliebert@bloomberg.net](mailto:lliebert@bloomberg.net)

## **NRC Says Not Clear That Japan Reactor Has Melted Vessel (REU)**

Reuters, April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Japan To Head Off Hydrogen Blast (WSJ)**

**Nuclear-Plant Operators Begin Injecting Nitrogen Into Reactor, as U.S. Assessment Flags Range of Risks**

By Mitsuru Obe And George Nishiyama

Wall Street Journal, April 7, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Preventing Blasts A Focus At Japan Nuclear Plant (AP)**

By Mari Yamaguchi

Associated Press, April 7, 2011

After notching a rare victory by stopping highly radioactive water from flowing into the Pacific, workers at Japan's flooded nuclear power complex turned to their next task early Thursday: injecting nitrogen to prevent more hydrogen explosions.

Nuclear officials said Wednesday there was no immediate threat of explosions like the three that rocked the Fukushima Dai-ichi plant not long after a massive tsunami hit on March 11, but their plans are a reminder of how much work remains to stabilize the complex.

Workers are racing to cool down the plant's reactors, which have been overheating since power was knocked out by the 9.0-magnitude earthquake and tsunami that killed as many as 25,000 people and destroyed hundreds of miles of coastline.

Unable to restore normal cooling systems because water has damaged them and radioactivity has made conditions dangerous, workers have resorted to pumping water into the reactors and letting it gush wherever it can.

Superheated or damaged fuel rods can pull explosive hydrogen from cooling water. If the gas were to combine with oxygen, there could be a blast, but nitrogen reduces that possibility.

Technicians began pumping nitrogen into an area around one of the plant's six reactors in the early hours of Thursday to counteract the hydrogen, said Makoto Watanabe, a spokesman for Japan's Nuclear and Industrial Safety Agency. They want to prevent hydrogen explosions that could spew radiation and damage the reactors.

An internal report from March 26 by the U.S. Nuclear Regulatory Commission warned such explosions could occur.

The nitrogen pumping also has risks, but the nuclear agency approved it as a necessary measure to avoid danger, spokesman Hidehiko Nishiyama said. The injection will take six days and could release radioactive vapor into the environment, but residents within 12 miles (20 kilometers) of the plant have been evacuated.

The government said Wednesday it might consider expanding that zone, though not because of the nitrogen injection. An expansion might not necessarily mean the radiation that has been spewing into the air and water from the plant is getting worse. The effects of radiation are determined by both the strength of the dose and the length of exposure, so the concern is that people farther away might start being affected as the crisis drags on.

"I would imagine residents in areas facing a possibility for long-term exposure are extremely worried," Chief Cabinet Secretary Yukio Edano said. "We are currently consulting with experts so that we can come up with a clear safety standard."

Edano did not say how far the zone might be expanded or how many people might be affected. Tens of thousands have been living in shelters since the tsunami, either because they lost their homes or are in the evacuation zone or both.

Police in hard-hit Fukushima prefecture prepared to launch a full-scale search for bodies in the evacuation zone Thursday. Nearly 250 agents from the Tokyo Metropolitan Police will join local police searching for 4,200 people still missing there.

At the plant, 140 miles (220 kilometers) northeast of Tokyo, workers finally halted the leak of highly contaminated water that raised worry about the safety of seafood caught off the coast.

But even that rare good news came with a caveat. Highly contaminated water pooling around the plant has often made it difficult or impossible for workers to access some areas because of concerns about radiation exposure. Now that the leak has stopped, the pooling could actually get worse because water that had been going into the ocean could back up onto the grounds of the complex.

And the confidential NRC assessment — obtained Wednesday by The Associated Press — noted that plant operator Tokyo Electric Power Co. still faces several challenges. It said that salt from seawater that had been used as a coolant is probably blocking circulation pathways, particularly in reactor 1.

The document — prepared by the U.S. agency's Reactor Safety Team, which is helping the Japanese government and TEPCO — offers new details on the conditions of the damaged cores in the three troubled reactors. For instance, it warned that as engineers pump water into the reactors, their containment structures could fill with water, making them more vulnerable to rupture in an aftershock from the earthquake.

The report is intended for U.S. regulators working with their Japanese counterparts and was first reported by the New York Times. The commission noted Wednesday that it only offers a "snapshot" of the situation at the plant and does not necessarily reflect current understanding.

Damage to containments would cause even more radiation to be released.

When water was still leaking into the ocean, officials said it would quickly dissipate in the vast Pacific, but the mere suggestion that seafood could be at risk stirred worries throughout Japan's fishing industry. Water with lower levels of radioactivity is also being dumped into the sea to make room to store other water with higher levels of contamination on the plant grounds.

In the coastal town of Ofunato, Takeyoshi Chiba, who runs the town's wholesale market, warily watched developments at the plant, about 120 miles (200 kilometers) down the coast.

"There is a chance that the water from Fukushima will come here," he said, explaining that area fishermen still haven't managed to get out to sea again after the tsunami destroyed nearly all of their boats. "If Tokyo decides to ban purchases from here, we're out of business."

This week, the government set its first-ever standard for the amount of radiation allowed in fish after levels in waters near the plant measured several million times the legal limit and elevated levels were found in some fish. The standard is the same as one already in place for vegetables.

Stopping the leak by injecting several chemicals into the area around it seemed to help cut down on radiation. By afternoon, radiation at a point 360 yards (330 meters) off the coast was 280 times the legal limit, down from a high of more than 4,000, although Edano said TEPCO was still watching closely.

## **Japan Using Gas To Avoid Explosion At Nuke Plant (AFP)**

By Harumi Ozawa

AFP, April 7, 2011

TOKYO (AFP) – Workers at Japan's stricken nuclear plant on Thursday pumped nitrogen into a crippled reactor in a bid to prevent a possible explosion and contain the world's worst atomic accident for 25 years.

With the crisis at the Fukushima Daiichi plant approaching the end of its fourth week, operator Tokyo Electric Power said it was concerned a build-up of hydrogen gas at the No. 1 reactor could cause another explosion at the site.

The fresh challenge underscored the fragility of the situation at the stricken plant, after rare progress was seen Wednesday when workers plugged a hole spewing highly radioactive water into the ocean.

TEPCO officials say hydrogen building up in the housing around reactor No. 1 could mix with incoming oxygen, creating an explosion.

Experts say the risk of a detonation could rise as the nuclear fuel rods cool and as the steam inside the containment vessel condenses into water, reducing pressure inside the unit and drawing air in through cracks.

The move came as an assessment by the US Nuclear Regulatory Commission dated March 26 emerged, citing persistent and growing threats at the plant, including the risk of gas build up and explosions.

Workers began pumping in nitrogen, an inert gas abundant in the atmosphere, which they hope will displace the oxygen. The process to inject 6,000 cubic metres (210,000 cubic feet) will take around six days, TEPCO said.

"Workers started injecting nitrogen gas at 1:31 am (1631 GMT Wednesday). Since the pressure level went up, they confirmed that the gas was successfully going into the container," said a spokesman with Japan's nuclear safety agency.

TEPCO said it was also planning to inject nitrogen gas into reactors number 2 and 3 as a protective measure.

In the days after the earthquake and tsunami crippled the plant, large explosions resulted from hydrogen accumulation near the reactors, damaging the outer buildings housing them.

A 20-kilometre (13-mile) exclusion zone around the plant has forced tens of thousands of people to evacuate.

The plant has emitted radioactive material into the air, contaminating drinking water and farm produce, with radioactive iodine above legal limits detected in vegetables, dairy products and mushrooms.

Nuclear concerns continue to distract from the March 11 disaster that has left more than 12,000 dead and over 15,000 missing.

Markets reacted positively to the latest efforts to stabilise the plant.

TEPCO shares gained 1.18 percent to 341 by noon Thursday, having hit all-time closing lows this week amid concerns it faces a huge compensation bill with the situation at its stricken nuclear plant still unresolved.

Shares in Japan's biggest utility have lost around 84 percent of their pre-earthquake March 10 closing value. Prime Minister Naoto Kan last week moved to dismiss speculation the firm may be nationalised.

On Wednesday, the government promised compensation for the fishing industry, a day after increasing unease about the contamination led it to impose a legal limit for radioactive iodine in seafood for the first time.

Levels of radioactive iodine-131 and caesium in seawater immediately outside the plant have spiked, stoking fears over marine life in a country whose diet depends heavily on seafood.

TEPCO has also continued a separate operation to release 11,500 tonnes of lower-level radioactive water into the sea to free up urgently needed storage space for water so toxic that it is hampering crucial repair work.

The water dumping has angered the fishing industry and on Wednesday Ikuhiro Hattori, the head of Japan Fisheries Cooperatives, visited the company's headquarters to protest.

The triple crisis has slashed the number of foreigners travelling to Japan's two main airports by two-thirds to a daily average of just over 5,000.

The wider economic impact from the quake, tsunami and nuclear emergency is likely to drive the country into recession in the coming months, many economists now say.

## **Engineers Try To Lower Danger Level At Crippled Japanese Nuclear Plant (LAT)**

**With a leak of radioactive water plugged at Japan's Fukushima nuclear plant, nitrogen gas is pumped into one of the reactors to reduce the risk of another hydrogen explosion. But a U.S. report suggests new problems may lie ahead.**

By Thomas H. Maugh II

Los Angeles Times, April 7, 2011

Engineers began injecting nitrogen into one of the reactors at the troubled Fukushima Daiichi nuclear power plant Wednesday evening as radiation levels in seawater near the plant dropped and a new report from the U.S. Nuclear Regulatory Commission suggested that the plant may face even more troubles in the future.

Officials from the United Nations, meanwhile, said that even though the situation in Japan is more serious than the U.S. faced after the Three Mile Island accident in Pennsylvania in 1979, the group does not expect severe health consequences.

Engineers began injecting inert nitrogen gas into the containment vessel of reactor No. 1 at the facility Wednesday evening in an effort to purge hydrogen and oxygen that might have accumulated from the breakdown of seawater in the reactor. Hydrogen is formed when the zirconium cladding on the fuel rods heats up and touches water, causing oxidation that releases the gas from the water.

Accumulations of hydrogen gas led to explosions in three of the reactors in the first four days after the magnitude 9 Tohoku earthquake nearly a month ago. Officials said they did not believe another explosion was imminent, but they did not want to take any chances.

They will also inject nitrogen into reactors No. 2 and No. 3.

Radiation levels in seawater near the plant, owned by Tokyo Electric Power Co., dropped dramatically even before engineers plugged a water leak at the facility on Wednesday, and authorities expect levels to continue falling now that the flow of contaminated water has diminished.

Levels of radioactive iodine had reached 7.5 million times permissible levels directly behind the plant Saturday, but by Tuesday new measurements showed that the amount of radioiodine was only 4% of that amount. That was still nearly 300,000 times the permissible limit, but levels were continuing to decline as the outflow from the plant was being diluted by the ocean.

At a point about 12.5 miles from the plant, iodine levels were down to 1.5 times the limit.

Much of the contaminated water had been entering the ocean from a leak in the tunnels under reactor No. 2. After several failed attempts to halt the leak, engineers finally succeeded Wednesday afternoon by pumping in a silicon-based polymer sometimes referred to as liquid glass. They planned to then pour concrete on top of the polymer to further seal the leak.

Engineers have also been pumping about 11,500 tons of slightly contaminated water out of holding tanks and into the ocean to make room for more highly radioactive water. But the radiation level of the water flowing into the ocean is not high enough to cause severe problems, experts said.

However, a new report from the U.S. Nuclear Regulatory Commission leaked to the New York Times suggests that the continued pumping of water into the plant may be putting a strain on the Fukushima facility that will leave it more susceptible to future earthquakes.

The report from engineers who have visited the site suggests that filling the reactor containment vessels with water that they were not designed to hold may place undue stress on the concrete vessels, leaving them susceptible to breakage if another quake strikes the facility.

The report also suggests that a fourth explosion at the site in the early days after the quake may have occurred in the spent fuel pool at reactor No. 4 and may have scattered some pieces of uranium pellets around the site between the buildings. Workers may have bulldozed dirt over the radioactive pieces in an attempt to contain the radiation, the report said.

In Vienna, Wolfgang Weiss, chairman of the United Nations Scientific Committee on the Effects of Atomic Radiation, said the Fukushima disaster was more severe than the incident at Three Mile Island three decades ago, but less of a problem than the 1986 accident at Chernobyl in Ukraine. "It is in between, in terms of environmental effects, not in terms of health impact," he said.

Asked about its health impact, he said: "From what I have seen now, from the information I have now, I would not expect anything ... serious" except for the effects on workers at the plant.

## **UN Expert: Fukushima Not As Bad As Chernobyl (AP)**

Associated Press, April 7, 2011

VIENNA – A senior U.N. radiation expert ranks the Japanese nuclear accident "in between" those that occurred at Chernobyl and Three Mile Island.

Wolfgang Weiss, chairman of the U.N. Scientific Committee on the Effects of Atomic Radiation, says it's still too early to make a full assessment since the crisis at the Fukushima Dai-ichi plant is still ongoing.

He said Wednesday that radioactivity from the 1979 Three Mile Island incident was largely contained but traces of fallout from Fukushima detected around the world are "much, much, much lower" than traces seen at similar distances after Chernobyl in 1986.

The Fukushima plant was hit by a tsunami triggered by a massive earthquake on March 11.

## Japan Nuclear Workers Start Pumping Nitrogen Into Damaged Plant (BLOOM)

By Michio Nakayama, Ichiro Suzuki And Tsuyoshi Inajima

Bloomberg News, April 7, 2011

Workers at Japan's damaged Fukushima Dai-Ichi nuclear plant are pumping nitrogen into a reactor to prevent another explosion, as the U.S. atomic watchdog said a pressure vessel may have been breached.

Tokyo Electric Power Co., the operator of the station, started pumping nitrogen gas into No. 1 reactor container vessel at about 1:30 a.m. today, spokesman Yoshinori Mori said. The process will continue for about six days, he said.

Tepco, as the company is called, is trying to prevent another hydrogen explosion at the plant after the March 11 earthquake and tsunami triggered three blasts, damaging reactor buildings and releasing radiation into the air. The company has been pouring water on the buildings to cool the reactors and spent fuel after the failure of backup generators and cooling systems created the worst nuclear crisis since Chernobyl.

Tepco also plans to feed gas into the Nos. 2 and 3 units to purge hydrogen and oxygen, to prevent explosions that would hamper attempts to cool the reactors.

"It's a bit like locking the stable door after the horse has bolted, but it's a sensible thing to do," said Tony Roulstone, an atomic engineer who directs the University of Cambridge's masters program in nuclear energy. Tepco needs to ensure there is no oxygen left in the reactor, which is "not a simple thing," he said.

There's no immediate danger of a hydrogen explosion, Hidehiko Nishiyama, an official at the Nuclear and Industrial Safety Agency, said yesterday.

The national toll of the number of dead and missing following the earthquake and tsunami was at 27,631 at 8 p.m. local time yesterday, according to the National Police Agency.

A pressure vessel at the station north of Tokyo may have been breached, the U.S. atomic watchdog said, leaving a final barrier to prevent more radiation leaks.

The Nuclear Regulatory Commission thinks the reactor in unit 2 of Japan's Fukushima Dai-Ichi nuclear plant got so hot it "probably melted through the reactor pressure vessel," U.S. Representative Edward Markey said yesterday.

Martin Virgilio, the U.S. agency's deputy director for reactor and preparedness programs, told reporters after a House hearing that the commission doesn't think the "core has breached," which would let radiation escape. The commission gets reports several times a day from agency staff in Japan and none mentioned a breach, he said.

The pressure vessel is one line of defense preventing a larger radiation leak from Fukushima Dai-Ichi's crippled reactors, where workers have sought to reconnect power to provide a steady supply of water.

"After you lose the vessel, then you are down to one final barrier, that's the containment," Virgilio told reporters.

Virgilio said he wasn't aware of an agency report, cited by the New York Times, that said water used to keep fuel from overheating at the Japanese plant makes containment vessels more vulnerable to rupture amid aftershocks that have rattled the region since the main quake.

The report raises the possibility of explosions inside containment structures from the release of hydrogen and oxygen in the seawater pumped into the reactors, according to the Times. The assessment doesn't speculate on the risk of new explosions or damage from an aftershock, events that may lead to a more serious release of radiation from the nuclear core, the newspaper reported.

The NRC report, dated March 26, offers a "snapshot" of what U.S. experts considered possible conditions inside the station, the agency said today in a statement. It isn't a reflection of the agency's "understanding of the current situation," according to the statement.

The agency offered recommendations to Tepco, which pursued "an alternative set of strategies to control the plants," according to the statement.

Tepco started injecting nitrogen into the reactors after plugging a leak of highly radioactive water into the sea from a pit near the No. 2 unit of the power station, which has six reactors and is about 220 kilometers (137 miles) north of Tokyo.

The level of radioactive iodine in seawater sampled yesterday morning near the No. 2 unit fell to 280,000 times the amount allowed by regulators, Tepco said late yesterday.

Samples taken on April 2 at the same location found 7.5 million times the permitted amount, the utility said.

Engineers used sodium-silicate to stop the release of highly radioactive water near the No. 2 reactor. Tepco has previously tried plugging the leak with materials including concrete, sawdust, newsprint and absorbent polymer used in diapers.

Water may be leaking from another part of the station, the country's nuclear safety agency said.

"This isn't a situation where we can be relaxed at all," Chief Cabinet Secretary Yukio Edano told reporters yesterday.

Plutonium was discovered in soil measured at four locations at the nuclear station, Tepco said yesterday. Plutonium-238, plutonium-239 and plutonium-240 were found in soil samples taken on March 25 and 28, Junichi Matsumoto, an official at the utility, said at a news conference yesterday.

Plutonium is produced from uranium in nuclear reactors, according to the U.S. Environmental Protection Agency.

Tepco stock rose 1.8 percent to 343 yen as of 9:27 a.m. in on the Tokyo Stock Exchange, after sliding to a record low 337 yen yesterday. The stock is down 84 percent since the day before Japan was struck by the magnitude-9 earthquake, the country's strongest on record.

The company's 1.155 percent bonds due in Sept. 2020 fell yesterday and were yielding 3.8 percent, or 2.56 percentage points more than government bonds of similar maturity. The bonds were yielding about 0.13 percentage points more than government debt before the earthquake hit.

## **Japan Nuclear Plant Is Far From Stable: U.S. Report (ABC)**

**Japan's TEPCO Will Begin Injecting Nitrogen Into Reactors, But NRC Assessment Sees Peril**

By Neal Karlinsky And Molly Hunter

ABC, April 7, 2011

After workers successfully plugged the highly radioactive leak seeping into the Pacific Ocean, a new confidential assessment by the Nuclear Regulatory Commission obtained by the New York Times suggests that the damaged Fukushima Daiichi plant is far from stable.

Fragments of incredibly dangerous nuclear fuel were blown out of the reactors "up to one mile from the units," and then simply bulldozed over to protect workers on site, according to the NRC report.

Until now, flooding the damaged reactors with water has been considered the most efficient cooling method but the latest assessment raises concerns that the water may have introduced a new set of dangerous complications. U.S. engineers now worry that the enormous amount of water is actually weakening the containment vessels, making them more vulnerable to possible ruptures.

In an effort to avoid the continued spread of radiation and worse, a hydrogen explosion due to the hydrogen and oxygen present in seawater, plant operator TEPCO announced that it will begin injecting nitrogen into reactor one and likely reactors two and three. Nitrogen is normally present inside the containment that surrounds the reactor core and can prevent highly combustible hydrogen from exploding as it did three times in the early days after the March 11 disaster.

The Associated Press reports that Japan's Nuclear and Industrial Safety Agency (NISA) made clear that TEPCO is erring on the safe side. "The nitrogen injection is being considered a precaution," said NISA spokesman Hidehiko Nishiyama.

ABC News consultant and president of Ploughshares Fund, Joe Cirincione told ABC News that a hydrogen explosion, while not expected, is not totally out of the question.

"A new hydrogen explosion could happen, there could be a failure 'in one of' the fuel ponds that could cause a fire and if so, it could be a major release of radiation," said Cirincione.

Safe Seafood?

While the newest threat is concentrated on land, nearly 11,500 tons of radioactive sea water is slowly diluting in the Pacific Ocean. Many worry that migrating fish such as albacore tuna might be contaminated as they make their way from Japan to the Pacific Northwest. Ken Buesseler, the senior scientist at Woods Hole Oceanographic Institution studies the effects of radiation in the ocean and said the situation is likely not as dangerous as people imagine.

"Eating fish from those offshore sites at concentration factors that people have seen before, over the course of a year for an average citizen might give you a dose equivalent to a CAT scan or something, that's significant, it's not trivial. But it would not be life threatening," said Buesseler.

The U.S. Food and Drug Administration said it will require seafood imported from Japan to be checked for radiation before it enters the food supply but Wenonah Hauter, the executive director of Food and Water Watch, questions the FDA's ability to run those necessary tests.

"I think the concern is, the FDA doesn't have the resources to properly screen and then do laboratory tests. In the best of times, they only test less than 2 percent of seafood that comes from imports," said Hauter.

But even with the new screenings, no one in the U.S. government is saying "stop eating tuna." So far, the FDA said every piece of imported seafood is completely safe.

## **Japan Tackles Hydrogen Buildup, Cumulative Radiation (REU)**

By Mayumi Negishi And Yoko Nishikawa

Reuters, April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **U.S. Sees New And Growing Japan Nuclear Threats (WLTX/USA)**

By Tony Santaella

WLTX-TV Columbia, SC, April 7, 2011

A team of experts from the U.S. Nuclear Regulatory Commission warned in a report about a week and a half ago that the very methods being used to try and cool down Japan's stricken nuclear plant may be increasing the risk of explosions or cracks in the reactor buildings, reports The New York Times. According to a report dated March 26 and obtained by the Times, experts warn that the millions of gallons of water

Workers in radiation suits prepare for the decontamination of two nuclear plant workers who were exposed to high levels of radiation at the Fukushima Medical University. (Getty Images)

(CBS) - A team of experts from the U.S. Nuclear Regulatory Commission warned in a report about a week and a half ago that the very methods being used to try and cool down Japan's stricken nuclear plant may be increasing the risk of explosions or cracks in the reactor buildings, reports The New York Times.

According to a report dated March 26 and obtained by the Times, experts warn that the millions of gallons of water -- most of it seawater - that have been dumped into the overheating reactors to cool fuel rods adds to pressure on the already-battered surrounding containment structures.

That pressure makes it more likely, according to the report, that future aftershocks could crack the containment structures, leading to cracks from which highly-radioactive water can escape into the environment.

One such crack, which allowed contaminated water to spill directly into the sea for days, was finally plugged by workers on Wednesday.

But in a sign that workers still face several challenges before the overheating reactors are stabilized, Tokyo Electric Power Co. said it plans to inject nitrogen gas into one of the reactors. Nitrogen can prevent highly combustible hydrogen from exploding -- as it did three times at the compound in the early days of the crisis.

There is no immediate possibility of an explosion, but the "nitrogen injection is being considered as a cautionary measure," said spokesman Hidehiko Nishiyama of Japan's Nuclear and Industrial Safety Agency.

TEPCO said the process could begin as early as Wednesday evening in Unit 1 -- where pressure and temperatures are the highest -- according to spokesman Junichi Matsumoto. The same measures will eventually be taken at the other two troubled reactors.

The NRC report obtained by the Times also cited an increased risk of explosions due to the release of hydrogen and oxygen from the overheating fuel rods. Salt from the seawater was caking around the fuel rods as the water evaporated away, making it more difficult for the fresh water being added to circulate around the cores and cool them down.

## **News Wrap: House Budget Committee Begins Debate On GOP Proposal (PBS)**

PBS NewsHour, April 7, 2011

HARI SREENIVASAN: The House Budget Committee began its markup of a GOP proposal to slash nearly \$6 trillion in spending over the next 10 years.

The committee chair, Paul Ryan of Wisconsin, unveiled the plan yesterday. It would restructure Medicare and other federal health-care programs, as well as reduce total spending. Ryan said sky-high deficits made the cuts vital.

Democrat Bill Pascrell of New Jersey denounced it as an attack on health programs for retirees and the poor.

REP. PAUL RYAN, R-Wis., Budget Committee chairman: Let's get through this partisanship, and let's get on to the business of saving this country and getting this debt paid off while we can still do it on our terms. The reforms in this plan are gradual. They're sensible.

This is something we can preempt. This is something we can stop. We owe it to ourselves, we owe it to our children and grandchildren, we owe it to our fellow countrymen to get this debt under control.

REP. BILL PASCRELL JR., D-N.J.: I think that your budget needs a GPS, because it is a road map into the woods, and we're not going to be able to get out. We believe in providing health-care security for more than just the next decade. And we reject the notion that we can balance the budget by privatizing our safety net for seniors, the poor and the disabled.

HARI SREENIVASAN: An analysis by the Congressional Budget Office found under the plan most future retirees would actually pay more for health care. The nonpartisan agency said, when people now 54 and under retire, they would enroll in a

voucher-like plan to buy private insurance. And it noted the Medicare benefits package is more expensive to deliver through private insurers.

Opposition forces in the Ivory Coast moved in on the man who will not leave office. But the fighters were repelled by heavy arms fire coming from behind the gates of Laurent Gbagbo's residence in Abidjan. Gbagbo refuses to cede power, despite losing last November's election to Alassane Ouattara.

We have a report narrated by Rohit Kachroo of Independent Television News.

ROHIT KACHROO: The distant evidence of an assault aimed at removing Laurent Gbagbo – as it began, rebel leaders said they were going in to end the comedy. Then they stormed the luxurious compound where he's been hiding.

Gbagbo played the commander-in-chief for state TV cameras. Today, he's cornered at his home in an underground bunker, but still refusing to leave. U.N. strikes forced him close to surrender, but he switched to defiance.

LAURENT GBAGBO, former Ivory Coast president (through translator): I love life. I love life. My voice is not the voice of a martyr. I do not seek death. It's not my goal here to die.

ROHIT KACHROO: Today, his wife emerged and showed that he still has some support in this divided country.

SIMONE GBAGBO, wife of former Ivory Coast president Laurent Gbagbo

(through translator): God is leading our fight. God has already given us the victory.

(CHEERING AND APPLAUSE)

ROHIT KACHROO: But her husband lost the election. It's his former citizens who've lost the most, though, desperate for food and for a solution. Aid agencies report a growing refugee crisis. Others fear revenge killings after Gbagbo goes.

HARI SREENIVASAN: French military officials said their forces were not taking part in today's offensive. French troops are backing up U.N. peacekeepers in Ivory Coast to protect civilians.

Libyan leader Moammar Gadhafi has sent a personal letter to President Obama, calling for an end to airstrikes on his country. The three-page letter written in English was obtained by the Associated Press.

In it, Gadhafi writes that "NATO is waging an unjust war against a small people of a developing country."

In Washington, with the Italian foreign minister, Secretary of State Hillary Clinton said there's no mystery about what the U.S. expects from Gadhafi.

SECRETARY OF STATE HILLARY RODHAM CLINTON: Mr. Gadhafi knows what he must do. There needs to be a cease-fire. His forces need to withdraw from the cities that they have forcibly taken at great violence and human cost. There needs to be a decision made about his departure from power and, as the foreign minister said, his departure from Libya.

HARI SREENIVASAN: A boat that set sail from Libya loaded with 300 migrants has capsized in the Mediterranean. It overturned in rough seas off the coast of a tiny Italian island near North Africa. Rescue crews were battling strong winds in their search for survivors. Fifty-one of the migrants were rescued and brought ashore. Thousands of people have fled to Italy to escape the recent unrest in their home countries.

Unrest in the Middle East continued for another day. Thousands of protesters in Yemen defied a government crackdown and took to the streets of Sanaa to demand president Ali Abdullah Saleh step down. Major rallies were also held in the southern city of Taiz.

Meanwhile, U.S. Defense Secretary Robert Gates traveled to Riyadh, Saudi Arabia, for talks on the spreading unrest in the region.

Japanese engineers turned their focus today to preventing new explosions at the destroyed Fukushima Daiichi nuclear plant. They began injecting nitrogen near the reactor to prevent more hydrogen explosions, like the ones that happened after a tsunami hit last month.

That came as The New York Times reported the United States Nuclear Regulatory Commission sees a host of new threats at the plant, including explosions and growing stresses on containment structures.

Portugal has become the third Eurozone country to request an international financial bailout. The prime minister said the country needs the extra help to tackle skyrocketing debts, amid recent political instability. He said the fact that Parliament rejected austerity measures last month made the request for aid inevitable. Greece and Ireland have already asked for financial assistance.

On Wall Street, stocks closed higher today, as the Dow neared a three-year high. The Dow Jones industrial average gained more than 32 points to close at 12,426. The Nasdaq rose eight points to close above 2,799.

Those are some of the day's major stories.

## **U.S. Agency Warned Of Risks In Repairs To Japanese Reactors (BLOOM)**

By Jim Snyder And Jim Efstathiou Jr.

Bloomberg News, April 7, 2011

The U.S. Nuclear Regulatory Commission warned that fuel at the Fukushima Dai-ichi plant's crippled reactors in Japan had melted and that salt build-up in spray nozzles was probably impeding the flow of cooling water.

The assessment was written on March 26 by the commission's reactor-safety team and sent to its engineers in Japan who are helping stabilize the reactors and spent-fuel pools, which emitted radiation after power was shut off by an earthquake and tsunami on March 11.

The report, labeled "For Official Use" only and obtained today, recommends ways workers at the site should attempt to keep the reactors cool and minimize the risk of further explosions, such as by injecting nitrogen, an inert gas, into containment vessels.

The document, reported by the New York Times on its website yesterday, also said that workers should "consider the water weight on seismic capability of containment." It was a reference to the possibility that an aftershock could wreck reactor containment structures that have been flooded with water in the effort to prevent a meltdown.

The NRC report offered a "snapshot" of possible actions U.S. experts considered at the time, the agency said today in a statement. It isn't a reflection of the agency's "understanding of the current situation," the regulatory agency said.

While the NRC offered recommendations, Tokyo Electric Power Co., owner of the crippled reactors, decided to pursue "an alternative set of strategies to control the plants," according to the statement.

## **Cleaning Up Japan's Radioactive Water Could Take Decades (LAT)**

**No one is sure how to safely dispose of millions of gallons of highly radioactive water at the Fukushima Daiichi nuclear plant. 'There is nothing like this, on this scale, that we have ever attempted to do before,' a U.S. expert says.**

By Julie Makinen, Ralph Vartabedian, April 7, 2011

Los Angeles Times, April 7, 2011

For nearly four weeks, Japanese emergency crews have been spraying water on the damaged Fukushima Daiichi nuclear reactors, a desperate attempt to avert the calamity of a full meltdown.

Now, that improvised solution to one nuclear nightmare is spawning another: what to do with the millions of gallons of water that has become highly radioactive as it washes through the plant.

The water being used to try to cool the reactors and the dangerous spent fuel rods is leaking through fissures inside the plant, seeping down through tunnels and passageways to the lowest levels, where it is accumulating into a sea of lethal waste.

No one is sure how to get rid of it safely.

"There is nothing like this, on this scale, that we have ever attempted to do before," says Robert Alvarez, a former assistant secretary of the U.S. Energy Department.

Japanese officials estimate that they already have accumulated about 15 million gallons of highly radioactive water. Hundreds of thousands of gallons are being added every day as the plant's operator, the Tokyo Electric Power Co., continues to feed coolant into the leaky structures.

Ultimately, the high-level radioactive substances in the water will have to be safely stored, processed and solidified, a job that experts say will almost certainly have to be handled on a specially designed industrial complex. The process of cleaning up the water could take many years, even decades, to complete. The cost could run into the tens of billions of dollars.

Victor Gilinsky, a former member of the Nuclear Regulatory Commission and longtime advisor on nuclear waste, said the problems facing Japan are greater than even the most highly contaminated nuclear weapons site in the U.S., the Hanford Nuclear Reservation in Washington state.

The Department of Energy is decommissioning eight reactors at Hanford and plans to process about 58 million gallons of radioactive sludge now in leaky underground tanks, all at an estimated cost of \$100 billion to \$130 billion, according to outside estimates. But unlike Fukushima Daiichi, none of the Hanford reactors melted down and virtually all of the site is accessible to workers without risking exposure to dangerous levels of radioactivity.

"It will be a big job, bigger than Hanford," Gilinsky said, though he cautioned that U.S. costs are unnecessarily high and that the Japanese may be able to do the work more economically.

The immediate problem facing the Japanese is how to store all that water until the reactors and the spent fuel pools are brought under control. The plant's main storage tanks are nearly full. To make room, Tokyo Electric Power, known as Tepco, released a couple of million gallons of the least contaminated water into the ocean this week, with the expectation that its radioactive elements would be diluted in the ocean's mass.

But international law forbids Japan from dumping contaminated water into the ocean if there are viable technical solutions available down the road.

So Tepco is considering bringing in barges and tanks, including a "megafloat" that can hold about 2.5 million gallons. Japan has also reportedly asked Russia to send a floating radiation treatment plant called the Suzuran that was used to decommission Russian nuclear submarines in the Pacific port of Vladivostok. The Suzuran was built in Japan a decade ago.

Yet even using barges and tanks to temporarily handle the water creates a future problem of how to dispose of the contaminated vessels.

U.S. and Japanese experts say the key to solving the disposal problem involves reducing the volume of water by concentrating the radioactive elements so they can be solidified into a safer, dry form. But waste experts disagree on exactly how to do that.

The difficulty of concentrating and then solidifying the contaminants depends on how much radioactivity is in the water, the type of isotopes and whether the work can be done on the Fukushima site.

UC Berkeley nuclear engineering professor Edward Morse said the water needs to be diverted into a concrete-lined holding pond fairly soon, where natural evaporation can help reduce its volume.

Youichi Enokida, a specialist in nuclear chemical engineering at Nagoya University in Japan, agrees that the material should be put into some type of storage that would concentrate it through evaporation, though Japanese experts generally talk about the need for a sealed pool.

"We must concentrate the liquid," he said.

Even with a pond, it could take up to 10 years before the radioactivity would decay enough for the material to be handled, Morse said. Building a storage pond "buys you time," he said.

But other experts sharply disagree, saying exposing the material to open air could allow radioactive iodine and other volatile substances to blow off the site, adding to the remote contamination that is already spreading dozens of miles from the plant.

A factor that could vastly complicate the problem is the presence of tritium, or heavy water, which is produced during fission. Tritium cannot be filtered out of water, instead requiring an extremely expensive treatment process.

"If the contaminated water has relatively high tritium or tritiated water concentration, then treatment could be more complicated," said Joonhong Ahn, a nuclear waste expert at UC Berkeley.

Nuclear power plants normally have systems in place to treat tritium on site. But the condition and capacity of the Fukushima system is not known.

Enokida and Morse contend that if the water can be concentrated, it can then be put into dry form or even turned into glass, as is planned at Hanford and other contaminated sites around the world. But this process, called vitrification, is expensive and requires a small-scale industrial facility.

The alternative — processing the waste elsewhere in Japan — is likely to be controversial.

"The fishermen will protest; this is inevitable," Enokida said.

Morse said that the plant faces at least six months of emergency stabilization, about two years of temporary remediation and anywhere from two years to 30 years of full-scale cleanup. Furthermore, the high levels of ground contamination at the site are raising concerns about the viability of people working at the site in coming decades.

It will take hundreds or even thousands of workers years or decades to handle the cleanup, experts said.

U.S. officials have not yet discussed the water management problems with their Japanese counterparts. But Nuclear Regulatory Commission spokesman Scott Burnell said the nuclear industry has a long experience with filtering radioactive contamination out of water, though never at a plant that has suffered such damage. At Three Mile Island it was decided to allow the tritium-contaminated water to evaporate, though that meant the tritium escaped as well.

At some point, however, Japan will have to add facilities to existing treatment plants in order to vitrify the radioactive material into glass logs or other dry forms that could be stored in alloy canisters. Those logs or canisters would have to be buried somewhere.

Where that burial ground is built is a question that the Japanese are only beginning to consider.

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## **NRC Examines Nuclear Plant Risks In U.S. (USAT)**

By Oren Dorell, Usa Today

USA Today, April 7, 2011

Japanese officials took some solace Wednesday in halting leaks of radioactive water from the nation's crippled nuclear plant. But in Washington, internal e-mails from the Nuclear Regulatory Commission revealed doubts within the organization about procedures for U.S. plants in a Fukushima-style event.

"U.S. plants continue to operate safely," Martin Virgilio, deputy executive director of the NRC's reactor and preparedness programs, told a House subcommittee.

The hearing took place as Japanese nuclear workers notched a rare victory by stopping highly radioactive water from flowing into the Pacific Ocean on Wednesday and turned their attention to injecting nitrogen into the reactor cores to prevent more hydrogen explosions.

Japanese nuclear officials said there was no immediate threat of explosions like three that rocked the Fukushima Dai-ichi plant after the earthquake and tsunami, but their plans are a reminder of work that remains to stabilize the complex. "The nitrogen injection is being considered a precaution," said Hidehiko Nishiyama, spokesman for Japan's Nuclear and Industrial Safety Agency.

More than 12,000 people have been confirmed dead from the March 11 disaster.

Virgilio addressed the NRC e-mails, obtained by the Union of Concerned Scientists through the Freedom of Information Act and released Wednesday. In the e-mails, NRC risk analysts questioned an exercise that simulated a catastrophic loss of power at a nuclear plant due to an earthquake, and whether operators should rely on equipment that was not certified to survive an earthquake.

The exercise, played out on a computer model, looked at what would happen at two U.S. power plants, Surry in Virginia and Peach Bottom in Pennsylvania, with new equipment and procedures, called B.5.b, ordered since the 9/11 terror attacks to make nuclear power plants more resistant to attack. One of the hypothetical accidents that were analyzed was a "station blackout" at Peach Bottom where the plant fails to recover power, as happened at Fukushima.

Under the scenario, the plant loses outside power, its diesel backup generators and battery power too, Virgilio said. The new B.5.b strategy would employ new, portable equipment to operate emergency cooling pumps off steam from the reactor core.

One NRC risk analyst questioned how NRC could rely on strategies "that have really not been reviewed to ensure that they will work to mitigate severe accidents."

Questions raised by this and other analysts "will need to be looked at," Virgilio said. But he added that the exercise looked at an unlikely scenario — a major earthquake that knocks out power inside and outside the plant.

U.S. nuclear plants do not sit on geological formations that are susceptible to the same kind of violent earthquakes, he said.

## **Nuclear Agency Tests Pennsylvania Plant (WSJ)**

By Tennille Tracy

Wall Street Journal, April 7, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **US Officials Doubted Nuclear Safety Plans-Watchdog (REU)**

By Scott Malone

Reuters, April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Doubts Raised Over US Atomic Plants (FT)**

By FT Reporters And Agencies

Financial Times, April 7, 2011

Full-text stories from the Financial Times are available to FT subscribers by clicking the link.

## **Pa. Nuclear Reactor Could Come Dangerously Close To Core Damage, Analysis Says (POCREC)**

Pocono (PA) Record, April 7, 2011

An analysis of hypothetical severe nuclear accidents conducted by US nuclear officials shows that a reactor in York County comes close to suffering core damage in situations where all power is lost at the plant, House Democrats said Wednesday.

This so-called State-of-the-Art Reactor Consequence Analyses, conducted by the Nuclear Regulatory Commission, analyzes the effects of various accidents at two nuclear reactors: the so-called Peach Bottom plant in Pennsylvania, which has a design similar to the damaged Fukushima Daiichi plant in Japan, and the Surry reactor in Virginia.

Under one scenario, in which a severe station blackout takes out all power, the simulation analysis showed the Peach Bottom reactor "came within one hour of core damage," according to a memo House Democrats released Wednesday.

In a House hearing Wednesday, a top nuclear official responded to the report and said the analysis of nuclear accidents looks at "very unrealistic events."

"We ignore all probabilities" of the events actually taking place, said Martin Virgilio, deputy executive director for reactor and preparedness programs at the Nuclear Regulatory Commission. "We're testing the envelope."

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## **Renewed Focus On Nuclear Reactors In U.S. (LANERA)**

By Ad Crable , Staff Writer

Lancaster (PA) New Era, April 7, 2011

The Peach Bottom and Three Mile Island nuclear plants are undergoing quick-look inspections to make sure a prolonged power disruption couldn't lead to the mess reactors in Japan found themselves in after an earthquake and tsunami.

All commercial reactors will come under near-term and long-term reviews in the wake of power failures and subsequent overheating at the Fukushima Dai-ichi nuclear plant in Japan.

"In the near-term, resident inspectors at all sites, with help from our special inspectors, will look for immediate implications of events in Japan reactors," said Neil Sheehan, a U.S. Nuclear Regulatory Commission spokesman in King of Prussia.

Nuclear plants in the United States, in the event of a blackout, are required to have multiple electricity backups. Power is essential to keep water flowing into the reactor core and a pool of spent uranium fuel.

Three Mile Island, for example, receives electricity from four independent power lines.

If power from the grid is lost, there are diesel generators on hand. If they, too, are lost or don't work, there is a room full of walls of giant batteries.

Still, renewed focus has been placed on U.S. reactors' backup power capabilities to deal with a prolonged power failure because the loss of power has raised such havoc at the crippled reactors in Japan.

Both TMI and Peach Bottom, since 2007, reported to the NRC that electric cables were found improperly submerged in water. No electrical faults occurred, but the cables were not designed to lie in water.

Some have found fault with the NRC's standards that only require nuclear plants to have battery backups of four to eight hours.

In a simulated accident scenario conducted on computers by the NRC in 2009, it was found that in extreme conditions, the Peach Bottom power plant could begin leaking radiation in less than a day if backup systems failed.

Exelon Nuclear's Peach Bottom plant and the Surry plant in Virginia volunteered for the "State-of-the-Art Reactor Consequence Analysis."

David Tillman, Exelon's spokesman at Peach Bottom, said the utility wouldn't be commenting on the analysis because a final report has not yet been released.

But he said Peach Bottom has "numerous and redundant" power backup systems, including four locomotive-sized diesel generators that are fortified and watertight. The storage tanks of diesel fuel are buried underground.

Then there are stored batteries. In addition, he said, there is a dedicated underground power line that could run the plant from the nearby Conowingo hydroelectric dam.

"These are all safety features to allow us to safely operate and shut down the plant if a loss of power occurs," Tillman said.

Peach Bottom also has come in for increased scrutiny because it, and 22 other U.S. plants, have the same Mark 1 radiation containment design as at Fukushima Dai-ichi, where radiation has leaked out.

On that score, the NRC's Sheehan pointed out that there are a number of safety upgrades at Peach Bottom and other Mark 1 plants that were not found at the stricken reactors.

For example, in Japan, a hydrogen explosion led to spent fuel being exposed to the environment.

At U.S. Mark 1s, reactors have vents that allow hydrogen gas to be vented to preclude buildup.

Also, years ago, the NRC required Mark 1 plants to reinforce donut-shaped reservoirs of water that would be needed in an emergency to cool the reactor, Sheehan said.

"But yes," he added, "we will look at Mark 1 again."

In February 2010, an NRC inspection at Peach Bottom noted a violation when it was found that a power cable that feeds a safety-related motor control center had been submerged in a manhole since at least 2002.

In July 2009, an inspection at TMI noted a violation because TMI staff failed to correct repeated flooding of cables. Corroded cable tray supports were observed, the report said.

Looking for submerged cables had been ordered by the NRC after it was found that 23 nuclear plants had experienced electrical cable failures between 1988 and 2004. Neither TMI or Peach Bottom was among the 23.

Ralph DeSantis, Exelon spokesman at TMI, said as a result of the nuclear accident in Japan, Exelon undertook immediate steps to "re-validate our emergency systems that would be used for extreme natural events.

"They are all in top-notch working order," he said.

Read more: <http://articles.lancasteronline.com/local/4/371851#ixzz1lpTh0g61>

## **E-mails Show US Nuclear Safety Concerns (MSNBC)**

**Contingency plans at one site have 'not been reviewed to ensure that they will work'**

MSNBC, April 7, 2011

U.S. regulators privately expressed doubts some of the nation's nuclear power plants are prepared for a Japan-scale disaster, documents obtained by the Union of Concerned Scientists show.

Obtained via a Freedom of Information Act request by the activist group, the Nuclear Regulatory Commission e-mails and memos questioned the adequacy of the backup plans to keep reactor cooling systems running if offsite power was lost for an extended period.

Those concerns contrast with the confidence U.S. regulators and industry officials have publicly expressed since the crisis began to unfold on March 11, the UCS said Wednesday.

"While the NRC and the nuclear industry have been reassuring Americans that there is nothing to worry about — that we can do a better job dealing with a nuclear disaster like the one that just happened in Japan — it turns out that privately NRC senior analysts are not so sure," Edwin Lyman, a UCS nuclear expert, said in a statement released along with the documents.

Story: Japan faces another dilemma: Radiation-contaminated bodies

Story: Japan plugs radioactive water leak from nuclear plant

Story: What are the odds? US nuke plants ranked by quake risk

The e-mails were part of a federal review of how the operators of nuclear plants in Delta, Penn., and Surry County, Va., would cope with a prolonged power outage that knocked cooling systems offline — as occurred at the Fukushima plant in Japan.

A NRC staffer e-mailed last July 28 that contingency plans for the Peach Bottom nuclear plant in Delta "have really not been reviewed to ensure that they will work to mitigate severe accidents."

Another, undated document said backup plans included just having equipment on the plant grounds that could be useful "when used by knowledgeable operators if post-event conditions allow."

The document went on to note: "If little is known about these post-event conditions, then assuming success is speculative."

The Peach Bottom site, operated by Exelon Corp., uses a General Electric reactor with a similar design to four of the reactors at Fukushima. (GE is a part owner of NBCUniversal, which co-owns msnbc.com through a joint venture with Microsoft.)

Officials at the NRC and Exelon did not immediately respond to calls seeking a comment.

## **Dems Slam NRC On Nuclear Safety (POLITCO)**

By Darius Dixon

Politico, April 7, 2011

House Democrats hammered federal regulators Wednesday on the safety of the U.S. nuclear industry, casting skepticism on the Nuclear Regulatory Commission's assurances that plants here are safe despite the disaster unfolding in Japan.

"Why do we keep finding ourselves here?" asked Rep. Diana DeGette of Colorado, one of several Democrats on the Energy and Commerce investigations subcommittee to suggest that U.S. plants are at greater risk than previously assumed. "It seems, time and time again, we hear: 'Don't worry. It's safe.' And: 'Oh, but that would never happen.'"

Massachusetts Democrat Ed Markey likened the Japanese authorities' desperate efforts at the Fukushima Daiichi plant to a BP-style "nuclear junk shot," adding: "Yet the Nuclear Regulatory Commission insists that our systems are safe, even before beginning, let alone completing, its review of our reactors and spent fuel pools."

Markey also complained that existing U.S. regulations don't fully account for the risk of earthquakes, while requirements for backup battery power here "are generally less stringent than what the Fukushima reactors were equipped with."

But the subcommittee split along party lines, with Chairman Cliff Stearns telling his colleagues that "there should be no question about the experience and responsiveness of America's nuclear power system."

"As we examine the Fukushima incident, we should not confuse what is happening in Japan with our own preparedness and assume they are one in the same," the Florida Republican said. "We should not make unsupported assumptions about risks and response measures or get ahead of the facts."

"Radiological releases from the facility have been much less than feared," Stearns said, citing data released Monday by the Energy Department.

The Japanese reactors have suffered from explosions, partial meltdowns and releases of radioactivity into the air and the ocean, resulting in minuscule amounts of radioactive substances being detected in milk and ground water in the United States.

DeGette, the subcommittee's ranking member, invoked last year's BP spill to raise questions about assurances from the nuclear industry and its regulators.

"Less than a year ago, many of us sat together at hearing after hearing investigating the terrible crisis of the Deepwater Horizon spill," she said. "And then, disturbingly, we learned an entire industry was quite simply unprepared for the failure of numerous failsafe methods."

DeGette added. "This seems like an ideal time to remind many of my colleagues across the aisle that regulation is not a bad word."

This article first appeared on POLITICO Pro at 12:14 p.m. on April 6, 2011.

## **Democrats Probe Worst Fears For U.S. Nuclear Power (REU)**

By Roberta Rampton And Ayesha Rascoe

[Reuters](#), April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **UW-Madison Professor To Testify Before Congressional Committee About US Nuclear Plant Safety (CHIT)**

[Associated Press](#), April 6, 2011

MADISON, Wis. (AP) — A Wisconsin professor is set to testify in front of a congressional committee about Japan's nuclear crisis

Michael Corradini is an engineering physics professor at the University of Wisconsin-Madison and a member of the U.S. Nuclear Regulatory Commission's advisory committee on reactor safeguards. He's scheduled to testify before the House Energy and Commerce Committee's oversight and investigation's subcommittee on Wednesday morning.

Corradini plans to talk about the effects of last month's earthquake and ensuing tsunami on Japan's nuclear plants and what the domestic nuclear industry can learn from the disaster.

## **U.S. Nuclear Regulator Split On Yucca Report Release (REU)**

By Roberta Rampton And Ayesha Rascoe

[Reuters](#), April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **More Yucca Mountain Turmoil At Nuclear Regulatory Commission (LVSRJ)**

By Steve Tetreault

[Las Vegas Review-Journal](#), April 7, 2011

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## **A Single Site For Nuclear Waste (SLPD)**

By John Shimkus

[St. Louis Post-Dispatch](#), April 7, 2011

The March 11 earthquake in Japan led to a tsunami that crippled the Fukushima Daiichi nuclear power plant. While a similar situation is not likely at any U.S. nuclear plant, we must use this to look at our country's lack of a central storage facility for nuclear waste.

The first commercial nuclear power plant began operating in the United States in 1960. In 1982, the Nuclear Waste Policy Act made the federal government responsible for collecting nuclear waste.

In 1987, Yucca Mountain was named the sole site for a permanent repository of nuclear waste. The Department of Energy confirmed the scientific side of this decision in 1994. In 2002, Congress and the president approved Yucca Mountain again. In 2008, DOE filed a license application with the Nuclear Regulatory Commission to build Yucca Mountain.

Obviously, the decision to move forward with a national nuclear waste repository has been supported by Republican and Democratic-controlled Congresses and Republican- and Democrat presidents over all these years.

I have visited Yucca Mountain. It is located on federal property. The storage site would be 1,000 feet below ground in a remote desert location. Earthquakes have had little impact on this area and are even less an impact underground.

Today, we store nuclear waste at each of the 121 sites in 39 states. Nuclear power provides over 20 percent of our nation's electricity. That number is closer to 50 percent in Illinois.

In Illinois, eight pools house spent nuclear fuel rods from the 13 nuclear power plants, 11 of which still are operating. Two pools are within 40 miles of downtown Chicago. Is that really where we want to store nuclear waste?

In testimony before the Senate on March 30, Massachusetts Institute of Technology physics professor Dr. Ernest Moniz called for these spent fuel rods to be stored in "dry" casks at regional government facilities. Senator Dianne Feinstein, D-Calif., agreed.

While I agree with the government following its own law and taking control of nuclear waste, I question why we should throw away the \$14.5 billion already spent on Yucca Mountain. We don't need regional sites; we already have designated a consolidated government storage site.

Also on March 30 President Obama called for an increase in nuclear power as part of a clean energy standard. While I may not agree with a mandated standard, I know that nuclear power will continue to be vital in our nation's electricity portfolio.

Unfortunately President Obama and his administration have unilaterally halted work on Yucca Mountain. They would rather see nuclear waste stored all over the country instead of in Nevada — home of Senate Majority Leader Harry Reid.

I believe the administration is failing to carry out the current federal law. In order to find out exactly why the administration halted work on Yucca Mountain, under our oversight authority House Energy and Commerce Committee, chairman Fred Upton, R-Michigan, and I are proceeding with an investigation. On March 31, we sent letters to the secretary of Energy and to the chairman of the Nuclear Regulatory Commission.

In addition, as part of our oversight and responsibility to ratepayers and taxpayers, I will be leading a delegation of legislators to tour Yucca Mountain later this month.

Past Congresses and administrations have approved Yucca Mountain. While it has taken too long to become reality, this administration cannot rewrite the law or pull already issued permits away from it.

In order to expand nuclear power, Yucca Mountain must become a reality.

U.S. Rep. John Shimkus, R-Collinsville, is chairman of the House Energy and Commerce Subcommittee on Environment and the Economy, which has jurisdiction over federal nuclear waste policy.

## **Yucca Mountain Won't Lessen Risks (RENONR)**

By Richard Bryan

Reno News & Review, April 7, 2011

Nuclear industry spokespeople and some in Congress have been very of late suggesting that the nuclear accident in Japan requires restarting the defunct Yucca Mountain nuclear waste repository program. They assert that moving spent fuel to a Nevada repository is needed to eliminate or reduce the risks associated with failures of spent fuel cooling pools at U.S. nuclear power plants. The refrain one hears is that it's safer to move spent fuel out of these cooling pools at 100-plus reactor sites to a single, isolated location in Nevada.

The problem with this assertion is that it's entirely wrong and misleading. There could be 100 Yucca Mountains up and operating, and the risks involved with spent fuel pools at reactor sites would still be there. Wherever there is a nuclear reactor, there must be a water-filled pool to cool the spent fuel for five years or more after it's removed from the reactor. Whether there is a repository at Yucca Mountain or anywhere else will have no effect on spent fuel pool risks. The only way to avoid this risk would be to shut down all the reactors.

Fortunately, the answer to minimizing risks posed by cooling pools is simple and straightforward. Utility companies that operate nuclear power plants should be required do what many already do—move spent fuel that is more than five years old and is capable of being taken out of the cooling pool to safe, passive dry storage at reactor sites. This virtually eliminates any chance that the spent fuel will overheat due to water leaks in the pool or cooling system malfunctions.

Dry storage is 100 percent passive, relies on natural air circulation to cool the fuel, and requires no moving parts and no active monitoring. Containers are large stainless steel cylinders placed in steel and concrete overpacks or vaults. They are lined up on concrete pads within the security perimeters of the reactor sites. Pads can even be recessed into the ground for added security. Dry storage virtually eliminates risks of the type we are seeing in Japan, where spent fuel is burning due to overheating. And unlike a repository—at Yucca Mountain or elsewhere—dry storage can be done immediately, as opposed to waiting decades before a disposal or storage location could be ready.

So why haven't U.S. utility companies already maximized the use of dry storage at reactor sites? Again, the answer seems relatively simple, and it's a four-letter word: C-O-S-T. Regardless of the risks, it's cheaper for utilities to maintain the status quo, loading more and more spent fuel into pools and keeping it there longer than necessary because it's less expensive to do it that way.

Instead of disingenuously using the disaster in Japan in an attempt to stampede Congress into restarting the failed Yucca project, the nuclear industry should be using its considerable influence to require utility companies to make maximum use of dry storage technologies.

## **Group Petitions NRC To Halt Review Of Westinghouse Reactor Design (PITTR)**

By Jeremy Boren And Thomas Olson  
Pittsburgh Tribune-Review, April 7, 2011

A southern environmental protection group said today it filed a petition that raises safety concerns about Westinghouse Electric Co.'s proposed AP1000 nuclear reactor design and asks the Nuclear Regulatory Commission to halt its review.

North Carolina Waste Awareness and Reduction Network, a nonprofit known as NC Warn, represents more than a dozen nuclear energy watchdog groups that expressed new concerns about the reactor design in the wake of the disaster at Japan's earthquake-ravaged Fukushima Daiichi reactor.

Environmental groups in North Carolina, Georgia and Florida have scrutinized the AP1000 because at least six are under contract to be built in those states.

"(We're) calling for the U.S. Nuclear Regulatory Commission to suspend its fast-track approval process until design problems are resolved and the lessons from Japan can be fully and openly analyzed," said Jim Warren, NC Warn's executive director.

"We believe industry pressure has rushed the long-delayed preliminary approval of the AP1000 that was announced in February by the NRC," he said.

Based in Cranberry, Westinghouse employs about 6,000 people in Western Pennsylvania, all engaged in the nuclear power business. The company is owned by Toshiba Corp.

"We dispute any allegation that would imply that the AP1000 is anything other than an extremely safe nuclear energy plant," said Westinghouse spokesman Vaughn Gilbert.

"Westinghouse wants to emphasize the AP1000 takes safety to the highest levels," he said. "Based on conservative computer modeling, it's 200 times safer than Nuclear Regulatory Commission requirements.

Westinghouse CEO Aris Candris told the Tribune-Review in an interview earlier today that the company expects to get the NRC's final approval of the AP1000 "by late summer," after the public comment period.

NC Warn filed the petition now because a 75-day public review period on the reactor design ends May 10.

Warren said the legal challenge wasn't prompted by the Fukushima disaster alone. The group raised potential weaknesses in the AP1000 "shield building," which would be part of a structure protecting the radioactive core from earthquakes, storms and airplane strikes, and the proposed reactor's passive, gravity-fed cooling system.

John Runkle, an attorney for NC Warn, said there is precedent that supports the group's petition to delay AP1000's final approval. After the Three Mile Island accident in 1978, the commission suspended "all licensing" until investigators traced the source of the problem, he said.

Warren noted that Dr. John Ma, a top structural reviewer with the NRC, in November filed a "non-concurring" opinion with the commission that said the concrete shield building, as proposed, would be too brittle and could shatter "like a glass cup" if it was hit by an earthquake, object propelled by a tornado or a plane.

"The shield containment building is incredibly robust," said Westinghouse's Gilbert.

The AP1000 design was reviewed and "deemed safe by the NRC's Advisory Committee on Reactor Safeguards, the NRC itself and numerous experts in other organizations," added Gilbert.

## **Southeast Groups: Delay Approval For AP1000 Reactor (CLTBIZJ)**

By John Downey

Charlotte (NC) Business Journal, April 7, 2011

Critics of Westinghouse's AP1000 reactor have petitioned the Nuclear Regulatory Commission to suspend proceedings to approve the reactor in the wake of the nuclear crisis in Japan.

That would probably delay construction of at least two nuclear projects in the Southeast — Southern Co.'s two units at its Vogtle nuclear plant and Scana's V.C. Summer expansion. It could also delay Duke Energy's plans for its Lee Nuclear Station in Gaffney, S.C.

But a group of environmental and public-policy advocates calling itself the AP1000 Oversight Group says it is the commission's duty to delay proceedings for safety considerations. Preliminary approval

The group contends it is unreasonable to proceed with the approval process until regulators learn what went wrong at Japan's crippled Fukushima plant. The nuclear industry and regulators will also need time to review those lessons and implement new design requirements to protect against problems in future reactors, the group says.

The NRC gave its preliminary approval of the Westinghouse design Feb. 18. The commission plans final action on the design 30 days after a 75-day comment period ends this spring.

Westinghouse spokesman Vaughn Gilbert says there is no need for a delay. He says the passive emergency cooling system that is a key part of the AP1000 design operates without backup power. Ready to start construction

Such a system could have averted the crisis in Japan, Gilbert contends. The potential for nuclear disaster there developed when the Fukushima emergency backup systems lost power after a March earthquake and tsunami badly damaged the reactors.

"The AP1000 design would have shut down and cooled the reactors without the need for backup power," Gilbert says. "We take safety to the highest level with this design."

The AP1000 group disagrees. Representatives held a press conference Wednesday to announce the petition. The group says it makes no sense to approve plants such as Vogtle and Summer, which are ready to begin construction, then change the design later once the failures at Fukushima are clearly understood. Precedent cited

John Runkle, attorney for the N.C. Waste Awareness and Reduction Network, cited the precedent of the 1970 disaster at Three Mile Island. At that time, he said, the NRC suspended all licensing and approval proceedings. "They clearly have the authority to do it," he said.

NCWARN is one of the 12 organizations that make up the AP1000 group. Others include the Blue Ridge Environmental Defense League, the Green Party of Florida, the Southern Alliance for Clean Energy and the Friends of the Earth. 'Comprehensive review'

The NRC is preparing to approve the design even as Westinghouse continues to work on design changes already mandated by the commission. Runkle expects a court challenge if the commission approves the plant before all the design changes are resolved.

The petition filed Wednesday calls on the commission to immediately postpone the rule-making proceedings for AP1000 certification.

And it calls on the commission to "initiate a comprehensive review of the Fukushima accident to develop lessons learned for new reactor designs" and implement "new regulatory safeguards to protect public health and safety."

## **Environmental Groups Seek Delay In New U.S. Nuclear Plants (REU)**

By Jim Brumm

Reuters, April 7, 2011

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## **Groups Want Licensing Of Reactors Suspended (AUGC)**

By Rob Pavey

Augusta Chronicle, April 7, 2011

Environmental groups opposed to the Nuclear Regulatory Commission's plan to license two new AP1000 reactors to be built at Plant Vogtle filed a new petition Wednesday asking the commission to suspend the licensing process until more is known about the evolving Japan disaster.

"It is apparent that while little is known definitively about the cause and impacts of what occurred at Fukushima, many aspects of the accident have grave consequences for U.S. nuclear plants, including the AP1000 reactors," said the petition, filed by the AP1000 Oversight Group, comprised of 12 environmental groups.

Southern Nuclear, which plans to use the Westinghouse reactor design at Vogtle, risks potential cost overruns if it moves ahead too quickly on the \$14.8 billion project, said Sara Barczak, the program director of the Southern Alliance for Clean Energy.

"The original Vogtle project was the poster child for cost overruns," she said, noting that additional regulatory requirements inflated the original \$660 million cost to more than \$8 billion.

"To us, it doesn't appear much has changed today. Odds are that the lessons learned from Japan may very well drive costs up."

Southern Nuclear is in the final stages of its quest for a combined operating license that would authorize both the construction and operation of the new units in Burke County.

The AP1000 has been touted as the newest and safest of all reactor designs with a unique, passive cooling system that includes a reservoir of cooling water stored above the reactor.

In the event of an emergency, cooling water can flow into the system by gravity without electric or diesel powered or pumps whose tsunami-induced failure contributed to the Japan crisis.

Jim Warren of the North Carolina Waste Awareness and Reduction Network said Westinghouse also must resolve lingering issues with the AP1000 shield building design, which the NRC said could not meet impact standards associated with aircraft strikes or natural disasters, such as a tornado-propelled object.

The group also raised questions about the spent fuel storage plan, which Warren claimed was changed to higher-density storage to cut costs, despite a 2005 National Academy of Sciences warning that such "high density racking" makes the fuel storage pools more vulnerable to degradation or fire if there is even a partial loss of cooling water.

Southern Nuclear spokeswoman Beth Thomas said the company has no plans to postpone its Vogtle project.

"As it relates to the recent events in Japan, Southern Nuclear supports a safety review and incorporating lessons learned," she said. "We remain, however, fully committed to the Plant Vogtle construction project. We plan to have Unit 3 operational in 2016 and Unit 4 in 2017."

## **Legal Action Seeks To Slow Rush To Build New Nuclear Reactors Across The South (FS)**

By Sue Sturgis

Facing South, April 7, 2011

A coalition of public-interest groups filed a legal challenge today with the U.S. Nuclear Regulatory Commission seeking to halt the fast-track approval process for the Westinghouse AP1000 reactor that utilities are planning to build across the South.

Filed directly with the NRC's five commissioners rather than agency staff, the petition [pdf] calls for suspension of the design approval process to consider safety concerns raised by experts – and to allow time for the lessons of the Japanese nuclear disaster to be absorbed.

"There is no cause to rush the design certification for the AP1000," says John Runkle, attorney for the AP1000 Oversight Group. "Well before the emergency in Japan, serious shortcomings with the Westinghouse model had been identified. The events at Fukushima redouble the need for a careful and transparent review of the AP1000 relating to both safety and cost."

The motion notes that the NRC spent a year and a half after the 1979 Three Mile Island accident studying the disaster's implications. That effort led to regulatory changes making both existing and proposed reactors safer.

The Westinghouse AP1000 is the design chosen for construction of 14 reactors at seven sites across the Southeast. The companies seeking to build those reactors are Duke Energy, Florida Power & Light, Progress Energy, SCANA, Southern Company and TVA. Westinghouse is majority-owned by Japan's Toshiba Corp. Last year the Obama administration awarded the project at Southern Company's Plant Vogtle in Georgia an \$8.2 billion federal loan guarantee.

The AP1000 Oversight Group charges that industry pressure caused NRC to skip testing of key aspects of the AP1000 design. Dr. John Ma, the NRC's lead structural engineer charged with evaluating the reactor's shield building, filed a formal nonconurrence against approval of the design last November. He cited concerns that the new concrete material being used in the building is so brittle it could shatter "like a glass cup."

Other problems the coalition points to include high storage density in the spent fuel pools and a weak containment structure. In addition, NRC science advisers have warned that potential clogging in the reactor's passive emergency cooling system could dramatically increase the risk of a meltdown.

The petitioners acknowledge fundamental differences between the AP1000 design and the GE-Hitachi boiling water reactors used at Fukushima and many sites across the United States. However, they also point out that the Fukushima accident has direct implications for the AP1000 design and operation.

"Accidents with catastrophic consequences that were once considered to be of extremely low probability have occurred," the motion states. "Now the ramifications of those accidents must be dealt with and resolved safely before new designs are reviewed and certified, and new reactors are licensed."

In February, the NRC announced its preliminary approval of the AP1000 design. It required public comments to be filed in 75 days, and for the NRC staff to finalize approval 30 days after that.

The members of the AP1000 Oversight Group are the Bellefonte Efficiency and Sustainability Team, Blue Ridge Environmental Defense League, Citizens Allied for Safe Energy (Miami), Friends of the Earth, Georgia Women's Action for New Directions, Green Party of Florida, Mothers Against Tennessee River Radiation, NC WARN: Waste Awareness and Reduction Network, Nuclear Information and Resource Service, Nuclear Watch South, Sierra Club's South Carolina Chapter, and the Southern Alliance for Clean Energy.

## **Westinghouse CEO Touts Reactors' Safety (PITTR)**

By Thomas Olson

Pittsburgh Tribune-Review, April 7, 2011

Westinghouse Electric Co.'s new generation of nuclear reactors could have withstood the earthquake and tsunami that crippled a nuclear plant in Japan, and that disaster might help the company secure contracts to build them, CEO Aris Candris said on Wednesday.

Although an environmental protection group yesterday petitioned the Nuclear Regulatory Commission to halt its review of Westinghouse's AP1000 design, Candris said he expects the agency to grant final approval in late summer and, by year's end, to license utilities in the Southeast planning to build six of the reactors.

"We've upgraded the design and done significant testing," Candris said in an interview with the Tribune-Review. Computer modeling reviewed by the NRC and its independent experts shows the AP1000 is about 200 times safer than the regulator's requirements, according to Westinghouse.

The Cranberry-based company expects to finalize agreements with China this fall to build 10 power plants with Westinghouse AP1000 nuclear reactors, Candris said. That's in addition to four, multibillion-dollar AP1000s under construction in China. Candris expects to win more contracts there after that.

"If anything, the number of AP1000s that will be built in China will go up as a result of the (disaster) in Japan," Candris said. He predicts that 60 of the more than 100 nuclear power plants China intends to build by 2025 "are probably going to be AP1000s," though it's undetermined how much of that work Westinghouse employees would do, versus a Chinese company under Westinghouse license.

AP1000 stands for "advanced passive" reactors with at least 1,000 megawatts of generating capacity, or enough to power 800,000 homes. In a serious plant malfunction, they would let water percolate from a 300,000-gallon water tank above the reactor vessel to cool the reactor core.

The design differs significantly from General Electric Co.-designed reactors ravaged by Japan's March 11 quake and tsunami. That design relies on generators and pumps to send cooling water to a reactor. The tsunami knocked out the GE equipment, allowing the reactors to overheat and emit radiation.

The natural disaster "would have been a nonevent for the AP1000," Candris said.

Michael Kruse, a principal and energy expert with global management consulting firm Arthur D. Little, agrees.

"The AP1000 probably would have prevented the plant from running into severe core-cooling" problems, said Kruse, reached by phone in Frankfurt.

Still, nuclear power opponents continue to take aim at the industry and Westinghouse.

North Carolina Waste Awareness and Reduction Network, a nonprofit known as NC WARN that represents more than a dozen watchdog groups, filed its petition because a 75-day public review period on the reactor design ends May 10.

"(We're) calling for the U.S. Nuclear Regulatory Commission to suspend its fast-track approval process until design problems are resolved and the lessons from Japan can be fully and openly analyzed," said Jim Warren, executive director of NC WARN. "Industry pressure" rushed the long-delayed approval of the AP1000, he said.

Warren said the legal challenge wasn't prompted solely by the disastrous events at Japan's Fukushima Daiichi reactor. The group questioned potential weaknesses in the AP1000 shield building -- part of a structure protecting the radioactive core -- and the reactor's passive, gravity-fed cooling system.

Environmental groups in North Carolina, Georgia and Florida scrutinized the AP1000 because utilities there contracted to build reactors that would come on line starting in 2016.

The NRC directed Westinghouse in October 2009 to modify the AP1000 design to make sure the outer building shielding the reactor vessel could withstand the impact of a jetliner, an earthquake, a hurricane or tornado.

"We will get the final approval on these changes in late summer," Candris said, and U.S. utilities that chose AP1000s will get NRC licenses "toward the end of the year."

John Runkle, an attorney for NC WARN, said precedent supports the group's request to delay final approval. After the Three Mile Island accident in 1978, the commission suspended licensing until investigators traced the source of the problem, he said.

Westinghouse won a \$5.3 billion contract with China in 2007 to build four reactors. The first two are expected to come online in 2013. Construction continues "on schedule and on budget, and will continue that way. There's no pause," Candris said.

Owned by Toshiba Corp., Westinghouse employs about 6,000 people in Western Pennsylvania, all in the nuclear power business. The company employs 15,000 overall. It has about 1,000 people in Japan, including at a facility that makes nuclear fuel for the General Electric reactors.

## **U.S. Nuclear Regulator Meshes Physics And Politics (REU)**

By Roberta Rampton

Reuters, April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **US Radiation Study Sparks Debate : Nature News (NATNEWS)**

**Researchers divided on how best to probe any possible link to cancer.**

By Gwyneth Dickey Zakaib

Nature News, April 7, 2011

Japan's ongoing nuclear emergency has intensified discussion on a simmering issue: the potential cancer risk from living near a reactor that is operating normally.

Last year, long before the crisis in Japan, the US Nuclear Regulatory Commission (NRC) asked the National Academy of Sciences (NAS) to examine this cancer question, prompted in part by long-standing public unease. The NAS is now consulting with experts about how to design a study, with the next public meetings on the effort scheduled for 18–19 April in Chicago, Illinois. Already, however, some researchers have questioned the study's feasibility and expressed doubt over whether it will produce meaningful results.

According to the NRC, less than 1% of a person's total annual background-radiation exposure comes from living near nuclear power plants. Much more comes from natural sources in the earth and air, and from some medical exams. Even so, "there are recurrent concerns among the public about increased cancer risks", says Terry Brock, the NRC's project manager for the Analysis of Cancer Risk in Populations Near Nuclear Facilities study. "We want the most current and most scientifically valid information to respond."

The last US-wide study, which found no evidence of a problem, was published by the National Cancer Institute in 1990. Now the NRC aims to update this effort by taking advantage of two decades of improvements in data and technology. For example, whereas the 1990 study considered only cancer deaths, better record-keeping means that researchers can now look for suspect patterns in cancer diagnoses. The previous study also lumped people by county, regardless of their actual distance from a nuclear plant. Global positioning systems, which can pinpoint where people live in relation to a reactor, should now help provide more meaningful results. A further step would be including estimates of radiation doses and looking for correlations with cancer incidence.

But Edward Maher, president of the US-based Health Physics Society, says that even if the study takes all of those factors into account, its statistical power will be too low.

"They may make the public feel better, but they're not going to see very low-dose effects."

"We feel that those studies don't have a lot of value," says Maher. "They may make the public feel better, but they're not going to see very low-dose effects." The money would be better spent on more laboratory research, he adds, where confounding factors such as the presence of other carcinogens can be effectively controlled.

Other experts say that the NAS should build on and improve a 2008 German study (C. Spix et al. *Eur. J. Cancer* 44, 275–284; 2008), which found a roughly 1.5-fold increase in cancers in children younger than 5 living within 5 kilometres of nuclear power plants. The authors concluded that plant emissions were too low to explain the effect, and similar studies done later in France and Britain failed to show any cancer increase, but some researchers have challenged their interpretation of the data.

Nevertheless, Steve Wing, an epidemiologist from the University of North Carolina at Chapel Hill, says that if there is an effect, it will be easiest to see in children and fetuses. Their rapidly dividing cells make them more sensitive to radiation than adults, and they haven't been exposed to as many possible carcinogens. Wing and his colleagues wrote an article on how best to design the NAS study in the 1 April issue of *Environmental Health Perspectives* (S. Wing et al. *Environ. Health Perspect.* doi:10.1289/ehp.1002853; 2011). Among other things, they emphasize the need to obtain radiation-dose estimates for the populations under study.

In the upcoming April meetings, the NAS committee will discuss nuclear power plant emission monitoring and hear study design suggestions. After a series of additional meetings, the committee aims to complete recommendations by the end of 2011, after which they will be posted online for public comment. If the committee decides to move forward with the study, another committee will be appointed next year to carry it out.

Some experts think that there is no effect for the study to find. Antone Brooks, a radiation toxicologist at Washington State University Tri-cities in Richland, says that DNA repair mechanisms and selective suicide of damaged cells are adequate to handle DNA damage below a certain dose threshold.

"We've lived in a sea of radiation throughout evolution," says Brooks. "The body knows how to handle low doses."

Others believe that the risk never vanishes. DNA repair mechanisms don't work perfectly 100% of the time, and even small amounts of radiation confer some risk, says Bill Morgan, the director of radiation biology and biophysics at Pacific Northwest National Laboratory in Richland. "It's a tremendous debate," he says.

Some will argue that if no effect is found, there isn't a problem, says David Brenner, director of the Center for Radiological Research at Columbia University in New York. "But the fact that you can't measure a risk in an epidemiological study doesn't mean that the risk isn't there."

## **Owners Of Mass. Nuclear Plant Say Facility Is Safe (BOSH/AP)**

Associated Press, April 7, 2011

The owners of the Pilgrim Nuclear Power Station in Plymouth, Mass. offered reassurances to state lawmakers Wednesday that the plant is safe, even as Japan continues to reel from the aftermath of a nuclear power disaster.

Entergy Corp. officials said that while Pilgrim's design is similar to that of the Fukushima plant, theirs have backup systems that the Japanese plant lacked, including extra diesel generators and better venting systems.

The comments came as Gov. Deval Patrick and top legislative leaders sent a letter to the U.S. Nuclear Regulatory Commission urging that it hold off on Pilgrim's relicensing request.

"We ... encourage you not to proceed with any steps toward relicensing until we can all be sure that we have learned what we need to from the experience in Japan," Patrick wrote in the letter, which was also signed by fellow Democrats Senate President Therese Murray, whose district includes Plymouth, and House Speaker Robert DeLeo of Winthrop.

Murray and state Attorney General Martha Coakley, both of whom testified at Wednesday's public hearing, urged federal officials to require the owners of Pilgrim to adopt a dry-cask method of storing spent fuel rods.

The plant currently relies on wet storage, similar to the Japanese plant.

Entergy officials said they are planning to move to a dry fuel storage system. They said plans are already under way and fuel rods could begin moving into the new \$65 million facility by 2013.

Even when the new system is in place, officials cautioned, spent fuel rods must still sit in water for five years to continue cooling down before they can be safely moved to dry storage.

Overall, they said, Pilgrim has greater safety measures than the Fukushima plant.

"We have two emergency diesel generators, each of which is redundant to one another and then we have a third redundant diesel generator that we refer to as the station blackout diesel," said Michael Balduzzi, senior vice president and chief operating officer of Entergy's northeast region.

The diesel generators are designed to deliver power for seven days, he said. The plant also has batteries designed to last eight hours.

New Orleans-based Entergy also owns the Vermont Yankee plant, which already has dry fuel storage, officials said.

Coakley faulted the federal government for continuing to collect ratepayer dollars for a national repository for spent nuclear fuel while failing to create the depository.

"Our residents, as ratepayers, have contributed to a \$24 billion fund that should have been used to make our communities safer almost 20 years ago," Coakley said. "They also continue to incur \$10 million a year for the cost of onsite storage at decommissioned sites."

Before the hearing, dozens of sign-holding activists chanted "no more nukes" during a rally on the front steps of the Statehouse.

Speakers at the rally said no new plants should be built in the U.S. and no existing ones relicensed until after a number of safety concerns are addressed.

Among those concerns, activists said, was what they described as the unsafe storage of spent fuel rods and submerged electrical cables at plants such as Pilgrim and New Hampshire's Seabrook that have been degraded by moisture as they age. They pointed out that the Fukushima accident was caused in part by the loss of electricity to the complex.

Officials from Entergy said they have tested submerged cables and found they were safe.

Paul Blanch, a retired Navy nuclear engineer, told the gathering that he was not opposed to the nuclear industry but believed regulation of commercial plants was lacking.

While it was unlikely that Massachusetts would be hit by a tsunami, nuclear plants could be compromised by other events such as hurricanes, tornadoes, floods and terrorist attacks, Blanch said.

"Can it happen here?" he said. "We all know that Pilgrim is about the same design as the Fukushima plants, and it can happen here."

## **Future Of New England Nuclear Power Center Stage On Beacon Hill Today (QPL)**

By Nancy Reardon Stewart

Quincy (MA) Patriot Ledger, April 7, 2011

Future of New England nuclear power center stage on Beacon Hill today

GateHouse Media, Inc.

Wednesday, April 06, 2011 12:00 AM

The future of nuclear power is a center-stage topic today on Beacon Hill, and not just the power produced by the Pilgrim plant in Plymouth.

Legislators are expected to hear from nuclear watchdog groups, industry experts, state health and environmental officials, and executives from the companies that own the three active nuclear plants in New England during an oversight hearing conducted by members of four joint committees – health, environment, public safety and energy.

State lawmakers do not have any real authority over the local nuclear plants, which are regulated federally by the Nuclear Regulatory Commission.

The hearing has been pitched as an opportunity for lawmakers to ask questions about safety concerns and procedures, and to gain a better understanding of the region's preparedness for a meltdown or some other nuclear-related disaster.

The NRC is considering Pilgrim's request for a 20-year extension of its operating license, which is to expire next year.

Today's hearing is expected to kick off with remarks by Attorney General Martha Coakley, who has been urging federal officials to take action concerning spent fuel stored at all three of New England's plants: Pilgrim, Vermont Yankee and Seabrook in New Hampshire.

The spent fuel has been kept at all three plants since they opened – since 1972, in the case of Pilgrim – and there are concerns about whether the storage is safe.

Mary Lampert, a Duxbury resident and founder of Pilgrim Watch, plans to focus her remarks on the dangers of storing spent fuel in a pool of water. This type of "wet" storage system has prevented officials in Japan from bringing the Fukushima Dai-ichi nuclear plant under control since the earthquake and tsunami that occurred March 11.

Lampert also plans to make several safety recommendations that state officials could implement, including enlarging the emergency zone around the Pilgrim plant. The zone currently extends 10 miles from the plant; Lampert advocates an increase to 25 miles.

The Nuclear Regulatory Commission has recommended that American citizens who are within 50 miles of the Dai-ichi plant evacuate the area.

Lampert also urges lawmakers to join the state's congressional delegation in asking President Barack Obama to enforce a 2002 law requiring the distribution of potassium iodide to people within 20 miles of a nuclear reactor and to conduct unannounced training exercises – ones that include schools – to make sure everyone is prepared.

## **Meeting Scheduled To Discuss Nuclear Plants (WMUR)**

WMUR-TV Manchester, NH, April 6, 2011

Lawmakers on Beacon Hill will shine a spotlight on two local nuclear power plants.

Hearings are scheduled Wednesday to discuss the safety of New Hampshire's Seabrook plant and the Pilgrim Nuclear Power Plant in Plymouth, Mass.

Massachusetts Senate President Therese Murray said she wants the public to know about the safety systems already in place and wants to hear from plant officials about what more could be done.

A rally is scheduled for 1:30 p.m. at the Statehouse in Massachusetts, followed by a public hearing.

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## **Antinuclear Sentiment Regains Its Voice At State House Rally (BOS)**

By Beth Daley

Boston Globe, April 7, 2011

A long-muted antinuclear movement in New England regained its voice today as more than 75 people held a State House rally to protest the region's aging nuclear plants and the increasing stockpile of radioactive spent fuel rods at them.

The protest was held shortly before a State House hearing where legislators were scheduled to hear representatives of the region's three nuclear plants – Pilgrim in Plymouth, Vermont Yankee in Vernon near the Massachusetts line, and Seabrook in New Hampshire – talk about the safety of their reactors in the wake of the unraveling Japanese nuclear crisis.

"We have lessons to learn here," said Mary Lampert of Pilgrim Watch, a group opposing an application by Pilgrim to extend its operating life by 20 years once its initial 40-year license expires next year. "Spent fuel is being stored in our reactors in an unsafe manner." Spent fuel rods stored at one of the troubled reactors in Japan caught fire and released radiation after last month's powerful earthquake and tsunami knocked out power and caused the plant's cooling system to fail.

Vermont Yankee and Pilgrim have designs similar to the crippled Japanese nuclear plant. Vermont Yankee received approval for a 20-year license renewal the day before the earthquake struck. Pilgrim is still waiting for approval, and Seabrook, which has a license that will expire in 2030, has applied for a 20-year extension.

Protesters held signs that read, "Safe Energy Saves Lives" and "Solar/Wind no Toxic Waste."

"It's not a time to panic but it's a great time to reconsider nuclear power's risk and our own safety," said Representative Lori Ehrlich, a Marblehead Democrat. "We need to make sure we can safely coexist with the energy generation on which we depend."

## **Activists Rally Against Nuclear Energy (WWLP)**

By Christine Lee

WWLP-TV Springfield (MA), April 6, 2011

BOSTON, Mass. (WWLP) - Energy and environmental groups rallied on Beacon Hill Wednesday, voicing concerns over nuclear energy in the aftermath of Japan's nuclear disaster.

Demonstrators say nuclear power plants in Plymouth, New Hampshire and Vermont are based on old and risky technology similar to Japan's Fukushima nuclear power plant. They're asking that no new reactors be built in the U.S. and that all licenses for existing plants be denied until all safety concerns are fully addressed.

Energy Consultant Paul Blanch says that while New England may not have tsunami fears, nuclear disaster could happen if there were ever an electrical power blackout.

"These events can be caused by hurricanes, tornadoes, floods, terrorist attacks," said Blanch, "and [Plymouth's] Pilgrim [nuclear power station] cannot survive core damage for more than four to eight hours."

Demonstrators are further concerned by the global impact of nuclear energy. Last week State Public Health Officials announced that low concentrations of radiation, originating from Japan, were found in a rainwater sample in Massachusetts.

"This is one of the things that's so crazy about nuclear power," said Environment Massachusetts Energy Advocate Ben Wright. "It is so risky that a disaster that happens actually on the other side of the world has effects here in Massachusetts."

The rally was held before a legislative hearing at the State House. Nuclear power plant owners from Plymouth's Pilgrim, Vermont Yankee and Seabrook in New Hampshire are scheduled to testify before lawmakers on their safety procedures.

## **Nuclear Protesters Take To Mass. State House (WBUR)**

WBUR-FM Boston, April 6, 2011

THE STATE HOUSE — State lawmakers held a hearing Wednesday afternoon to examine potential risks at the three nuclear plants in and near Massachusetts.

Before the hearing, several dozen people from various environmental groups held a rally in front of the State House, expressing their concerns about nuclear power. Groups including Environment Massachusetts, Clean Water Action and Pilgrim Watch are calling on the Nuclear Regulatory Commission to delay re-licensing for the Pilgrim Nuclear Power Plant in Plymouth.

Mary Lampert of Pilgrim Watch said one of the biggest worries is spent nuclear fuel being stored in containment pools at Pilgrim.

"We cannot take that risk," Lampert said. "We don't need that risk. We must push for on-site dry cast storage of this waste, until there's an off-site repository."

Critics say the plant in Plymouth is susceptible to disaster since it is the same design as the stricken Fukushima plant in Japan.

Marblehead state Rep. Lori Ehrlich, who has toured the area around the 1980s' Chernobyl disaster, said lawmakers are aware of the risks associated with nuclear power.

"It's not time to panic, but it's certainly time to reconsider nuclear power's risk and our own safety," she said, adding later, "We must do everything we can to make sure catastrophe like Chernobyl or Fukushima, Japan, never happens here."

## **NRC Says 2 Illinois Nuclear Plants Undergoing Special Inspections Over Equipment Concerns (AP)**

Associated Press, April 7, 2011

CHICAGO (AP) — The U.S. Nuclear Regulatory Commission says it's conducting special inspections of equipment issues at two Illinois nuclear power plants.

The agency said Wednesday that a special inspection team will review backup water pumps at the Byron and Braidwood generating stations. NRC inspectors in February raised concerns about whether the pumps would be able to cool the reactors if the normal system wasn't working.

The plants' operator, Exelon Corp., initially said the pumps would work, but later concluded they wouldn't.

The NRC says it'll also review the loss of alarms on control room equipment at the Braidwood plant during maintenance.

The agency says none of the issues posed an immediate threat to the public and have been resolved.

Exelon spokesman Marshall Murphy says the company supports the investigation as it proceeds.

## **U.S. Nuclear Regulator Reviewing 2 Illinois Plants (REU)**

Reuters, April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Extra Inspections At The Byron Nuclear Plant (WIFR)**

WIFR-TV Rockford (IL), April 7, 2011

BYRON (WIFR) — Special inspections will soon be taking place at the Byron Nuclear Plant due to concerns with the water pumps' backup system.

The U.S. Nuclear Regulatory Commission is investigating whether the pumps would be able to cool the reactors if the normal system wasn't working. This comes after the plants' operator Exelon Corp. initially said the pumps would work, but later concluded they wouldn't.

U.S. nuclear plants are now being looked at more closely due to the nuclear meltdown in Japan.

## **Public Meeting April 13 On Peach Bottom Power Plant Inspection Report (EXHARCO)**

By Bryna Zumer

Explore Harford County, April 7, 2011

Residents can hear about Peach Bottom nuclear power plant's inspection report at a public meeting to be held by the U.S. Nuclear Regulatory Commission April 13.

The commission holds such meetings annually at all its power plants to update the community about safety status, spokeswoman Diane Screnci said.

The meeting will be held at 6 p.m. at the Peach Bottom Inn, 6805 Delta Road in Delta, Pa., several miles from the plant. Attendees will have a chance to ask the NRC staff any questions about the plant's performance.

According to a press release from the commission, Peach Bottom operated safely during 2010 and had no performance indicators other than “green,” the safest level, and no inspection findings greater than green. The NRC spent 5,500 hours inspecting the facility during 2010, including two major team inspections.

Two resident inspectors from the commission routinely check the plant.

The areas being studied this year are emergency preparedness; radioactive material handling, storage and transportation; the dry cask storage of spent nuclear fuel; and the plant’s problem identification and resolution program.

“Our annual assessment reviews allow us to step back and gauge whether the nuclear power plants we regulate are on the right track in terms of performance and adhering to the highest levels of safety,” Bill Dean, administrator of NRC’s Region 1 office, said in a press release.

## **Beaver Nuke Plant Was Cited For Having Submerged Cables (BEAVCT)**

By Patrick O’Shea

Beaver County (PA) Times, April 7, 2011

SHIPPINGPORT - The Beaver Valley Nuclear Power Station was cited in a December report from the Nuclear Regulatory Commission for having electrical cables to safety systems the previous year in an environment where they could be submerged in water, which could cause the cables to fail.

However, a representative of FirstEnergy Corp., operator of the Shippingport plant, said the company already has modified its safeguards for the cable system to comply with federal requirements.

Todd Schneider of FirstEnergy said Wednesday that the NRC reviewed the situation during the plant’s most recent license renewal process and gave its approval.

Beaver Valley was one of nine plants since 2007 that were found to have cables that were improperly submerged in water, based on the NRC report, listed in a recent legal filing from the nuclear watchdog group The New England Coalition, according to The Associated Press. The coalition has been fighting the license renewal of a plant in Vermont that also was on the list.

Neil Sheehan, spokesman for the NRC, said his agency has been concerned about maintenance of underground electric cables at U.S. nuclear plants for many years and issued a generic letter in 2007 asking plant operators to gather information on cable failures. Information from the responses was included in last year’s report, which noted 269 cable failures throughout the country. Beaver Valley did not report any cable failures.

Sheehan said a major factor in the cable failures were submergence in water or exposure to moisture. The NRC is concerned about cable failures because they can lead to losses of safety system backups and possible plant shutdowns, he said.

It was a loss of power to Japan’s Fukushima nuclear plant that led to the release of radiation that has been seen throughout the world, including low levels of radioiodine-131, a byproduct of nuclear fission, in the atmosphere over several U.S. states, including Pennsylvania.

Sheehan said Beaver Valley was given a notice of violation after an Aug. 4, 2009, inspection in which inspectors said the plant failed to maintain safety-related cables in an environment for which they were designed. According to the violation notice, the cables affected were those for Unit 1 river water and Unit 2 service water.

Schneider said the cables at the Shippingport plant are suitable for underwater use, but he said FirstEnergy has made changes. He said a system is in place to remove water automatically from the mechanical maintenance manholes where water gathers, and the manholes now give off an alarm if water accumulates. Schneider added that the integrity of cables also is routinely tested.

## **New York On Nuclear: What’s Plan B? (POLITCO)**

By Darius Dixon

Politico, April 7, 2011

For years, Andrew Cuomo has been part of a chorus urging the shutdown of the Indian Point nuclear power plant north of New York City, calling it an unacceptable danger to the 17 million people who live within 50 miles of its reactors.

Now, as governor, Cuomo stands to preside over the plant’s potential retirement. But so far, he has yet to spell out a proposal for how the state would cope without Indian Point, which produces about 12 percent of the state’s power and provides a quarter of New York City’s electricity.

Cuomo has had reasons to be otherwise preoccupied, including a state budget fight that was resolved only last week, but the hole in his energy strategy is frustrating both supporters and opponents of Indian Point. It also leaves him just a brief window in which to propose serious changes to the state’s energy portfolio or walk back his many years of opposition to the plant.

"Whether Indian Point shuts down tomorrow or not, it needs to be alleviated because the plant's not immortal," said David Lochbaum, a nuclear safety expert with the Union of Concerned Scientists, a group that opposes nuclear power. "It's going to shut down at some point, so some planning needs to be done."

Others, such as New York City Mayor Michael Bloomberg, maintain that the city still needs the power plant.

"Short term, we have to have power if we are going to grow," Bloomberg said in March, "and Indian Point at the moment is a big part of that."

The debate has gained new urgency in light of the nuclear disaster in Japan, although a vocal and powerful opposition force was targeting Indian Point well before Sept. 11 drew attention to the two reactors' vulnerability to terrorist attacks. Opponents note that the people living within 50 miles of Indian Point make up almost 6 percent of the U.S. population — the highest concentration in the country for any nuclear plant.

At the same time, the state's Independent System Operator said in its annual reliability report in September that allowing both Indian Point reactors to retire would jeopardize the reliability of the electricity grid and create transmission choke points.

The initial 40-year licenses for the plant's two reactors are set to expire in 2013 and 2015. Even if the Nuclear Regulatory Commission offers extensions, the plant still has to deal with other environmental regulations and contend with the governor's bully pulpit.

In 2007, as state attorney general, Cuomo championed an effort with then-Gov. Eliot Spitzer to block relicensing of Indian Point.

"We cannot continue to roll the dice with the operation of Indian Point — there is simply too much at stake," Cuomo said in a statement at the time. He added, "The NRC has repeatedly ignored the danger that Indian Point poses to New Yorkers — from its vulnerability to a terrorist attack, to its incapability to withstand potential earthquakes, to its lack of a plausible evacuation plan in the event of a catastrophe."

Current Attorney General Eric Schneiderman has gladly taken the mantle and, although he's fallen short of targeting the plant for closure, has led perhaps the most vigorous legal assault on it so far — challenging everything from the NRC's onsite waste storage rules to Indian Point's fire-safety provisions.

But nobody has laid out a detailed plan to replace the lost electricity.

Although Cuomo campaigned partly on a promise to close Indian Point, his energy proposals ran thin on what would replace the plant. His "Power NY" agenda merely said repeatedly that "We must find and implement alternative sources of energy generation and transmission to replace the electricity now supplied by the Indian Point facility."

The most commonly floated strategy is one that rests on building transmission lines that would bring in hydroelectric power from Canada.

"More than planning, you have to build infrastructure," said Lochbaum, of the Union of Concerned Scientists. "There are already resources up in upstate New York and Canada. It's getting them to where all the users are."

On the other hand, he said, "no one wants the transmission lines in their backyard." So on whether Cuomo could build the lines before both reactors would close, Lochbaum said, "I wouldn't bet on that."

The plant's supporters say it would be foolish to shut down the reactors without a program to work around their loss.

"What is the alternative?" asked Matt Nelligan, director of the state Senate's Energy and Telecommunications Committee, whose Republican chairman, George Maziarz, supports keeping Indian Point open. "What's the impact on electricity prices in the state? People should be concerned about that."

"New York has some of the most diverse generation assets in the country, and nuclear is a part of that mix," Nelligan added. "It's very hard to figure out, given the parameters here, how you would replace 2,000 megawatts of power."

Environmentalists, though concerned about nuclear power in general, have also grown weary of the state's lack of progress in developing a workaround for the plant.

Cuomo "really should make it a priority to develop and implement, basically, a non-Indian Point energy plan," said Phillip Musegaas, an attorney and researcher for Riverkeeper. He said he's seen other governors make similarly lofty promises, only to leave them incomplete.

Riverkeeper filed a lawsuit against the EPA to make it enforce a section of the Clean Water Act requiring plant operators — like those at Indian Point — to install cooling water systems that are less harmful to aquatic creatures and avoid sucking them into the plant.

The increased awareness of the hazards of nuclear power in light of the Fukushima Daiichi crisis makes this the best time for the state to leap on the issue if it is serious about closing Indian Point, Musegaas said.

"Its location, more than anything else, just cries out for somebody to address this. And now is the time to do that, whatever the outcome," he said. "Even if they work on a plan and they come back and say, 'We can't do it without this plant,' I think the public deserves an honest assessment."

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## **Clearwater Conducts "Power Sail" To Discuss Indian Point (MIDHUD)**

Mid-Hudson News, April 7, 2011

Hudson River Sloop Clearwater, the organization, assembled environmentalists, scientists, public officials and students to take to the Hudson River aboard their famed schooner Clearwater and discuss the Indian Point nuclear power plant and alternative forms of energy production.

The sail was full of visual imagery as the boat passed in front of the nuclear plant as song and discussion continued.

Clearwater Executive Director Jeff Rumpf noted the nuclear plant disaster in Japan is what brought the Indian Point safety issue to the surface.

"There is a tragedy unfolding in Japan and we feel and we respect the horrors that are going on over there," he said. "Coming here today is related to that. There are real risks associated with Indian Point. Many of these risks are not even being considered by the NRC."

Speakers including representatives from the Lamont-Doherty-Earth Institute, environmental groups, and former Congressman John Hall.

Among the concerns expressed were the possibility of earthquake and the 10 mile radius evacuation zone around Indian Point.

## **U.S. Nuclear Output Declines To Lowest Level In Almost 17 Months (BLOOM)**

By Colin McClelland

Bloomberg News, April 7, 2011

U.S. nuclear-power output fell to the lowest level in almost 17 months as Entergy Corp. (ETR) shut the Waterford 3 reactor in Louisiana, the Nuclear Regulatory Commission said.

Power generation nationwide decreased by 411 megawatts, or 0.5 percent, from yesterday to 75,774 megawatts, or 75 percent of capacity, the smallest amount since Nov. 9, 2009, according to a report today from the NRC and data compiled by Bloomberg. Twenty-four of the nation's 104 reactors were offline.

Entergy Corp. idled the 1,157-megawatt Waterford 3 reactor about 25 miles (40 kilometers) west of New Orleans. The unit was operating at about 85 percent of capacity since Feb. 21 because of high vibration on a feedwater pump, the NRC said.

The Tennessee Valley Authority started the 1,104-megawatt Browns Ferry 2 reactor in Alabama. It was operating at 1 percent of capacity.

Two other reactors at the site, the 1,065-megawatt Unit 1 and the 1,115-megawatt Unit 3, are operating at full power. The plant is 84 miles north of Birmingham.

Duke Energy Corp. (DUK) boosted the 1,100-megawatt McGuire 2 in North Carolina to 55 percent of capacity from 10 percent yesterday. The 1,100-megawatt McGuire 1, is operating at full power at the site 15 miles north of Charlotte.

Southern Co. (SO) increased output from the 1,109-megawatt Vogtle 1 reactor in Georgia to 94 percent of capacity from 87 percent yesterday. The unit is returning from an outage that began March 7.

The plant is 26 miles southeast of Augusta. Another reactor at the site, the 1,127-megawatt Vogtle 2, is at full capacity.

Some reactors close for maintenance and refueling during the spring and fall in the U.S., when demand for heating and cooling is lower. The outages can increase consumption of natural gas and coal to generate electricity.

The average U.S. reactor refueling outage lasted 41 days in 2009, according to the Nuclear Energy Institute.

## **Residents Learn About Local Nuclear Plant Safety (CLHRLD)**

By Andrew Mitchell

Clinton (IA) Herald, April 7, 2011

CORDOVA, Ill. — The Exelon-owned nuclear power plant continued its public relations effort Tuesday night with an open house at the Cordova Civic Center.

Randy Gideon, vice president of the Quad-Cities Generating Station in Cordova, said that with the crisis in Japan still fresh in the public's mind, they wanted to show people how the plant along the Mississippi River is a safe and well-maintained facility.

"As an industry, we haven't done a good job educating the public," he said. "It's like, you've got atomic bombs over here and power plants over there. They're very different things."

Davenport resident Dwayne Luebbe said the crisis at Japan's Fukushima power plant is part of why he attended the open house. But he also has family living in Cordova, and he wanted to ease his mind about the plant's safety.

"I'm mainly concerned about spent fuel," he said.

Representatives from the federal Nuclear Regulatory Commission were also on hand to answer questions and inform those within the plant's 10-mile radius what to do should an emergency at the plant occur.

The commission regularly comes to Cordova to hold public meetings like the one Tuesday. Gideon said this meeting was the most well-attended one in years.

"Usually, it's just us and the NRC," he said.

Both he and communications manager Bill Stoermer, as well as NRC officials, reiterated their confidence in the plant's safety, and the extreme unlikelihood of a disaster like that of Japan's to hit Cordova.

Lawmakers in Iowa and Illinois have been debating whether to allow an expansion of nuclear power since the disaster, with some saying it's a vital and under-utilized source of dependable energy. Opponents say they are still worried about safety and environmental impact. Copyright 2011 The Clinton Herald, Clinton, Iowa. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.

## **NRC In Surry To Discuss Nuclear Plant Safety (WAVY-TV)**

WAVY-TV Norfolk, VA, April 7, 2011

The U.S. Nuclear Regulatory Commission held a public meeting Wednesday night to discuss the safety performance of Dominion Virginia Power's Surry nuclear power plant.

Officials say the agency found that both units at the Surry plant met all safety objectives in 2010 and was at a level that results in no additional oversight.

"I've been here most of my life and they haven't had any major incidents," resident Lawrence Weller said. "I guess they're okay. But like I say, the Nuclear Regulatory Commission passing anything doesn't give you a lot of comfort because it's another bureaucracy."

A letter sent from the NRC to plant officials addresses the plant's performance is available by clicking [here](#).

The agency works to ensure plants are being operated in a way that protects the environment and nearby residents.

"Each year, the NRC evaluates the safety performance of nuclear plants in a detailed and systematic way," NRC Region II Administrator Victor McCree said. "The inspections and oversight at Surry ensure that the plant is operated in a way that protects people near the plant as well as the environment."

But recent events regarding Japan's Fukushima Dai-ichi nuclear power plant have some Surry residents concerned.

"That could possibly be us one day," Paula Walker told WAVY.com. "That could happen here at some point, but that's kind of the chance we take."

"We constantly look to see if there are things they can do better," said Roger Hannah with the U.S. Nuclear Regulatory Commission.

Still other residents who watched the disaster in Japan admit they are worried.

"We could have the same thing other countries have, said Clarence Fields. " We could have a major disaster that could cause the nuclear power plant to go out of control and so I worry about that."

"I think it's on people's minds," said Judy Little. "What if? We all can say 'what if.'"

Plant officials say inspectors checked the plant from top to bottom and they say the Surry reactors are safe. They're now looking at Japan, to see what could have been done differently.

"Are there things that happened there?" Hannah asked. "Are there methods that can be used that could apply to plants in this country? The bottom line is that at this point we don't know."

The Surry nuclear power plant is about 17 miles northwest of Newport News. It contains two nuclear reactors. According to Dominion's website, Unit 1 began commercial operation in December 1972 and Unit 2 began operating in May 1973.

## **Report: Surry Nuclear Plant Deemed Safe, No Additional Oversight Needed (NWPRTNWZ)**

Newport News (VA) Daily Press, April 7, 2011

WAVY.com is reporting that a safety meeting held Wednesday night that dealt with safety issues at the Surry nuclear plant found that the plant met objectives in 2010.

According to the report, the U.S. Nuclear regulatory commission did not recommend any additional oversight for the plant. Fears of nuclear plant safety have arisen after the recent crisis in Japan involving their nuclear plant. For the complete report, click [here](#) to visit WAVY.com.

## **Interest In Surry Nuclear Safety Is Heightened (VAPILOT)**

By Linda McNatt

Hampton Roads Virginian-Pilot, April 7, 2011

Every spring, the U.S. Nuclear Regulatory Commission holds public information meetings to advise the public about the safety of nuclear power plants.

About two or three people show up.

This year, Gerald McCoy of the NRC said the agency seems to be operating under an increased public interest, likely because of the nuclear disaster in Japan.

"I've seen more response than I've ever seen before," McCoy said of the handful of people at Wednesday night's meeting in Surry County, where the nearby Surry Nuclear Power Station has operated since 1972.

In Virginia's North Anna power station community a few days ago, McCoy said 42 people showed up.

At the Surry meeting, several people aired concerns.

Two women who live on Hog Island Road, the rural roadway that leads to the power station, wanted to know how long they would have to get out of their home should a nuclear disaster occur at Surry.

Maybe they shouldn't leave their homes, the NRC staff told them. Maybe they would be safer inside, just as the people in Japan were instructed to do.

Both of Virginia's nuclear power plants currently have a safety ranking code of "green," meaning they are at the safest of four levels.

The most recent inspection at North Anna uncovered some concerns that briefly changed its safety ranking to "white," the second level. One concern had to do with a lightning strike, another with incorrect computer software, McCoy said.

Once the concerns were corrected, North Anna was considered back at green.

Surry has been green since its most recent inspection was completed. The first of its two reactors went on line in 1972, the second in 1973. They have a potential life expectancy of 60 years. The plant recently had its license extended through 2012.

NRC representatives are now in Japan, McCoy said.

"We're taking this as an opportunity to learn," he said.

Nobody can say yet just how serious the Japanese disaster might be because it's far too soon to get close, he said.

"We're going to take what we've learned and take our own look at it. We'll continue to build on that."

The good news is that neither North Anna or Surry are likely to experience either an earthquake or a tsunami.

## **Energy Secretary Steven Chu: 'Imprudent' To Close US Nuclear Plants (CSM)**

By Dave Cook, Staff writer

Christian Science Monitor, April 7, 2011

Energy Secretary Steven Chu had a distinguished scientific career before joining Barack Obama's cabinet. He shared the 1997 Nobel Prize in Physics, was a professor at Stanford University, and ran the Lawrence Berkeley National Laboratory. He was the guest speaker at the April 1 Monitor breakfast in Washington, D.C. Skip to next paragraph

Progress dealing with the damaged reactors at -Japan's Fukushima Daiichi complex:

"They are making headway, but [in one reactor] ... there [are] significant levels of radiation that impede progress."

Nuclear energy's continuing role in US energy policy:

"We still believe that that has to be part of our energy mix.... We do not want to be generating our electricity from one source.... We want to have a diversified source as the renewables pick up ... steam, as the price drops and they become cost [competitive] without subsidy."

Calls to close nuclear plants close to population centers like New York City:

"It is premature to say that these plants have to shut down. New York State, in partnership with the nuclear regulatory agency, is reviewing the issue.... It would be imprudent to say we have 20 percent of our energy [from nuclear] so shut them all down. That's like saying you have a major gas leak somewhere and an explosion kills a lot of people – we don't want to use natural gas anymore."

The impact of Republicans' proposed cuts in his department's clean-energy R&D budget:

"I would hope Congress would appreciate the fact that the research-and-development budget is vital for our future prosperity.... This is a very competitive world out there.... You turn off the spigot for this research and ideas, you will be saying, 'All right, United States, you are not in the race anymore.' And that would be tragic."

Climate change and the transition to cleaner energy:

"There are two very good reasons for transitioning to clean energy and a more energy-efficient economy. One of them ... is the climate imperative. There are risks as we go forward; each year, we are learning more about those risks. The evidence is getting stronger and stronger. And there is a very compelling case. But there is another reason. And the other reason is: The world is beginning to realize that they will need to transition to clean energy, they want clean-energy sources, and those clean-energy sources – we believe within the coming decade or decades, but not too many – will become competitive with fossil fuel."

## **Analyst: No VY Shutdown In 2012 (BRATBORO)**

By Bob Audette

Brattleboro Reformer (VT), April 7, 2011

BRATTLEBORO – According to Jefferies, an investment advising company, Entergy will continue to operate Vermont Yankee nuclear power plant in Vernon beyond the March 2012 cut-off date.

"That would force the state to file a lawsuit in federal court seeking a shutdown of the plant," stated the report, which was issued on Tuesday.

Entergy has a strong defense it can present in court, stated the report, in claiming that Vermont is attempting to pre-empt federal law and regulation.

"We believe it is presumptuous to assume that the plant will be shut down or that Entergy would lose the lawsuit," states the report.

"It does look like a showdown is coming," said Patrick Parenteau, professor of law and senior counsel at the Environmental and Natural Resources Law Clinic at the Vermont Law School.

However, he added, the state may have a pair of trump cards in its back pocket.

"The first is that the state doesn't have to go to court to shut Yankee down," said Parenteau. "It can simply order (Vermont Electric Company) to disconnect the plant from the grid."

Velco maintains the state's transmission lines and runs the power switchyard that connects Yankee to the New England power grid.

Kerrick Johnson, a spokesman for Velco, said it would not speculate on litigation that has not yet been enjoined.

"I would simply say that Velco will continue to follow all applicable federal and state laws," said Johnson.

Secondly, said Parenteau, "Entergy would be crazy to keep operating in open defiance of state law. That would put Entergy in the worst possible posture before the federal court. If Entergy wants to challenge the constitutionality of the state law, it would be better advised to seek a declaratory ruling from the court before the expiration date arrives."

Entergy recently received a new license from the Nuclear Regulatory Commission to operate Yankee for another 20 years past March 2012, its original expiration date.

However, when Entergy purchased the power plant in 2002, it signed a memorandum of understanding with the state that it would abide by the Vermont Public Service Board's decision on whether it should receive a certificate of public good, which is required for continued operation.

In 2006, the Vermont Legislature passed Act 160, giving itself the power to forbid the PSB from issuing a CPG without the Legislature's approval.

In January of 2010, the Vermont Senate voted 26 to 4 against allowing the PSB to issue a certificate of public good.

Parenteau also said that if Entergy continues the operation of Yankee, it is placing "a hefty wager on its legal theory that it is not bound by the contract it signed in 2002," because one of the conditions of the NRC's relicensing is that Entergy spend hundreds of millions of dollars on the replacement of the plant's condensers, which cool reactor water.

"And of course, there's still the business about 'misleading' the PSB about the tritium pipes," he added.

The Vermont Attorney General's office is in the process of investigating whether Entergy representatives knowingly gave false or misleading information to the state in 2009 about the status of buried and underground pipes at Yankee.

Sarah Hofmann, the deputy commissioner of the Vermont Department of Public Service, said the state expects Entergy to abide by its memorandum of understanding.

"If Entergy wants to operate the station after that time, it needs an affirmative vote by the Vermont General Assembly and a new certificate of public good from the Public Service Board," she said.

Vermont Attorney General William Sorrell that, according to Act 160, which is Vermont law enacted by the Legislature, Entergy can't continue to operate without a certificate.

"Not without a big fight," he said. "We will do all in our power to see that Vermont law is obeyed."

The Senate has already stated "very vehemently" when it voted 26 to 4 that it is against the plant's continued operation, said Sorrell.

"Consequently, there is no permission from the state for Yankee to operate beyond 2012 unless the Legislature changes its course," he said.

In its report, Jefferies noted that the state cannot refuse to issue a certificate based on radiological safety issues, which falls under the NRC's purview.

The state can only base its decision on the reliability of the plant and any impacts its operations might have on the environment.

"As for the plant reliability issue," stated the report, "Vermont Yankee has had an average capacity factor of more than 94 percent in the past five years ..."

The plant's National Pollution Discharge Elimination System permit will soon be up for review by the Vermont Agency of Natural Resources. It is unclear how that might affect the plant's operation. It's also not clear if the review will even be completed by March 2012.

Entergy might also have an argument in court based on a clause in the MOU that states operation of the plant has to "promote the general welfare" of the state.

"Our legal contact at the Vermont Department of Public Service noted that there is no standard in the law that defines 'general welfare,'" stated the report.

The report pointed out that Entergy was unable to finalize new 20-year power purchase agreements with Central Vermont Public Service and Green Mountain Power "because of the uncertain political environment."

Steve Costello, spokesman for CVPS, said both CVPS and GMP agreed on "a lot of things (with Entergy) but we never got a deal we thought we could get approval for."

And even if the two utilities had reached a tentative agreement with Entergy, "We wouldn't sign a contract without Vermont's backing," he said.

Last week, Entergy announced it had presented a proposal to sell 10 megawatts for 20 years to the Vermont Electric Cooperative in northern Vermont.

VEC's board of directors will vote on the proposal at the end of this month; however the company's president said many board members are hesitant to approve the contract in light of the ongoing nuclear crisis in Fukushima, Japan, and because of the storage of nuclear waste on-site in Vernon.

At the time the proposal was announced, CVPS and GMP both said they would not sign a contract to purchase electricity from Yankee unless Entergy sold the plant and it received a certificate of public good from the state. Bob Audette can be reached at [raudette@reformer.com](mailto:raudette@reformer.com), or at 802-254-2311, ext. 160.

## **Nuclear Opponents Worry About Vt. Yankee Decommissioning Costs (WCAXTV)**

By Susie Steimle

[WCAX-TV Burlington, VT](#), April 7, 2011

Opponents of nuclear power want to make sure Vermont Yankee sets aside enough money to safely dismantle the plant.

Three advocates led a discussion Tuesday night in Rutland focusing on the post-Yankee era. The plant could be forced to shut down next year.

Citizen's Awareness executive director Deb Katz says she's seen three nuclear reactors shut down in New England and worries about how much it will cost to close Vermont Yankee.

"The reality is all of the funds for decommissioning for all the nuclear reactors are underfunded because the NRC doesn't require them to have fully funded decommissioning and they're underestimated," Katz said.

Yankee may not shut down in 2012 despite Vermont lawmakers voting against a new license. The federal government OK'd a license for the plant. And Yankee officials say one option is to stay open without state approval.

## **UPDATE 1-Japan Crisis Casts Pall Over Nuclear Fuel Meeting (REU)**

By Nick Carey And Eileen O'Grady

[Reuters](#), April 7, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Nuclear Plant To Hold Emergency Drill (OCR)**

By Pat Brennan

[Orange County Register](#), April 6, 2011

The San Onofre nuclear plant will simulate an emergency next week in one of the largest drills of its kind, involving federal, state and local officials whose responses will be graded by the Federal Emergency Management Agency.

The three-day drill begins for San Onofre on April 12, when plant employees' pagers will be activated with news of the "emergency."

It is one of several regularly scheduled drills held at the plant each year, according to spokesmen for Edison and the California Emergency Management Agency.

"This is not something being precipitated by events in Japan," said Cal EMA spokesman Jay Alan. "But obviously, it takes on added interest."

This year, FEMA officials will evaluate how the agencies respond to the press.

The public affairs team for the San Onofre plant, run by Southern California Edison, will set up a mock information station on site, while a variety of agencies send representatives to an "emergency information center" in Irvine, also offering briefings to journalists.

The drill scenario is not being revealed in advance to employees to better duplicate real-world conditions, Edison spokesman Gil Alexander said.

The Irvine center, Edison's Saddleback Service Center on Bake Parkway, will be a hive of activity, with emergency responders from Orange and San Diego counties, the Camp Pendleton Marine Base and a number of cities on hand.

Cities and agencies taking part include San Clemente, Dana Point, San Juan Capistrano and the state Department of Parks and Recreation, among others.

## **San Onofre Emergency Readiness To Be Tested Next Week (SDUT)**

### **Long-planned drill to simulate release of radioactivity**

By Onell R. Soto

San Diego Union-Tribune, April 7, 2011

Even as a badly damaged nuclear plant across the ocean pours radioactive water into the Pacific, federal, state and local officials want to know how ready we are for an accident at the San Onofre nuclear plant.

Beginning April 12 and concluding April 14, state, federal and local officials will simulate the release of radioactivity from the plant.

Inside the plant, located in the northern reaches of San Diego County, workers will be simulating how to shut the plant down and secure radioactive fuel, said Gil Alexander, a spokesman for Southern California Edison, which runs the plant.

"There are a total of about 200 of us associated with the plant that will drill," he said. "At least half of those are focused on the plant."

The others will be working on communicating what's happening inside with the outside world, including government officials, news media and the public.

State law mandates these tests every few years.

The drill was planned by the California Emergency Management Agency months ago, long before the March 11 earthquake and tsunami that crippled Japan's Fukushima Daiichi nuclear complex.

There, a quake much larger than thought possible launched a tsunami that overran the oceanfront nuclear plant. In the weeks since, there have been explosions, meltdowns and radiation releases.

At San Onofre, federal officials will be observing how community leaders react in the face of a potential catastrophe, said John Hamill, a spokesman with the Federal Emergency Management Agency.

They will rate how they work and look for places to improve.

FEMA and the U.S. Nuclear Regulatory Commission will discuss what they find at a public meeting at 4 p.m. April 15 at the Capistrano Unified School District Education Center, 33122 Valle Road, San Juan Capistrano.

In addition to plant workers and state and federal officials, the exercise will also include representatives of Los Angeles, Orange, Riverside, San Bernardino and San Diego counties, and the cities of Dana Point, San Clemente and San Juan Capistrano, and the Capistrano Unified School District.

## **San Onofre Power Plant Plans Mock Radiation Drill (SFC)**

San Francisco Chronicle, April 7, 2011

The San Onofre nuclear power plant will test its emergency preparedness next week with a drill that will simulate the release of radioactivity.

The exercise, scheduled for April 12 through 14, was planned long before Japan's Fukushima Dai-ichi (deye-ee-chee) nuclear complex was crippled by a magnitude-9 earthquake and tsunami.

The California Emergency Management Agency planned the drill, which is required of nuclear plants every few years.

Southern California Edison, which runs San Onofre, says workers will simulate how to shut down the plant and secure radioactive fuel.

## **More Seismic Studies Expected By SONGS (SANCT)**

By Stacie N. Galang

San Clemente (CA) Times, April 6, 2011

Southern California Edison, the owner of San Onofre Nuclear Generating Station, expects to conduct further studies of seismic activity near the power plant.

SCE spokesman Gil Alexander said the utility company hopes to submit its request to the California Public Utility Commission "very soon." He would not be more specific about the date.

The requested study follows on SCE's February 2 report evaluating seismic conditions near the power plant. The earlier report included seismic and tsunami hazard evaluations "based on the latest research."

The additional studies to be requested would be conducted by the power plant itself and would include 2-D and 3-D imaging and further tsunami analysis.

SCE had planned to propose the study prior to the events in Japan but has since made some changes in light of new concerns, Alexander said.

"Edison is very close," he said. "We wanted to review this proposal in light of the initial information we're gathering from Japan. However, we did not want to wait on all of the lessons because that will take months."

When preparing the original request, the cost to complete the research had been estimated at between \$25 to \$30 million but that could change with proposal revisions. The cost will be passed on, in part, to ratepayers.

"The final price tag is still under review," the spokesman said.

Once SCE submits its request to the CPUC, the commission must vet and approve it before the utility can go forward with the research. Edison hopes to start within about six months.

## **San Onofre Plans Major Emergency Test (KPBS)**

By Dwane Brown

KPBS-TV San Diego, CA, April 6, 2011

One of the largest emergency tests in years will be conducted at the San Onofre nuclear power plant next week. Operators want to know if we're prepared for a natural disaster.

About 200 workers will be simulating how to shutdown the plant north of San Diego and secure radioactive fuel. Gil Alexander is with Southern California Edison the company in charge of San Onofre. He said this will be the largest drill of its kind to insure public safety.

"We believe the plant is safe (from) any type of natural disaster," he said.

State law requires nuclear plants be tested every few years in California. The two-day drill begins on Tuesday. It was planned long before the nuclear crisis in Japan.

Energy experts from California and the federal government will observe and grade the exercises.

A former San Onofre plant manager filed a lawsuit against the company last month. He claims he was fired because he spoke up about safety concerns his workers had.

## **San Onofre Nuclear Plant Concerns (ABSCNBTB)**

By Yong Chavez

ABS-CBN TV, April 6, 2011

LOS ANGELES – Los Angeles County has the biggest Filipino community in America.

Many pinoy live and work within driving distance to the San Onofre Nuclear Power Plant in San Clemente, California. The nuclear crisis in Japan has made people who live near power plants to be very worried.

CBS News recently came out with a report that had ex-employees alleging serious safety violations against the plant that generates electricity for southern Californians.

A spokesperson for Southern California Edison, the company that runs the plant says there's no reason to panic.

Gil Alexander, Spokesperson for Southern California Edison said, "For 42 years there hasn't been a single serious injury or death from radiation."

But he advised people to always be prepared.

Alexander added, "We live in California and we should be aware that this is a state that can experience earthquakes. We should all have an emergency plan with our families."

Despite assurances, Jay Fermin still worries about San Onofre because his daughter regularly travels to the city where it's located.

Fermin, a member of Los Angeles Fire Department's Community Emergency Response Team, attended the disaster preparedness seminar organized by the Philippine Disaster Relief Organization and the L.A. consulate.

There are 104 nuclear plants operating in the country, two are in southern California.

James Featherstone, General Manager for Los Angeles Emergency Management said, "Nuclear facilities, San Onofre and Diablo Canyon, I'm sure they're re-assessing what they would do to the communities proximal to their locations in the event they have something like that."

Fermin added, "If there's a problem in that plant, there's only two options, you find a shelter or you get the hell out of the way".

For more information contact Yong Chavez at [ybchabs@yahoo.com](mailto:ybchabs@yahoo.com)

## **U.S. Homeland Security Holds Drill In N.J., N.Y., Connecticut To Test Terrorist Threat Response (NSL)**

By Richard Khavkine

Newark (NJ) Star-Ledger, April 7, 2011

A five-day drill involving several levels of law enforcement and overseen by the U.S. Department of Homeland Security began in New Jersey, New York and Connecticut today, the federal agency announced.

The purpose of the full-scale exercise is to evaluate and hone a program that guards against possible future threats of illicit radiological and nuclear weapons and materials, a department release said. The exercise is not related to a specific threat.

First responders and law-enforcement officers from 150 agencies in all three states are participating in the so-called Securing the Cities program.

In Essex County, roadside checkpoints will be set up on Saturday in Belleville and Nutley to test law enforcement readiness in case of a true emergency, the prosecutor's office said. The county sheriff's department is also participating.

"The Securing the Cities program is a key component of the Department's efforts to protect the nation from terrorist threats," the head of the Homeland Security agency, Janet Napolitano, said. "The STC pilot program has helped build a capability among first responders to help detect illicit radiological and nuclear weapons or materials in a major metropolitan area that simply did not exist four years ago."

The program began in 2006 as a pilot project for the New York City region, providing equipment, tools and training through cooperative agreements to the New York City Police Department, the lead agency for the STC program, federal officials said. That department in turn distributes grant money to other participating agencies.

In all, STC has provided more than 5,800 pieces of detection equipment, trained nearly 11,000 personnel, and conducted more than a hundred drills.

## **Hanford Nuclear Plant Due Back On Line This Summer (AP)**

**A 78-day refueling outage that began Wednesday at the Columbia Generating Station will keep the Hanford nuclear power plant off line until the end of June.**

Associated Press, April 7, 2011

A 78-day refueling outage that began Wednesday at the Columbia Generating Station will keep the Hanford nuclear power plant off line until the end of June.

Energy Northwest says it will be the largest and longest outage in the 26-year history of the plant, which is located on the Hanford nuclear reservation in southeast Washington.

Spokesman John Dobken told KONA more than 1,800 outage workers were hired from across the country for the \$154 million project. They'll be replacing 244 of 764 fuel assemblies and replacing the condenser, which turns steam from the turbines back into water for reuse.

Spring was selected for the outage because the Bonneville Power Administration is getting plenty of electricity from hydroelectric dams this time of year.

## **Supervisors Want To See County Evacuation Plans (SANTAMAR)**

By April Charlton

Santa Maria (CA) Times, April 7, 2011

Despite the best-laid plans to deal with natural disasters or a nuclear crisis, San Luis Obispo County emergency services officials were reminded this week that planning for human behavior is next to impossible.

Office of Emergency Services staff briefed the Board of Supervisors Tuesday on the county's emergency planning and management process, which includes specific plans for earthquakes, tsunamis and nuclear power plant crises.

The briefing followed a local tsunami warning issued March 11 for low-lying coastal areas after a magnitude-9.0 earthquake rocked Japan and a subsequent tsunami badly damaged the Fukushima Daiichi nuclear power plant.

Although a large portion of the Office of Emergency Services' presentation focused on how an emergency at Diablo Canyon Power Plant would be handled, staff didn't present a comprehensive overview of the county's evacuation plans.

And the supervisors want to see those plans and discuss any improvements that could be made to the process of getting county residents and visitors out of harm's way.

"Plans can look good on paper," said Chairman Adam Hill. "But human panic isn't something that you can really drill for."

Hill acknowledged it would be almost impossible to simulate a mass-scale evacuation in the county but noted that's what people are most concerned about — getting to safety in the event of a disaster.

"We can't assess what we need to do better unless we do it," Hill added.

Because Diablo Canyon Power Plant is located up the coast from Avila Beach, the county receives reimbursement funding from Pacific Gas and Electric Co. for its emergency-planning program.

The Office of Emergency Services has about a \$1.5 million annual budget, with the bulk of the funding coming from PG&E, which owns and operates the nuclear facility on the coast.

"It allows us to have a very robust emergency-planning program ... and to do a tremendous amount of training and planning," said Jim Grant, Office of Emergency Services director.

In addition to emergency-preparedness training, the Office of Emergency Services also is required to participate in regular emergency-preparedness exercises, such as simulating a radioactive plume released from Diablo Canyon.

Almost 7,000 training hours were logged last year, officials said.

Emergency Services also is responsible for developing and implementing the county's various evacuation plans that would be triggered if there was a radiation leak at Diablo Canyon or a major earthquake happened on the Central Coast.

Plans direct motorists to leave the county using either Highway 101 or Highway 1 or to be sheltered in place. The Sheriff's Department and California Highway Patrol help implement traffic control in the event of an evacuation, Grant said.

Staff is expected to present the county's evacuation plans in detail at a future meeting.

## **SLO County Discusses Emergency Evacuations (SLOT)**

By David Middlecamp

San Luis Obispo Tribune, April 7, 2011

Concerns about how and whether people would be able to evacuate if there were a radiation leak at Diablo Canyon nuclear power plant emerged at an emergency preparedness discussion by the county Board of Supervisors on Tuesday.

The county's emergency plans call for residents in danger of exposure to radiation from a Diablo Canyon leak to either evacuate or create a shelter where they are, known as sheltering in place. Supervisor Adam Hill said he is concerned about traffic congestion on Highway 101, noting that even a car show in Pismo Beach can cause highway slowdowns.

"We have plans on paper, but when you have panic, it's not something you can train for," he said.

Several members of the public agreed, saying that a radiation leak at Diablo Canyon would most likely be caused by an earthquake, which could damage roads as well. The disastrous earthquake, tsunami and nuclear accident in Japan last month showed how difficult it is to plan for multiple large-scale disasters.

"This problem is unsolvable," Linda Seeley of San Luis Obispo said.

Supervisors agreed to schedule a full discussion of evacuation planning at a later meeting. Tuesday's discussion was the first in what is likely to be a series of overviews of emergency preparedness in the aftermath of the tragedy in Japan.

County Administrator Jim Grant, who also heads the county's Office of Emergency Services, said local officials would benefit from the fact that Diablo Canyon is surrounded by a six-mile buffer zone that could allow some extra time to implement evacuation plans.

One challenge of evacuation planning is the fact that officials cannot hold a full-scale drill with some people actually leaving the area.

"It would be incredibly disruptive, and I don't know how we would do that," Grant said.

The disaster in Japan unfolded gradually, which gave emergency officials and residents there some time to react, Grant said.

Tracey Vardas, an emergency planner at Diablo Canyon, said studies have shown that panic can be avoided if the public receives clear, timely and accurate emergency information from trusted officials.

Officials had an opportunity to use their emergency protocols for real March 11 when a series of small tsunamis spawned by the Japanese quake rolled ashore. Campers were evacuated from beaches and a reverse 911 system was used to alert residents in low-lying coastal areas, said Ron Alsop, county emergency services coordinator.

Because of Diablo Canyon, San Luis Obispo County has much better emergency planning than other counties of comparable size, Grant said. The county's emergency planning budget is \$1.5 million, with PG&E supplying nearly three-quarters of that amount.

Federal rules require that emergency plans be developed for a 10-mile radius around nuclear plants. State and local authorities decided to expand the emergency planning zone around Diablo Canyon. Diablo Canyon's zone extends from 18 to 22 miles, said Kelly Van Buren, a county emergency services planner. The larger zone allows more agencies to be brought into the planning process, she said.

## **Nuclear Plant Bill Passes Senate Committee (STLBIZ)**

By Kelsey Volkmann

St. Louis Business Journal, April 7, 2011

The Missouri Senate Commerce, Consumer Protection, Energy and the Environment Committee approved legislation Tuesday that would allow Ameren and other utilities to pass on to customers the \$45 million cost of a site permit for a new nuclear plant in Callaway County.

The measure passed out of committee with a 7-2 vote.

Irl Scissors, director of Missourians for a Balanced Energy Future, a pro-nuclear energy group that supported the legislation, lauded the bill's passage.

"Thousands of people from across the state have made their voices heard and demonstrated to our lawmakers just how serious Missouri is about keeping nuclear power — and the jobs, economic investment and clean, affordable energy that come with it — an option for our state," he said. "... Now the responsibility for moving this bill forward falls to Senate Pro Tem Rob Mayer, who has previously delayed this legislation. We urge him to allow this bill to have a fair and open debate and an up or down vote on the Senate floor — and to bring it to a vote soon. Without action from Senate Pro Tem Mayer, nuclear power will no longer be an option in Missouri — we urge him to act in favor of this critical legislation."

Some consumer advocates and business customers blasted the measure, saying it does not contain enough protections against cost overruns and lacks any guarantee that a plant will be built.

The Missouri Coalition for the Environment said Senate Bill 48 repeals part of a consumer protection law that saved Missouri ratepayers nearly \$400 million after the completion of Ameren's first Callaway nuclear reactor.

The legislation lacks "a true hard cap, a true rebate provision and true assessment funding for the Office of Public Counsel," said the Fair Energy Rate Action Fund, which represents some of Ameren's biggest customers, including AARP, Anheuser-Busch, Consumers Council of Missouri, Ford Motor Co., the Missouri Association for Social Welfare, Missouri Retailers Association and Noranda Aluminum.

"It is unfortunate adequate provisions were not added that will protect consumers who are being forced to pay for this early site permit, especially with no guarantee a new plant is built," said Chris Roepe, director of FERAF. "Consumers took a big hit today and this legislation would overall weaken the (Public Service Commission) process and hurt ratepayers."

## **Activists: Nuclear Waste Danger For Asheville Area (ASHCT)**

By James Shea

[Asheville \(NC\) Citizen-Times](#), April 7, 2011

High-level nuclear waste could be transported through Western North Carolina if a plant in South Carolina is used to store nuclear waste, experts told a crowd at UNC Asheville on Tuesday.

The Savannah River Site in Aiken, S.C., is being considered as a place to store waste from nuclear power plants around the country.

The waste is currently stored at nuclear plants across the country. Business owners near the Savannah River Site have embraced the proposal, making the site a viable option, said Mary Olson of the anti-nuclear power Nuclear Information and Resource Service and a member of a federal commission examining the waste issue. There are 103 operating nuclear power plants in the U.S., and they create 95 percent of the high-level nuclear waste in the country, Olson said.

"The biggest 600-pound gorilla in the room is what to do with this nuclear waste," Olson said.

She said the transportation of waste on highways carries risk, Olson said. The containers could leak, and an accident is always possible, Olson said. The trucks, however, could travel through Atlanta or other routes.

But the experts at the meeting were skeptical. They thought the relatively sparsely populated mountains would be the preferred route.

"We have less population in Western North Carolina," Olson said.

A nuclear waste depository was considered in the 1970s for Sandy Mush. The site was rejected by the Department of Energy, but Olson said the site could be reconsidered because it has the preferred geology.

"The problem with our granite is that it is closest to the Savannah River Site," Olson said.

Paul Gallimore helped fight the original proposal in Sandy Mush.

He wants the community to be aware that it remains a possibility and to express opposition to storing nuclear waste in Buncombe County.

He said the United States should be looking at other energy options besides nuclear power.

"That is the overriding question," Gallimore said. "What kind of energy options are we going to have in the 21st century? Let's not limit our options."

Ned Doyle, host of "Our Southern Community" radio show, said nuclear energy is not a viable option economically.

He said the nuclear industry is heavily subsidized by the federal government, and the government will have to pay for the disposal of the waste.

"All forms of sustainable energy are more affordable than nuclear power," Doyle said.

## **State, Energy Officials: Oyster Creek Better Equipped Than Japanese Plant To Withstand Disaster (RHNNJ)**

By Salvador Rizzo

Record and Herald News (NJ), April 7, 2011

State, energy officials: Oyster Creek better equipped than Japanese plant to withstand disaster

Their blueprints may be similar, but New Jersey's Oyster Creek nuclear power plant can withstand a disaster better than Japan's troubled Fukushima Daiichi plant due to safety upgrades built in over the years, state officials and energy industry executives told lawmakers Wednesday.

Three Assembly committees jointly heard testimony from the state's top environmental officer, the state director of Homeland Security, and nuclear plant executives from Exelon and PSE&G, who said a disaster like the one besetting Japan is unlikely to strike any of New Jersey's four nuclear plants.

"I think the public does not have to concern itself that what happened in Japan could happen in New Jersey," said Charles McKenna, state director of Homeland Security.

Officials said President Obama has ordered comprehensive reviews of all nuclear facilities, in addition to the regular evaluations plants must undergo by law. Oyster Creek in Lacey Township was found to be safe by the federal government at its last review in October 2009, and Hope Creek in Lower Alloways Creek Township will be inspected on May 22, McKenna said.

PSE&G implemented "over 100 procedures" after 9/11 to ensure its plants could still run safely in the event of a disaster such as a plane crash, said Bill Levis, president of PSE&G Power. He said the company is also looking at what to do in the event of two disasters striking at the same time. Experts say the Fukushima reactors withstood the 9.0-magnitude earthquake but not the tsunami that followed.

DEP Commissioner Bob Martin disclosed that milk and water samples taken in New Jersey showed no signs of radiation stemming from the Japanese disaster. Air and rainwater samples were also found to be safe, though they contained trace amounts of radiation "far below" the level of concern.

The panelists said New Jersey reactors similar to the ones in Japan have received safety enhancements, such as water-tight doors, improved ventilation systems, longer battery capacity to keep the reactors' cooling systems running during a power outage, and strengthened infrastructure.

But environmentalists said those upgrades were done decades ago, and many safety issues still gave cause for concern.

"I think (the hearing) was designed to say, 'Everything's fine, we're doing all these things,' when they haven't learned anything about what happened in Japan or Chernobyl," said Jeff Tittel, New Jersey director for the Sierra Club. "It's all about public relations rather than public policy."

He said Oyster Creek, the nation's oldest nuclear reactor, had corrosion problems and radioactive leaks recently because of its age.

Tittel also criticized the lack of independent analysts at the hearing, which heard testimony only from state officials and industry representatives. Assemblyman Upendra Chivukula (D-Somerset), one of three lawmakers chairing the hearing, said "this was more of a briefing rather than a hearing; we can always bring independent professors at a later date."

Martin said a nuclear review task force created by Governor Christie met for the first time last week. It will analyze emergency communications and power supply, and evaluate the minimum evacuation radius of 10 miles from a nuclear incident. The panelists said that may increase to up to 50 miles.

Salvador Rizzo: (609) 989-0341 or [srizzo@starledger.com](mailto:srizzo@starledger.com)

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## **NRC: Japan No Reason To De-license NJ Nuke Plant (AP)**

By Wayne Parry

Associated Press, April 7, 2011

TRENTON, N.J. (AP) – The U.S. Nuclear Regulatory Commission says nothing it has learned from the Japanese nuclear disaster warrants revoking the license of the nation's oldest nuclear power plant in New Jersey.

The agency filed its response Tuesday to a federal appeals court that had asked if the Japanese crisis should lead to a re-thinking of the Oyster Creek Nuclear Generating Station's current 20-year license that was awarded two years ago.

The agency says that while it is studying the ongoing crisis in Japan, it remains confident of the safety of U.S. nuclear plants.

"Licensed nuclear power reactors in the United States are currently safe and may continue to operate under NRC's comprehensive scheme of safety regulations and inspections, pending development of any new safety measures that emerge," the agency wrote.

A coalition of anti-nuclear groups is challenging Oyster Creek's 2009 license renewal. It asked the appeals court to reconsider whether Oyster Creek's license should have been renewed, citing concerns about its age and wear and tear on the plant, which went online in 1969.

The New Jersey Sierra Club says the NRC has not learned anything from the Japanese disaster.

"NRC stands for No Regulatory Commission," said Jeff Tittel, the group's director. "The agency is a cheerleader for industry and looks the other way it comes to relicensing, especially around issues of public safety."

"The NRC should be saying license renewals across the country should be on hold while we reevaluate the safety of these facilities," said Tittel. "This brief shows the NRC will not learn any lessons from Japan, just as they did not learn any lessons from Three Mile Island or Chernobyl. Given what we are learning about Japan, it does not make any sense and could be outright dangerous to keep Oyster Creek open."

The NRC noted in its response that it adopted new standards and practices following Three Mile Island, and the Sept. 11, 2001, terrorist attacks.

"As with the post-TMI and post-9/11 regulatory enhancements, any lessons learned from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation," the agency wrote. "No safety, technical, or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review."

Oyster Creek's license allows it to operate until 2029. But its owners, Chicago-based Exelon Corp., struck a deal with New Jersey in December to shut Oyster Creek 10 years early, in 2019. In return, the state dropped its insistence that Oyster Creek build costly cooling towers to drastically reduce the number of fish and small aquatic creatures the plant's operations kill each year.

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## **Oyster Creek Nuclear Power Plant Almost Identical To Fukushima, So Why Do Residents Support It? (WPIX)**

WPIX-TV New York (NY), April 7, 2011

Even though it's the oldest nuclear power plant in the country and its reactor is virtually identical those which exploded in Japan, the Oyster Creek Nuclear Power Plant in New Jersey is safe to operate.

That's what the Nuclear Regulatory Commission said in a brief filed this week in a federal case that seeks to have the court review Oyster Creek's license in the wake of the Japanese nuclear emergency. Some of the people who live within sight of the New Jersey reactor agree with the NRC, despite the similarities between the New Jersey and Japanese facilities.

The Fukushima Daiichi reactors were designed and built by General Electric in 1971, two years after it built the Oyster Creek nuclear power generating facility. Oyster Creek is seventy miles south of New York City, in Lacey Township. Nearly four weeks after the Fukushima emergency, some Lacey Township residents like Joe McLaughlin call their potentially radioactive neighbor "a mixed blessing, particularly so now."

He says he's just being realistic, and is not insulting his town. In fact, he and his wife Mary Jane are arguably like the official emblem of the township where they live. The Lacey Township crest prominently features a drawing of an atom, representing nuclear power as part of the way of life in Lacey Township.

The McLaughlins own a historic Victorian home that faces a marina, but as Joe McLaughlin points out, the home also faces something else. "The plant is about a mile (away)," he told PIX 11 News as he pointed south from his front porch. "You can see the stack and the light flashing on top, across the line of trees across the (marina) here."

In the wake of Japan's tragedy, they're among residents paying a bit more attention to having to get away from the Oyster Creek Plant in an emergency. Even though the power plant's safety record shows that a catastrophic event is highly unlikely, Mary Jane McLaughlin is skeptical that an evacuation could be carried out smoothly if an emergency were to occur. "If we were to leave here by car, I think it would be a slow process," she said.

Lacey Township Police Chief William Nally, however, says that emergency responders are prepared for the worst, pointing out that every year his department joins state and federal emergency managers in a major emergency drill. "(It) always involves a radiological emergency at the power plant, through various emergency sources, a storm, flooding, a fire."

The chief says that the drill includes a mock evacuation of the 27,000 people who live in the township. However, anyone who has ever been to down to the Jersey Shore in the summer knows that tourists can more than double the population, and in the process transform emergency evacuation routes like U.S. Route 9 into virtual parking lots.

Despite that, last month's Fukushima emergency gives Chief Nally confidence about evacuating his township. "As we've seen in Japan," the chief says, "These kinds of situations, like a crisis at the power plant, would take time to develop."

The chief feels that time is on his side. It took a full day for any reactor at the Fukushima plant to go from being damaged to leaking radiation, and two more days after that to erupt and destroy containment buildings.

Also working in local emergency managers' favor in a crisis are extra resources they have been able to acquire to help move people away from the plant. Ironically, they got those resources as a result of the plant being in Lacey Township in the first place.

"We've acquired close to a million dollars in assorted equipment through various grants related to the fact that we host the power plant," Chief Nally told PIX 11 News.

If an emergency were to happen, the department and its 43 officers would need every bit of equipment it can get its hands on, particularly since about a third of the homes in the township are on an island on which the plant sits as well. Those homes have only one paved road in and out, Beach Boulevard.

Then again, being on an island, some may consider doing the same thing as the McLaughlins in case the worst happens. "We could leave by boat," Mary Jane McLaughlin says, "and we have a boat across the street."

That sort of access to an oceangoing emergency route is a hidden benefit of the nautical lifestyle that attracts many people to settle in Lacey Township. One reason they can afford that lifestyle is that the nuclear facility is required by the state of New Jersey to pay them \$11.1 million a year, as Lacey Township's mayor said in an interview.

"The energy tax... covers 40 percent of the municipal budget," Mayor Gary Quinn told PIX 11 News. "It does allow us to keep the tax rate significantly lower than other townships in the area."

But people in those other townships aren't too happy that Lacey gets benefits for having the Oyster Creek plant, while its neighbors get no benefits, but still have to cope with its dangers.

"The townships, about 20 of them, passed resolutions for a shutdown of Oyster Creek," Jersey Shore Nuclear Watch chairperson Edith Gbur tells PIX 11 News, referring to actions some local governments took in the months after 9/11. Looking ahead, she says, "I think it's a matter for the people in Lacey Township feeling that there are other alternatives to keeping the plant open."

That plant will close in 2019, ten years earlier than its license allows. The early closure is the result of an agreement the facility's operator, Exelon Corporation, made with the state of New Jersey late last year. In exchange for Exelon not having to install cooling towers at the plant, as the state required, it agreed to cut its 20-year federally licensed operating period in half. Exelon Corporation did not respond to interview requests by PIX 11 News in relation to this story.

In the eight years that remain in the plant's power-generating life, township leaders hope to attract another energy plant, possibly a natural gas or wind facility, to the Oyster Creek site. Critics of the nuclear plant hope that no nuclear emergency occurs in the meantime.

## **More Fallout From Japan Detected In Tennessee (TENN)**

Tennessean, April 7, 2011

Air monitoring in the state has shown slight amounts of a radioactive isotope linked to the nuclear power plant in Japan that was damaged by an earthquake and tsunami, according to the Tennessee Department of Environment and Conservation.

The amounts of Iodine-131 are extremely low and don't present a health risk, according to an agency email.

Routine monitoring detected the substance from air samples taken March 29 from near the Sequoyah and Watts Bar nuclear power plants, as well as a monitor in Dayton, Tenn.

"We can detect these isotopes at extremely low levels," Environment and Conservation Commissioner Bob Martineau said. "These levels do not indicate a health concern of any kind, and we will continue to monitor."

The results range from 0.044 to 0.089 picoCuries per cubic meter of air. These levels are within the range expected and are far below levels of public health concern.

Rainwater samples at three sites in Oak Ridge also showed slight amounts of I-131, according to EPA information. Similar results are seen in some nearby states.

## **Radiation Detected Is 'Far Below' Health Concern (KNOXNS)**

By Frank Munger

Knoxville News Sentinel (TN), April 7, 2011

The Tennessee Department of Environment and Conservation reported Wednesday that air samples at multiple sites had confirmed the presence of iodine-131 linked to the crippled Japanese nuclear facility. But state officials emphasized that the levels of radioactivity are very low and of no health concern to Tennesseans.

In information released to the news media, TDEC said the air samples were collected March 29 from fixed monitors near TVA's Sequoyah and Watts Bar power plants, as well as from a monitor in Dayton. The state said the I-131 levels ranged from 0.044 to 0.089 picocuries per cubic meter of air.

"These levels are within the range expected and are far below levels of public health concern," the statement said.

TDEC Commissioner Bob Martineau said the state monitors for radiation in the environment on a regular basis.

"We can detect these isotopes at extremely low levels. These levels do not indicate a health concern of any kind, and we will continue to monitor," Martineau said in a statement.

Meanwhile, Oak Ridge National Laboratory also said it had confirmed the slightly elevated presence of I-131 at four air monitors near the lab.

Joe Herndon, director of environment, health, safety and quality at ORNL, said the average of the four results was 0.0529 picocuries per cubic meter of air. Those levels are of no health significance, he said.

"I'm just happy the numbers are so low," Herndon said. "That's next to nothing."

Senior writer Frank Munger may be reached at 865-342-6329.

## **Japan Radiation Found At Sequoyah (CHTNGA)**

By Pam Sohn

Chattanooga Times Free Press, April 7, 2011

Air samples collected at the Sequoyah and Watts Bar nuclear plants last week detected radioactive isotopes from the Fukushima Dai-ichi nuclear crisis in Japan, but local officials say there has been no threat to public health.

Tisha Calabrese-Benton, spokeswoman for the Tennessee Department of Environment and Conservation, said routine monitoring has turned up very low levels of iodine-131, an isotope linked to the Japanese power plant.

"These detections are 1,000 to 10,000 times below any levels of concern," Calabrese-Benton said. "They are within the range expected and are far below levels of public health concern."

She said a different set of real-time air monitors would alert officials of radioactive levels that might require immediate action.

The samples were taken March 29, and analysis took about a week, Calabrese-Benton said.

"We have also sent some rainwater samples [for analysis], but we're still waiting for those results," she said.

Within hours of the announcement, state Health Commissioner Susan R. Cooper issued a news release, saying residents have no need to purchase or take potassium iodide. The compound provides short-term protection for the thyroid gland in people exposed to radioactive iodine, one of many radioactive materials that may be released from a nuclear power plant.

"The state has a supply of [potassium iodide], but only to be used if there is an emergency or a risk of harm to Tennesseans," Cooper said. "There is neither a cause of concern nor a risk to public or individual health."

The state also is collecting air and rainwater samples in Knoxville, Nashville and Oak Ridge for the EPA's nationwide RadNet program, which collects air, precipitation, drinking water and milk samples to check for radioactivity.

EPA officials have said they are monitoring the air carefully because of the leaks and explosions at the Fukushima nuclear plant following a 9.0 earthquake and tsunami in mid-March.

Several EPA air monitors across the nation have detected very low levels of radioactive material, consistent with estimated releases from the damaged nuclear reactors, according to [www.epa.gov](http://www.epa.gov).

EPA also has stepped up monitoring of precipitation, milk and drinking water, and officials said radioactivity detected has been far below levels of public health concern.

EPA's website states that "even an infant would have to drink almost 7,000 liters of this water to receive a radiation dose equivalent to a day's worth of the natural background radiation exposure we experience continuously from natural sources of radioactivity in our environment."

TDEC Commissioner Bob Martineau said a statement that the department regularly monitors for radiation in the environment.

"And we will continue to monitor," he said.

about Pam Sohn...

Pam Sohn has been reporting or editing Chattanooga news for 25 years. A Walden's Ridge native, she began her journalism career with a 10-year stint at the Anniston (Ala.) Star. She came to the Chattanooga Times Free Press in 1999 after working at the Chattanooga Times for 14 years. She has been a city editor, Sunday editor, wire editor, projects team leader and assistant lifestyle editor. As a reporter, she also has covered the police, ...

## **State Detects Non-threatening Radiation From Japan (MDNJ)**

Murfreesboro Daily News Journal, April 7, 2011

NASHVILLE - The Tennessee Department of Environment and Conservation reports that results from air monitoring for radioactive isotopes confirm that no threat to public health exists related to the incident at the Fukushima Daiichi nuclear power plant in Japan.

Routine and ongoing air monitoring performed by the state indicates the presence of very low levels of Iodine-131, an isotope linked to the Japanese power plant, the state news release states. Tennessee's results are consistent with sampling results reported by federal agencies, licensees and neighboring states.

"The Department of Environment and Conservation monitors for radiation in the environment as a regular course of business," Environment and Conservation Commissioner Bob Martineau said in the news release. "We can detect these isotopes at extremely low levels. These levels do not indicate a health concern of any kind, and we will continue to monitor."

Environment and Conservation's air samples being reported today were collected on March 29 from fixed monitors near the Sequoyah and Watts Bar power plants, as well as a monitor in Dayton, Tenn. The results range from 0.044 to 0.089 picoCuries per cubic meter of air. These levels are within the range expected and are far below levels of public health concern.

In addition to its own monitoring, the department collects air and rainwater samples in Knoxville, Nashville and Oak Ridge for the U.S. Environmental Protection Agency's RadNet program. The Tennessee Department of Agriculture collects milk samples for RadNet as well. All of those samples are sent to an EPA laboratory for analysis, and the results are available on EPA's website at [www.epa.gov](http://www.epa.gov).

## **No Raised Radiation Found In NJ Air, Milk Samples (AP)**

Associated Press, April 7, 2011

TRENTON, N.J. (AP) - New Jersey's top environmental official says samples of air and milk show no sign of elevated radiation from the Japan nuclear disaster.

Environmental Protection Commissioner Bob Martin says rainwater samples show trace amounts of Iodine-131, but not enough to cause any concern.

Martin was among five environment and security experts to testify at a briefing on nuclear power plant safety and emergency preparedness at the Statehouse on Wednesday.

The most densely populated state has four nuclear reactors, including Oyster Creek, the nation's oldest.

The review was prompted by the disaster unfolding in Japan after an earthquake and tsunami severely damaged four reactors there.

2 of Japan's damaged reactors are a design similar to Oyster Creek and Hope Creek in Salem County.

## **Officials: Trace Amounts Of Radioactive Iodine-131 Found In Rainwater, Air (DLYRCD)**

By Jason Method

Daily Record (NJ), April 7, 2011

New Jersey officials have found trace amounts of radioactive material from Japan's nuclear accident in rainwater and air samples, but no contamination has been found in milk or drinking water.

Bob Martin, commissioner of the state Department of Environmental Protection, said Wednesday that rainwater samples had shown small amounts of iodine-131, a radioactive byproduct of nuclear fission, similar to results reported in states across the country.

Officials also have tested milk and drinking water, but not found the iodine-131, Martin said.

DEP spokesman Larry Ragonese said in an interview Wednesday that minute traces of radiation were found in water collected late last week by the Middlesex Water Co. at a sampling site on the Delaware and Raritan Canal. After laboratory analysis, the DEP confirmed that find.

Very small traces of iodine-131 also were found in rainwater collected late last week, and subsequently analyzed, from the roof of a state laboratory in the Trenton area, Ragonese added.

Ragonese said the radiation levels, just above what is normally found in nature, do not pose a health problem. The iodine-131 isotope dissipates in eight days.

Martin and other officials appeared Wednesday before a collection of three Assembly committees holding a hearing on how New Jersey should respond to the nuclear meltdown crisis in Japan that has riveted world attention.

Deputy Assembly Speaker John F. McKeon said he was concerned about storage of spent fuel rods at the Oyster Creek nuclear power plant in Lacey, which he noted had greater amounts than at the Fukushima Daiichi plant in Japan, which was breached as a result of an earthquake, tsunami and the resulting malfunctions.

McKeon, D-Essex, also said he was worried about how well state residents could be evacuated from Long Beach Island in the event of an emergency, especially during the summer.

"Anyone who's had a New Jersey experience knows it's hard to move (traffic) under normal circumstances," McKeon said in comments afterward.

State officials said there are 4,000 emergency responders trained to react to a nuclear emergency. The state expects that it would evacuate the area around the Oyster Creek plant within 9 1/2 hours by reversing inbound car lanes and moving all traffic out of the vicinity.

Assemblyman Joseph R. Malone III, R-Burlington, who also represents parts of Ocean and Monmouth counties, said there was little chance here of a major earthquake or other event causing a crisis similar to what has occurred in Japan.

"I want the public to understand that the chances of what's happened there happening here are slim to none," Malone said.

State emergency response teams will be tested in September at the Oyster Creek plant as regularly scheduled, officials said.

State Police Lt. Thomas Scardino said the Federal Emergency Management Agency conducts the drill by announcing a fictional scenario to state emergency officials. Those involved in the drill must then react to that situation. A FEMA drill is scheduled for next spring at the nuclear power plant in Salem County.

On March 25, Gov. Chris Christie created a Nuclear Review Task Force to apply lessons learned from the Japan events. Martin said the first meeting was held last week and findings are expected to be issued by the end of May.

## **Bellefonte Decision Won't Be Made In April (SDS)**

**The Tennessee Valley Authority Board of Directors at its April 14 meeting in Chattanooga will not be asked to make a decision on completing a reactor at the Bellefonte Nuclear Plant near Scottsboro.**

Scottsboro (AL) Daily Sentinel, April 7, 2011

The Tennessee Valley Authority Board of Directors at its April 14 meeting in Chattanooga will not be asked to make a decision on completing a reactor at the Bellefonte Nuclear Plant near Scottsboro.

"The good news is we're not stopping on Bellefonte," TVA President and Chief Executive Officer Tom Kilgore said in an interview with The Daily Sentinel Wednesday. "Our engineers are continuing their work at Bellefonte without pause."

Kilgore earlier expected to ask the TVA Board for formal approval to complete the Unit 1 reactor at Bellefonte. That recommendation is being delayed due to ongoing problems at the Fukushima Dai-ichi plant in Japan.

"The challenges at the Fukushima Dai-ichi plant call for a studious and thoughtful review of the Japanese experience," Kilgore said. "The prudent steps will be to listen, learn, incorporate those lessons into our designs, and be in a position to proceed more confidently in the near future."

The Japanese plant was hit by a magnitude 9 earthquake on March 11 followed by a tsunami with 40-foot waves. The natural disaster has rendered the plant useless and workers are trying to minimize health and environmental damage from the still leaking reactors.

Jackson County Economic Development Authority President and CEO Goodrich "Dus" Rogers said he was pleased Kilgore personally visited with local governmental leaders to discuss the future of Bellefonte.

"I thought that it was a class act that Tom Kilgore came to Scottsboro and met with local leaders personally to tell us the plan," Rogers said. "I appreciate TVA taking a pause and stepping back to understand lessons learned and apply best practices to this project. It will help them find out what changes need to be made to have a safe nuclear fleet."

Approximately 500 workers remain on site at Bellefonte doing engineering work on the proposed reactor. Kilgore does not anticipate any layoffs or work stoppages and says the utility already has a considerable investment in the facility.

TVA recently located its nuclear training facility that is used by contractors and employees from all of its plants in Jackson County. Kilgore said that decision demonstrates the utility's commitment to nuclear power and to the future of the immediate area. He said the tentative start-up date for the "several billion-dollar" Bellefonte facility remains in the 2018-2019 timeframe.

"As we digest and learn from the Japanese situation I know there will be some things we change," Kilgore said. "We will harden the plant. We are evaluating what we need to do."

TVA, other utility companies, trade associations and the Institute for Nuclear Power Operations are providing assistance to the Japanese. While some of the assistance has been technical in nature, the group has supplied personal dosimeters (for measuring radiation exposure), borated water (used to control the splitting or fission of uranium atoms) and protective clothing. Observers are also on the ground providing assistance and learning in the process.

"We're all trying to help," Kilgore said.

TVA is committed to providing clean nuclear power as part of its energy mix for the future. Construction continues at its Watts Bar Unit 2, which is scheduled to be on line by 2013 and its newly formulated integrated resource plan reinforces the use of nuclear power generation and energy efficiency among its main components.

On Wednesday an alliance, called the AP1000 Oversight Group, entered a challenge contesting the approval of the new Westinghouse AP1000 reactor by the Nuclear Regulatory Commission. The alliance consists of a number of environmental and nuclear watchdog groups.

Kilgore said the move would have no immediate impact on TVA though the utility continues to work toward finishing the original design of a proposed project at Bellefonte. "The AP1000 is way in the future."

"TVA does take seriously any accidents and safety issues discovered anywhere in the world. They always consider how to make operations better," Rogers said. "They take pride in their work. I trust them to do the right thing."

Kilgore, an Ider native and 1966 graduate of Ider High School in nearby DeKalb County, stressed that safety is a top priority for the community and TVA's work force.

"We are evaluating what we need to do," he said. "We want the people to have confidence in us to do the right thing and to feel safe about living by a nuclear power plant. The one thing that is more important than building of the Bellefonte Nuclear Plant is for us to operate it safely over its entire life."

AREVA, a global energy company focused in large part on nuclear power, is completing the majority of engineering and development work at Bellefonte as part of the utility's long-range design, planning, licensing and procurement process. It is also developing a new state-of-the-art instrumentation and control system for the facility.

"We are delighted to continue our partnership with TVA to help expand America's supply of safe, reliable, carbon-free nuclear energy to meet the country's growing demands," Mike Rencheck, COO of AREVA North America said when the contract was announced in October 2010. "This agreement reinforces our position as a world leader in clean energy solutions."

"Bellefonte is a good design. It is spacious," Kilgore said. "Bellefonte has the potential to be the best nuclear plant we have."

## **Editorial: Look At Nuclear Power Without Fear, Passion (RMA)**

The Republican (MA), April 6, 2011

The Nuclear Regulatory Commission is looking toward tomorrow – just as it used to do.

It has been more than 30 years since the NRC approved construction of a new nuclear power plant in the United States. The accident at Three Mile Island in 1979 turned the tide. Citizens, power companies and federal regulators took a very long time-out.

But over the decades, events began to work in favor of at least reconsidering nuclear energy. Three Mile Island began to fade into memory even as the very real dangers from other types of conventional energy became increasingly obvious. Oil sometimes gets spilled. Coal mines can collapse. Gas plants can blow up. And emissions are of increasing concern.

Those who instead banked on alternative energy sources ran right up against stark realities: Power from the sun and the wind and the tides was simply not plentiful enough, or financially viable. So many big plans turned out to provide neither heat nor light. Maybe, just maybe, nuclear power deserved a second look.

It was slow in coming, and its full embrace was anything but assured.

And then came Japan. The ongoing nuclear disaster that followed the tsunami that followed the gigantic earthquake has left everyone in shock.

But the right time to make policy is not in the middle of a crisis. That's when those with an agenda to push try to make hay. But cooler heads must prevail.

The NRC has given preliminary approval to the construction of two new nuclear power plants near Augusta, Ga. We applaud the decision. Our nation should not be setting its nuclear agenda based on what happened in Japan. We should instead be looking at the facts at hand — and to the future — which is exactly what the NRC is doing.

## **IN THE BLOGS**

### **Chemistry 201: Why Is Fukushima So Gassy? (NYT)**

By Matthew L. Wald

New York Times, April 7, 2011

As my colleagues report in The Times, American experts are concerned about the possibility of new explosions at the Fukushima Daiichi nuclear plant in Japan and have urged the Tokyo Electric Power Company to fill the air space in the primary containments of the reactors there with nitrogen gas to avert this. Andrew Pollack, a colleague in Tokyo, reported a few hours later that that the company was moving toward that goal.

2:10 p.m. | Updated The injection of nitrogen has begun.

An explosion would be powered by a combination of oxygen and hydrogen. Where are those gases coming from?

Water, H<sub>2</sub>O, is always a source. An American expert who was not involved in the reported advice to the Japanese, Charles W. Forsberg, the executive director of M.I.T.'s Nuclear Fuel Cycle Project, notes that if you simply put a teacup of water in a microwave oven, some of the water molecules will come apart. But there are reasons, he and others say, that Fukushima is particularly vulnerable.

One is its recent use of seawater to cool the reactors' fuel rods and cores. In addition to the oxygen in water molecules, cold seawater can hold a great deal of dissolved oxygen gas. But warm water cannot; so as the seawater was heated in the reactor, the dissolved oxygen emerged and gathered in the empty space above the water.

(Ordinary reactor cooling water has had the oxygen removed from it by plant operators to reduce the possibility of rust.)

In addition, gamma radiation from the nuclear fuel in the reactor would continuously produce small amounts of hydrogen and oxygen by breaking up water molecules — and the normal method of recombining these elements into water at such plants in a controlled fashion is no longer available.

Plants of the Fukushima variety usually have catalytic converters that accomplish that at the point where steam has run through the turbine and is condensed back into water for another trip through the reactor. But that path has been closed since the plant lost power at the moment of the March 11 earthquake.

"If the reactors are producing any steam, the steam will push the hydrogen and oxygen into the pressure suppression pool," Mr. Forsberg warned. (The reactor is vented into the pool, he explained.) One solution would be to keep the area in a nitrogen atmosphere.

Hydrogen can also emerge from the zirconium metal used as fuel cladding. One of the lessons of the Three Mile Island accident in 1979 near Harrisburg, Pa., is that when the cladding comes into contact with steam rather than water, it goes through a reaction that is akin to rusting; it picks up oxygen from the water molecule and gives off hydrogen.

This only happens at high temperatures, but uncertainty reigns at the moment about temperatures in the Fukushima reactor cores. With some cooling channels blocked, they are likely to have hot spots.

By design, boiling water reactors like these have far more zirconium metal in them than pressurized water reactors do. They boil water directly in the core, covering the fuel assemblies with a water/steam mixture rather than keeping them immersed in water. The water has to be directed to each individual fuel assembly and therefore each sits in its own zirconium box.

All of that zirconium is available for an oxidation reaction with steam in which the metal absorbs oxygen from water and turns to a powdery rust, releasing hydrogen.

## **INTERNATIONAL NUCLEAR NEWS**

### **Energy Agency Head: Reconsider Nuclear Power (BSWK)**

BusinessWeek, April 7, 2011

The head of a new international agency designed to promote renewable energy says consumers are beginning to look again at alternative sources of power in the wake of Japan's nuclear crisis.

The International Renewable Energy Agency's director-general, Adnan Amin, said Tuesday all countries need to examine their needs to determine whether nuclear plants should be part of their energy mix.

He made clear that the agency's clean-energy mandate does not include promotion of nuclear power. That puts it at odds with the United Arab Emirates, the host nation for its headquarters, which is making atomic power a centerpiece of its energy policy.

Amin spoke at the end of the agency's first assembly meeting in Abu Dhabi.

### **Keep Faith On Nuclear, Says IEA (NAT)**

By April Yee

The National, April 7, 2011

Nuclear technology needs to remain part of the energy mix despite safety concerns following the disaster in Japan, says a top International Energy Agency (IEA) official.

An earthquake and tsunami on March 11 crippled three reactors at Japan's Fukushima plant and led to radiation leakages from spent fuel-storage tanks. That should not stop countries from considering nuclear power, said Richard Jones, the deputy executive director of the IEA, the organisation that represents 28 energy-consuming nations.

"The problem is if you start betting on any one technology, then something can happen and derail that technology," he said on the sidelines of an energy ministers' meeting yesterday in Abu Dhabi.

"Every technology has its Achilles' heel, and in the nuclear case the safety issue has been raised. But if you look at it, this plant survived a 9 [magnitude] earthquake without a core breach. It wasn't an accident, it was a natural disaster. There's a big difference."

He spoke a month after Abu Dhabi broke ground on the proposed site of its US\$20 billion (Dh73.45bn) first nuclear plant, part of the emirate's plan to diversify its energy mix and free-up more fossil fuels for lucrative export.

Mr Jones was in the capital to present a report on progress in renewable energy adoption to energy officials from the US, the UAE and other nations.

In the past decade coal has met 47 per cent of new power demand, and to meet targets to combat climate change the efficiency of such plants needs to be improved, he told ministers.

Governments should also back the adoption of hybrid vehicles and at least 100 projects in carbon capture and storage technology in the next decade, in which carbon dioxide emissions from industrial plants or power stations are buried underground, added Mr Jones.

Yesterday, the price of Brent crude, the European benchmark, hit a two-and-a-half year high, reaching \$122.75 a barrel in intraday trading.

A civil war in Libya that has halted crude shipments, and continuing political unrest in other parts of the region, have caused oil prices to soar and forced producers - including Saudi Arabia and the UAE - to increase production.

The price of oil has also been pushed upward by concerns over the future of nuclear power. Countries around the world have launched safety reviews or imposed halts on nuclear power production at older plants in response to public safety concerns sparked by Fukushima.

"I think with confidence that these problems can be dealt with," said Mr Jones, a US career diplomat. "More likely what it'll mean is more of a delay while countries reassess their policies and look at the safety of their existing plants, they look at emergency response capabilities, and they decide whether to licence new plants, whether or not they want to wait for new technologies.

"The problem with nuclear is that it's such a capital-intensive technology that it really depends on what the interest rates are when you make the investment, so it's the capital costs that drive the overall cost of nuclear.

"But you know right now capital costs are low, so it's a good time to build nuclear power plants from a cost perspective. Now, we have these other concerns, obviously," Mr Jones said.

## **Iran Criticizes Saudi Arabia's Involvement In Bahrain (WT)**

### **Says kingdom should go after Israel instead**

By Ben Birnbaum, The Washington Times

Washington Times, April 7, 2011

About 200 members of Iran's parliament on Wednesday condemned Saudi Arabia's military intervention in Bahrain and urged the Persian Gulf kingdom to use its forces against Israel instead.

"The Saudi Army has learnt nothing from the Islamic culture because had it been really powerful, it should have stood up to the crimes of the Zionist regimes against defenseless people of Palestine," they said in a statement, according to Iran's state-run Islamic Republic News Agency.

Saudi Arabia and other members of the six-nation Gulf Cooperation Council (GCC) sent more than 1,000 troops into Bahrain on March 14 to help that nation's Sunni royal family quell a month-old uprising by the nation's Shiite majority.

Iran has backed the protesters since they took to the streets Feb. 14, though the regime's rhetoric has escalated in recent days. On Monday, Iranian President Mahmoud Ahmadinejad said "the Saudis did an ugly thing to deploy troops," and "the Bahraini government also did an ugly work to kill its own people."

At rallies Wednesday in the Iranian cities of Qom and Masshad, senior clerics accused the GCC troops of committing "savage crimes" in Bahrain, while protesters chanted "Death to Zionist Saudis" and called Bahrain's king "an enemy to Prophet [Mohammed]."

In telephone interviews with The Washington Times, senior pro-government lawmakers in Bahrain blasted Iran's interference.

"I would like to ask the Iranians a question," said Adel al-Moawda, second deputy chairman of Bahrain's Representative Council. "Why are they using this language now? The GCC troops entered Bahrain two weeks ago."

Mr. Moawda speculated that Iran was trying to divert attention from the news of Kuwait's dismantling of an alleged Iranian spy ring.

Gamal Fakhro, first deputy chairman of Bahrain's Consultative Council, called Iranian allegations of a violent crackdown "total rubbish" and said they revealed the regime's hypocrisy.

"We have seen what they have done with Mir Hossein Mousavi and Mehdi Karroubi," he said, referring to the two opposition leaders who were imprisoned by the regime in February. "[Other anti-government activists] have either been jailed or kept under house arrest. Rather than focusing on the internal affairs of Bahrain, Iran needs to focus on its own affairs."

Events in Bahrain have been seen as a regional conflict between an emboldened Iran and its Arab neighbors, particularly those with large Shiite populations.

Jasim Hussain, a senior lawmaker from Bahrain's opposition Wefaq bloc, told The Times that he was "not surprised" by the Iranian rhetoric and said it confirmed his fears that the Saudi-led intervention would provoke a response from Tehran.

"We don't want Bahrain to become a place where regional powers try to settle their accounts and make Bahrain a place for their proxy war," he said.