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This morning's Nuclear Regulatory Commission News Summary and Clips are attached.

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Full-text Links: Clicking the hypertext links in our write-ups will take you to the newspapers' original full-text articles.

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NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

TUESDAY, APRIL 5, 2011 7:00 AM EDT

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TODAY'S EDITION

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NRC NEWS

Jaczko: US Nuclear Plants Are Safe. [Reuters](#) (4/5) reports that, speaking at the start of a two-week conference of nuclear regulators in Vienna, Nuclear Regulatory Commission Chairman Gregory Jaczko said, "Let

me say firmly that we believe right now plants in the United States are safe. We believe we have a very strong programme in place to ensure that safety." Meanwhile, European leaders want to test their reactors to ensure they could withstand crises such as the one at the Fukushima plant.

Jaczko: No Evidence Of Recriticalities At Japanese Plant. Bloomberg News (4/5, Tirone) reports that "Jaczko said he has seen 'no evidence' of localized re-criticalities at Japan's damaged Fukushima Dai-ichi plant." Reuters (4/5, Westall, Dahl) also mention's Jaczko's comments about the plant.

IAEA Head: No "Business As Usual" Following Japanese Nuclear Crisis. The AP (4/5) reports that at the conference, Yukiya Amano, head of the International Atomic Energy Agency, said that "Japan's reactor crisis poses a major challenge with enormous implications for nuclear power," adding "that the global nuclear community cannot take a 'business-as-usual approach.'" Amano also called for transparency and strict adherence to safety standards. Later, he "appeared to criticize Fukushima's utility, the Tokyo Electric Power Co., for not learning from earthquake-related incidents in 2007 at its Kashiwazaki Kariwa nuclear power plant."

AFP (4/5, Morgan) reports, "Amano insisted that the basic drivers behind the interest in nuclear power -- which included rising global energy demand, concerns about climate change, volatile fossil fuel prices and energy security -- 'have not changed as a result of Fukushima.'"

Blogger: Reexamination, Not Reassurances, Needed In Wake Of Japanese Nuclear Crisis. On Treehugger (4/4), Brian Merchant writes, "American nuclear regulatory officials have come out to assuage the anxious public's fears" following the nuclear crisis in Japan, but "we'd do best to address those concerns rather than sweeping them under the rug." Merchant quotes Slate's William Saletan, who wrote, "I agree with Jaczko and Levis about the relative safety of nuclear power," but added that he wanted "to hear humility and a ruthless re-examination of assumptions," not reassurances. Merchant concludes, "It makes no sense at all to assume that we simply have better regulations, better machinery of better luck than Japan, and to call it a day."

NRC Called On To Do More To Protect Public. In an op-ed in the Huffington Post (4/5), Elliott Negin, the Media Director of Union of Concerned Scientists, wrote that "modern-day Cassandas have been sounding alarms about the risks of nuclear power for years." The Japan crisis showed "it can happen here", and "the NRC needs to do a lot more to protect the public" such as requiring much of the spent fuel be in dry casks, reassess the radius for emergency plans, and "ensure that plant owners have realistic plans to cool reactor fuel rods in the event their main and backup power fails." Negin predicts the NRC "will draft a solid action plan to address problems highlighted by the Japanese nuclear disaster, but then implement safety upgrades at a glacially slow pace" and calls for Congress to speed the NRC's actions.

House Subcommittee To Examine US Response To Japanese Nuclear Crisis. The E&E Daily (4/5, Northey) reports, "A House Energy and Commerce subcommittee Wednesday will review US reactions to the ongoing emergency that began when" Japan's Fukushima Daiichi nuclear power plant was damaged. "Key lawmakers on the subcommittee are likely to tout their own responses to the disaster," such as Rep. Ed Markey's bill requiring new or extended reactor licenses to meet safety requirements such as having 14 days of diesel fuel backup generation 72 hours of battery power. Meanwhile, "US regulators have been simultaneously moving to quell fears of radiation in the United States." The NRC "launched a nationwide review of US nuclear plants to ensure they can withstand disasters and loss of power" and appointed a task force to "examine NRC programs, processes and rule implementation in light of the Japanese disaster."

The Yuma (AZ) Sun (4/5) editorializes that the review of the US nuclear power industry "needs to be a rigorous review that pushes beyond normally accepted standards." The Sun focuses on the possibility that a long power outage could cause cooling systems to fail.

US Focusing On Backup Systems, Fuel Pools In Analyzing Fukushima Disaster. AFP (4/3, Santini) reported, "US engineers studying Japan's experience with its crippled nuclear plant have focused on two key weaknesses - backup energy systems and spent fuel rod pools - that could also plague reactors in the United States." NRC head Gregory Jaczko said that fuel storage containment pools in the US "are 'robust structures equipped to withstand natural disasters like an earthquake and tsunami.'" However, "unlike the reactors, the spent fuel pools are not cooled by a multitude of redundant systems that can be kept running with multiple power backup systems" and the pools often aren't in armored buildings.

Group Calls For Nuclear Plant Construction Moratorium. Greenwire (4/5, Mandel) reports that the Safe Energy Program at Physicians for Social Responsibility believe the government "should put construction of new power plants on hold while an independent commission reviews the lessons to be learned from the continuing Japanese disaster" in a report similar to the Kemeny Commission's investigation of the 1979 Three Mile Island accident. The NRC is also accused of being "inherently biased toward industry because their operations are funded by fees collected from those they oversee." The group is part of the Alliance for Nuclear Accountability, which is "highlighting nine Energy Department projects that they say present the most significant risks for runaway federal spending along with environmental, public safety and nuclear proliferation hazards."

GE Head Defends Nuclear Power. Reuters (4/5, Uranaka) reports that, while in Tokyo, General Electric CEO Jeffrey Immelt defended the nuclear industry's safety record. Over 1,000 GE and Hitachi workers are helping deal with the damaged Fukushima power plant, GE will send over 20 gas turbines to Japan to help address its power shortage, and the company will donate up to \$10 million towards humanitarian support. Immelt told reports, "This is an industry that operated effectively for 40 years." According to a GE Japan spokeswoman, he excluded the Chernobyl incident because the reactor wasn't designed by Western or Japanese firms.

In Wake Of Japanese Nuclear Crisis, Concern Over Washington State University's Reactor. The Tacoma (WA) News Tribune (4/5, Gwinn, Crawford) reports, "As workers in Japan struggle to cool nuclear power plants, the phone has been ringing with questions to Washington State University's Nuclear Radiation Center." Corey Hines, reactor supervisor at the center, explains, "This reactor can't melt down" because it is naturally cooled. He also said that "the reactor is generally shut down at the end of the day and restarted in the morning after an extensive series of safety checks."

Paper Argues Against Ceasing Nuclear Development. The Detroit News (4/5) editorializes that the Fukushima Dai-ichi nuclear facility crisis "should certainly prompt safety reviews of nuclear plants and plans. But nuclear energy must remain in the mix of power sources in the future." The News notes it is clean energy and as the nation recovers from its economic problems it will "need additional baseline electric power. Nuclear energy capacity in particular has to be maintained as pressure increases on coal-fired plants."

Safety Of Submerged Cables At Vermont Yankee Questioned. The AP (4/5, Gram) reports that NRC documents show that when it renewed the Vermont Yankee nuclear plant's license, the agency knew "that electrical cables serving key plant safety systems had been submerged in water for extended periods of time," which increases the chance more than one cable would simultaneously fail and "disable safety-related accident mitigation systems." While the NRC "has been concerned about submerged electrical cables at US nuclear plants for years," its documents said it wouldn't require the industry to change. "NRC spokesman Neil Sheehan said the submerged cable issue had come up in several license renewal reviews at nuclear plants around the country" and that Vermont Yankee's owner, Entergy Corp., agreed to at least yearly inspections for water accumulation. Meanwhile, watchdog group the New England Coalition plans to "file an enforcement petition this week, asking the NRC to follow its own rules on the submerged cables."

WTEN-TV Albany, NY (4/4, 5:37 p.m. EDT) reports that a nuclear watchdog group "is asking federal regulators to take a closer look at the Vermont nuclear power plant. The New England Coalition is filing an enforcement petition with the Nuclear Regulatory Commission this week. The Coalition says the issue of wet cables needs another look, after electrical failures caused by flooding triggered the nuclear catastrophe in Japan. The group says the cables are not designed to get wet, which could cause the plant's safety systems to fail."

Emergency Drill To Be Held Around Vermont Yankee. The AP (4/5) reports that a readiness test is scheduled for next month for the Vermont Yankee nuclear plant. The drill will involve local, state, and federal emergency responders and will be held "in and around the towns of Vernon, Guildford, Brattleboro, Halifax, Dummerston, and Marlboro." WCAX-TV Burlington, Vermont (4/4) reports, "The drill taking place Tuesday and Wednesday involves radiological testing."

Entergy Opposes Discharge Review Of Vermont Yankee. The Brattleboro (VT) Reformer (4/4, Weiss-Tisman) reported that Entergy requested that Vermont's Agency of Natural Resources reject a request from the Connecticut River Watershed Council for the agency to "review the plant's discharge permit," arguing that the petition "is meritless and should not serve as a basis to the company's pending discharge permit." According to Entergy, "Vermont Supreme Court and the Vermont Environmental Court have both considered the impact" on the Connecticut River" and "approved Entergy's plan to release water.:"

NRC Increases Scrutiny Of Wolf Creek Plant. KCTV-TV Kansas City (4/4) reports, "In a congressional hearing Thursday, the Nuclear Regulatory Commission said the Wolf Creek Nuclear Power Plant in Burlington needs more oversight, inspections and scrutiny." Wolf Creek spokeswoman Jenny Hageman said "there is no need for alarm at the plant" and they "are working to address the issues," including unplanned shutdowns and equipment issues as well as a shutdown due to "a lightning storm knocking out power in the area for a few moments."

Jaczko Testified Before Congress On Three Plants NRC Is Most Concerned About. In a blog on the Charlotte Business Journal (4/4), John Downey wrote that, in his testimony before Congress last week, NRC Chairman Gregory Jaczko discussed the three plants his agency "is 'most concerned about' as it placed them under enhanced review because of operational issues." The other two plants are said to be the H.B. Robinson plant near Hartsville, South Carolina and the Fort Calhoun plant in Nebraska. The agency says that "the heightened review...is routine following

unexpected outages or unresolved problems” and that “the plants are still being safely operated.”

NRC To Hold Meeting On Surry Plant Safety.

The Williamsburg Yorktown Daily (4/5, Lenz) reports, “The safety of the Surry nuclear power plant will be up for discussion at a public meeting Wednesday.” The meeting “will begin with a brief presentation, then U.S. Nuclear Regulatory Commission staff will be available to answer questions on the safety performance of the Surry plant last year.” The agency “found that the performance of both units at the Surry plant met all of the agency’s safety objectives in 2010 and was at a level that results in no additional NRC oversight.”

Report Highlights “Near Miss” Incidents At Nuclear Plants.

The Gaston County (NC) Gazette (4/5, Turbyfill) reports that in 2010 the NRC found 40 violations of federal safety regulations during “near miss” incidents at 14 nuclear power plants. “Some of these violations resulted from problems during the event, but most were for safety problems known for months if not years.” A report by the Union of Concerned Scientists highlighted “the importance of keeping these facilities in check and not ignoring needed repairs.”

Refueling Reactors Drop US Nuclear Output.

Bloomberg News (4/5, McClelland) reports that NRC said that “US nuclear-power output fell to the lowest level in almost a year,” falling by 6,152 megawatts (7.4 percent) “from April 1 to 76,840 megawatts, or 76 percent of capacity, the smallest amount since April 8, 2010” as 24 reactors from Connecticut to Washington shut during “the spring refueling season.”

Columbia Generating Station Begin Refueling Early.

The Tacoma (WA) News Tribune (4/5) reports, “Energy Northwest’s Columbia Generating Station temporarily shut down Saturday, starting a planned biennial refueling outage a few days early,” following a request from the Bonneville Power Administration. Bonneville said that “weather conditions could produce high water flows through the federal hydroelectric dam system.” While the reactor is shut down “workers will add new nuclear fuel, conduct maintenance and replace the plant’s main condenser.”

Hanford Plant Begins Refueling.

The AP (4/5) reports, “The nuclear power plant on the Hanford nuclear reservation was taking off the Bonneville Power Administration grid on Saturday as it prepares for a refueling operation that begins Wednesday.”

NRC To Hold Open House On Cordova Plant’s Safety.

The Quad-City (IA/IL) Times (4/2, DeWitt) reported that the NRC “will hold an open house Tuesday to discuss the agency’s annual safety assessment of the nuclear plant near

Cordova, Ill,” which was found to have operated safely. According to Jim McGhee, the NRC’s senior resident inspector at the Quad-Cities Station, “the meeting has shifted from a formal presentation of the NRC’s safety assessment to an open house format,” so while the meeting is being held to deliver the message of the NRC’s assessment, they will answer questions on the crisis in Japan. In a news release, NRC Region III Administrator Mark Satorius said one purpose of the meeting is to answer questions on how the NRC works and on nuclear regulation. McGhee said that although “the annual meeting has not drawn any members of the public for the past three years...we’re expecting a bigger crowd this time.”

New Hampshire Legislators Briefed On Nuclear Plant Safety.

New Hampshire Public Radio (4/4, Quinton) reports, “State emergency and Nuclear Regulatory officials briefed legislators today/Monday on nuclear plant operation and safety.” Legislators asked “about the safety of both Seabrook and Vermont Yankee Nuclear plants” for several hours. While the Vermont Yankee is “the same basic design” as Japan’s Fukushima plant, “nuclear regulatory officials say the Mark I containment used by Vermont Yankee has seen a number of changes in design and safety since the late 1980’s.”

NRC Asked If Indian Point Emergency Area Should Be Expanded.

The Mid-Hudson (NY) News (4/5) reports that Westchester County Emergency Services Commissioner Tony Sutton said that the county executive wrote “the NRC asking the agency for their take on if the Indian Point emergency area should be enlarged.” The current area is a 10 mile radius around the plant, but the NRC told “Americans near the failed Japanese nuclear plants to move 50 miles away.” Sutton said, “I know that the NRC is going to be looking into differences, the very fundamental things about the differences in plant designs, and what actions the staff took and when did they take them and was that appropriate or wasn’t it appropriate, what counter-measures were put in place, was there a reluctance on the operators to pump sea water because maybe they had an economic interest they were focusing on?”

WNBC-TV New York, NY (4/5, 4:42 a.m. EDT) reports, “Japan’s nuclear crisis is expected to spark debate in Westchester today. The topic, safety at the Indian Point power plant. The county legislature plans to discuss the possibility of extending the emergency evacuation zone from its current ten-mile limit to 50 miles. That would include New York City. Lawmakers are especially concerned with rules affecting schoolchildren. They would only be moved to shelters ten miles from the plant. Yesterday Westchester

officials asked the Nuclear Regulatory Commission to consider expanding the evacuation zone."

Debate On Indian Point Urge To Be On Facts, Not Emotions. In an op-ed for the Westchester (NY) Journal News, Al Samuels, president/CEO of The Rockland Business Association, writes, "Some opportunistic, anti-nuclear groups that are utilizing the events at Fukushima to further their longstanding goals of shutting down Indian Point by spreading fear-based rhetoric about nuclear power," and some elected officials, "responding to the fears of some constituents," are advocating such a move. However, "those in positions of leadership have an obligation to know the facts and help their constituents overcome their fears." Samuels notes Indian Point's safety record and precautions, and argues that the plant is "vital" to the region's economic health, given the rising costs of oil and gas.

Poll Finds Majority Of Americans Think US Nuclear Plants Are Safe. AFP (4/5) reports that a new Gallup poll released Monday showed that "a majority of Americans is concerned that the United States could be hit by a nuclear disaster like the one unfolding in Japan, but many still think US nuclear power plants are safe." The poll, conducted two weeks after the earthquake and subsequent tsunami in Japan, "found that seven in 10 respondents were more worried than they were that something similar might happen in the United States. But 58 percent of the 1,027 poll respondents said they still think nuclear power plants in the United States – which includes 23 Mark I reactors identical to those at Japan's crippled Fukushima nuclear plant – are safe."

In a summary of its findings, The Hill (4/5, Geman) "E2 Wire" blog reports, Gallup says, "There is no exact Gallup trend to which these results can be compared. However, Gallup asked Americans in 2009 about the perceived safety of 'nuclear power plants' without specifying their location, finding 56% saying they were safe — almost identical to results for the current question about nuclear power plants 'in the United States.'" The poll also found "that the public is split on whether new reactors should be constructed in the United States."

Reuters (4/5, Morgan) adds that 48 percent of respondents said that the risks were too great to justify the construction of new nuclear plants in the US, while 46 percent believed that more were necessary.

The USA Today (4/5, Koch) "Green House" blog reports that Gallup also acknowledged in its summary of the findings, "It may be months or years before the final impact of the Japanese disaster on American attitudes toward nuclear power can be assessed."

Progress Energy Delays Crystal River Restart Due To Containment Building Cracks. The Dow Jones Newswires (4/4, Malik) reported that Progress Energy Inc. would again delay the restart of its Crystal River, FL, atomic power plant, following discovery of new cracks in the containment building. The company said the shutdown would be indefinite. This is the second time that the company has delayed restarting the plant in recent times. The plant, which could produce 860 megawatts, was expected to restart this month, Dow Jones Newswires said.

The St. Petersburg (FL) Times (4/5) also covers the story, saying the plant, "shut down since September 2009, will remain out of service while the company conducts an engineering analysis and reviews a delamination or separation of concrete in the plant's containment building." The paper notes "the utility said it has notified the Nuclear Regulatory Commission and Florida Public Service Commission of its plan to keep the plant, known as Crystal River 3 or CR3, shut down."

Power-Gen Worldwide (4/4) provided details of the shutdown, saying "the plant was first shut down in September 2009 for refueling and maintenance and workers created an opening in the structure to replace a steam generator. Concrete at the periphery of the containment building was damaged at that time." Last month, "retensioning work on tendons was suspended while engineers looked into evidence of additional separation resulting from the retensioning work." Reuters (4/5, O'Grady) also covers the story.

New York Power Authority Approves Hudson Cable. The New York Times (4/5, A18, McGeehan) reports, "With a trustee newly appointed by the governor taking the lead, the New York Power Authority on Monday hurriedly approved a revised deal for the construction of an \$850 million cable that would carry electricity to Midtown Manhattan from New Jersey." Gov. Andrew M. Cuomo "has called for the shutdown of the Indian Point nuclear plant" and this cable "is one potential source of replacement supply, though it would deliver less than one-third of the output of Indian Point's two reactors." However, despite new concession from developers, "the power authority still stands to lose money on the contract."

Analyst Predicts US Will Build Five New Reactors By 2020. Bloomberg News (4/5, Martin) reports that Chris Gadomski, an analyst at Bloomberg New Energy Finance, predicts "the US will build five new nuclear reactors by 2020 and ignore calls to scale back plans in the wake of Japan's nuclear accident." Gadomski believes the "plans to build the five reactors [that] are already underway" won't be abandoned. Meanwhile, Andrea Sterdis, senior

manager of nuclear expansion at Tennessee Valley Authority, said, "We are looking first and foremost at keeping our current fleet operating safely."

Scientists Disagree On Danger Of Low Radiation Doses. The New York Times (4/5, D1, Grady) reports, "Scientists disagree about the effects of very low doses [of radiation] of the sort that may have occurred so far in Japan." The "current estimates by government agencies for risks from low doses rely on extrapolation from higher doses," and some believe that reflects the actual risk. Others argue "that estimating risk for doses near zero is nonsensical, and some believe there is a threshold dose, or limit below which there is no risk from exposure."

Japan Nuclear Crisis Stokes People's Fears. The San Diego Union-Tribune (4/5, Schmidt) reports, "Nuclear engineers, along with social scientists, believe the biggest byproduct of the still-developing Japanese nuclear crisis — at least as it affects the United States — may be fear itself," primed by "years of incomplete or outright false government information, decades of exaggeration in popular culture and the public's general ignorance of nuclear science." Radiation from the Fukushima reactor "poses no significant risk," but memories of nuclear weapons tests and "the unseen nature of radiation" can stoke people's fears.

Columnist Doubts Assurances About Fukushima Radiation's Health Risks. In a column in the Blue Springs (MO) Examiner (4/5), Lynn Youngblood writes that we wear protection when getting x-rays, so its "funny then that we are now hearing that the levels of radiation escaping the Fukushima Daiichi nuclear plant in Japan poses no health risk." Youngblood doubts scientists' claims that the diluted radiation isn't harmful, and calls for developing renewable energy sources "so there are some parts of our world that are still healthy for our grandchildren."

Public Reassured On Radiation From Fukushima. Michigan's Herald Palladium (4/3, Aiken) reported that D.C. Cook Nuclear Plant principal nuclear specialist David Miller said that samples from the plant contain "tiny amounts of radioactive isotopes from" the Japan's Fukushima plant, but added that "the public should not be concerned," as the "iodine-131 isotopes reaching the plant are at a level 1,000 times less than a person would get in a chest X-ray."

The Morris (IL) Daily Herald (4/2, Hustis) reported that Exelon headquarters representative Craig Nesbit said that "there's no danger to the public from minute levels of radiation detected outside Dresden Generating Station, probably from the troubled Fukushima plant in Japan." The Illinois Emergency Management Agency noted that a grass sample from outside the plant "showed the iodine detected is 200,000

times under the regulatory limit for effluent from nuclear power plants."

Wisconsin Nuclear Plants' Safety Examined. WUVM-FM Milwaukee (4/4, Bence) reports on the safety of Wisconsin's nuclear plants. Sara Cassidy, who handles communications for the Point Beach power plant, says that while the plant's reactors were built around when Japan's Fukushima installation was, "We are a different design and it appears that our nuclear plants, have additional safety systems." Kewaunee power plant spokesman Mark Kanz said that his plant has a number of backups for its cooling system, including grid power, diesel generators, batteries, and "a turbine driven auxiliary feed-water pump which can operate without power."

Cost Of Storing New England's Nuclear Waste Expected To Increase. WBUR-FM Boston (4/4, Oakes) reports that New England "rate-payers could be in for some serious sticker shock in terms of the cost of storing the growing pile of spent nuclear fuel." Over the last thirty years, "electricity consumers shelled out nearly \$1 billion to store nuclear waste — and will likely pay a lot more."

Delaware Distributing Iodide Pills To Those Near Reactor. The Wilmington News Journal (4/4, Brown) reported, "Calls of concern from state residents led to the Delaware Emergency Management Agency's plan to distribute" potassium iodide pills to those who live or work within a 10-mile radius of Salem/Hope Creek Nuclear Generating Stations in New Jersey. The pills help prevent the thyroid gland from absorbing radioactive iodine. "Still, the Japan crisis has fueled a run on the pills." NewsWorks (4/4, Fowser) also covers this story.

Diablo Canyon Reactor Back In Service Following Pump Repairs. The AP (4/5) reports that Pacific Gas & Electric Co. said that water pump repairs at its Diablo Canyon nuclear power reactor are complete. Unit 2 "was shut down for a week after sensors detected a problem," but "PG&E spokesman Kory Raftery says the Unit 2 reactor was returned to full power at 2:27 p.m."

County Officials To Request Diablo Canyon Withdraw License Renewal Application. The Adobe (CA) Press (4/5, Charlton) reports, "The San Luis Obispo County Board of Supervisors will ask Pacific Gas and Electric Co. to withdraw its application to renew licensing for Diablo Canyon Power Plant until a full analysis of earthquake faults near the nuclear facility is completed." The NRC doesn't require the study "be part of the licensing renewal application process for Diablo Canyon."

Diablo Canyon To Test Warning Sirens. KEYT-TV Santa Barbara, California (4/4) reports, "On Tuesday and Wednesday, officials at Diablo Canyon Nuclear Power Plant will test their Early Warning System sirens."

Zion Nuclear Plant Being Decommissioned. WLS-TV Chicago (4/4, Meincke) reports, "The nuclear power plant in far north suburban Zion is being shut down and eliminated." Energy Solutions, which "now holds title to the plant and its nuclear license," began the decommissioning last fall. The nuclear fuel assemblies will be moved "to more permanent on site storage," which, "until and unless the government chooses a more permanent destination," will be in giant concrete casks.

NRC Urged To Require Immediate Reporting Of Safety Issues. The Salem (OH) News (4/5) editorializes that the NRC's IG reported that the "guidelines used by nuclear plant operators to report potential safety risks" are "contradictory and unclear," which is "the last thing we want to hear." The News calls for the NRC to examine the rules and change them, if needed, so that "any equipment malfunction that threatens the safety of plant workers or the public in any way should be reported immediately."

Columnist Urges Awareness Of Nuclear Power's "Scary Side." In a column in the Nashua (NH) Telegraph (4/4) David Brooks wrote, "Nuclear power, for all its carbon-free energy heft that makes it a necessary part of the modern world, has a very scary side that we must be aware of." He notes that New Hampshire has six atmospheric radiation measuring stations within 10-miles of nuclear plants, and "every month or so, the state gathers samples of water, milk, farm silage, and sediment around to make sure that radiation isn't building up in the environment." Also, "New Hampshire runs exercises several times a year that are overseen by the Nuclear Regulatory Commission."

Columnist Waxes Nostalgic Over Nuclear Physicist Father. In a column in the Chicago Sun-Times (4/5), Neil Steinberg reminisces that, as his father was a nuclear physicist at NASA's Lewis Research Center in Cleveland, Steinberg was never scared of "nuclear stuff." He notes that people "focus on new dangers while ignoring those we have grown accustomed to," citing nuclear power's better safety record than that of coal harvesting. Still, Steinberg admits that "everyone needs oversight, not because they're lax but because their focus...might not reflect other concerns," such as if there is a disaster and uses an anecdote about his father to illustrate the point.

Columnist: Energy Needs Mean Nuclear Power Will Remain. In a column in the Milwaukee Journal Sentinel (4/2), John Gurda wrote, "The unfolding nuclear disaster in Japan has focused new attention on" the "venerable" Point Beach power plant, Wisconsin's oldest atomic facility. When it was built, "Point Beach was greeted with open arms." Gurda added, "Nuclear power is highly efficient and generally unobtrusive when the plants are operated and maintained properly." He concluded that with the power needs of the US and the world, "nuclear power, like its byproducts, is sure to be with us for a very long time to come."

NRC Employee Says Being Informed Is First Line Of Defense. In a column in the Morris (IL) Daily Herald (4/2), Jo An Hustis wrote about Viktoria Mityng, senior communications spokesman for the Nuclear Regulatory Commission's Region 3 at Lisle, Illinois. Before that, she was a reporter in Russia who covered those who dealt with the Chernobyl disaster. She said, "the major reason I took the job with the NRC is that I believe being informed and having opportunity to demand information from your government is your first line of defense," noting that townsfolk in Chernobyl didn't know what was occurring for over a day. She added, "I feel like I work for an agency where if there is a safety violation, it's made public."

Nuclear Liability Cap Said To Distort Spending On Safety. In a letter to the editor of the Chicago Tribune (4/5), Steve Cohn, a professor of economics at Knox College, writes that the cap on private firms' liability for nuclear accidents prevents "the potential for very dangerous releases of radiation" from being factored "in assessments of the merits of nuclear power versus other energy options." Cohn argues that "the industry's adamant refusal to give up the liability cap belies recent claims by nuclear industry representatives that a serious nuclear accident cannot happen in the United States." Cohn further argues that without the cap, companies would have developed reactors that don't need power to prevent a meltdown. Cohn concludes, "Marginally competitive light-water reactors, pressured to cut corners by tough economic competition and insulated from full accident liability, invite unacceptable risks."

Nuclear Industry's Risk Model Criticized. In a letter to the editor of the New York Times (4/5, D4), Michel Lee of Scarsdale, New York, writes, "'Idiotic' would be a more accurate than 'probabilistic' as a characterization of the risk model used by the nuclear industry." He asserts that "the Indian Point nuclear power plant...exemplifies the defiance of common sense," with its "extensive history of safety problems." After the plan

Neighbors Of Dominion's North Anna Reactors Met With NRC.

WTVR-TV Richmond, VA (4/5, Pellarano, 12:00 a.m. EDT) reports, "The northeastern coast of Japan is thousands of miles away from Mineral, Virginia, but to these people, it may as well be next-door. They live near the North Anna power station's two nuclear reactors. Members of the Nuclear Regulatory Commission held its annual meeting Monday night to inform the public of the reactors' performance last year. And even though the agents said that the reactors were fine, residents had serious questions, based on what they've seen in Japan. The NRC's Roger Hannah, identified in an on-screen title as Ralph Hannah, says on-camera that said that the two on-site inspectors had "access to all of the plant. They do inspections and they make sure the plant is being operated safely."

TVA: Valve Failure At Ala. Nuke Plant Not A

Threat. The AP (4/5, Brumback) reports, "Operators of a nuclear plant in Alabama where a key valve failed last year told federal regulators Monday that a manufacturing deficiency in a part of the valve caused the problem and that it was never a safety threat." According to AP, officials from the TVA, "which operates the Browns Ferry Plant near Athens, Ala.," met with NRC "officials in Atlanta to respond to the federal report on the valve failure." The "problem in the plant's Unit 1 reactor was discovered by TVA employees while the reactor was shut down for refueling in October and reported to the NRC."

Similarly, the Atlanta Journal-Constitution (4/4) reported that "TVA officials say the mechanical problem was discovered, repaired and reported while the reactor was shut down for refueling. They say it was never a safety threat."

Reuters (4/5, Bigg) reports that the news of mechanical problems with the valve comes at a time when there is heightened concerns about the safety of nuclear plants in the country following the nuclear crisis in Japan in the wake of the earthquake and tsunami there. TVA officials say a repeat of atomic crisis at the Fukushima plant was a remote possibility in at the Browns Ferry plant because of advanced safety systems in place.

Tennessee's Daily Post Athenian (4/4, Reynolds) reported, "In light of Japan's nuclear crisis, McMinn County's top road expert is calling for an Athens bypass as an alternative evacuation route for people living in the fallout zone from Watts Bar Nuclear Plant." The Birmingham Business Journal (4/4) "Morning Call" blog also covered the news.

Residents Near TVA Reactors Feel Untouched By Japan Crisis. The Chattanooga (TN) Times Free Press (4/5, Flessner) reports that residents within the 10-mile emergency management zone surrounding TVA's nuclear reactors in Southeast Tennessee "seem less concerned" amid the

"heightened public concerns over nuclear power." Shelley Walker, marketing coordinator for the Tennessee Department of Health, said that "since the tsunami in Japan, a total of about 10 people have requested KI from the county health departments in our Southeast Region." Further, "Jeremy Heidt, a spokesman for the Tennessee Emergency Management Agency, said fewer than 200 of the households around TVA's Sequoyah and Watts Bar plants in Tennessee have requested the KI tablets over the past couple of years," according to the report.

TVA Meets With NRC, Says Faulty Valve Never Posed Safety Risk.

WTVC-TV Chattanooga, TN (4/4, 5:07 p.m. EDT) reports that federal regulators today heard why a key valve apparently failed at the Browns Ferry nuclear plant in Alabama last year. Operators said the failure was caused by a manufacturing deficiency in a part of the valve. The operators say it was never a safety threat. TVA officials made their case Monday to Nuclear Regulatory Commission officials, in Atlanta. NRC officials say the failure of a valve on a coolant system on the unit 1 reactor could have left a residual heat removal system unable to do its job, particularly if there was a fire."

PSC To Make Decision Tuesday Over Plant Vogtle Cost Controls.

The Peachtree Corners (GA) Weekly (4/4) reported, "The Public Service Commission will decide tomorrow whether to reduce Georgia Power's profit margin if construction costs for the two new nuclear units at Plant Vogtle exceed the \$6.1 billion price tag originally approved by the Commission." The paper said Georgia Watch Consumer Energy Program Director Clare McGuire "is urging commissioners to adopt a cost control plan that creates incentives for Georgia Power to finish the Vogtle units on time and under budget." Notably, "PSC Staff has formally recommended a risk-sharing mechanism (RSM) that calls for a slightly lower profit margin for Georgia Power if construction costs rise above \$6.4 billion, or \$300 million over budget." Georgia Power, however, objects to Staff's RSM proposal, "saying it should be judged on its conduct during the construction process, not the project's final cost."

DOE Seeking Bids For Nuclear Waste Haulers.

The AP (4/5, Klein) reports that the DOE "is seeking bids to continue hauling nuclear waste" to the Waste Isolation Pilot Plant near Carlsbad, New Mexico from DOE sites around the nation. "The two current carrier contracts expire next year, in March 2012 and September 2012." The contract is estimated to be worth "\$80 million to \$100 million over five years."

Groups Condemn SRS MOX Plant Project. AFP (4/5) reports that anti-nuclear groups, including Friends of the

Earth and the Alliance for Nuclear Accountability, on Monday condemned the mixed-oxide plutonium reprocessing plant that is being built at the Savannah River Site in South Carolina, "saying the plan was costly, dangerous and would benefit mainly the French group, Areva." Tom Clements of Friends of the Earth said at the launch of a report by ANA, "In my opinion, it is primarily because of Areva's influence inside the Department of Energy that the US is pursuing a plutonium fuel program and it's because of Areva's influence that there's a push for the US to also reprocess commercial spent fuel to remove plutonium, like France does." He also said that "even as the nuclear disaster in Japan highlights the dangers of MOX fuel – which the ANA report says was used in one of the reactors at Japan's crippled Fukushima power plant – the US government is failing to rethink construction" of the plant.

Areva Executive Urges Support For Nuclear Power, Loan Guarantees.

Dow Jones Newswires (4/5, Chernova) reports that Jacques Besnainou, CEO of Areva's US division, told the Columbia University Energy Symposium in New York on Friday that nuclear energy was still necessary and encouraged continued support for loan guarantees from the Department of Energy for new plants. While he acknowledged that all power generation processes have risks, Besnainou said, "Plants are much safer than they used to be," adding during his speech, "Whatever our emotions, the facts are stubborn." Besnainou said he doesn't believe that the cost for constructing a plant will increase as a result of the Japanese disaster, but because of the high upfront cost for construction, he urged the US to continue funding for the DOE loans.

LVSun Urges Dry Cask Spent Fuel Storage. In an editorial, the Las Vegas Sun (4/5) says that "instead of pushing the foolish Yucca Mountain plan, the industry should be talking about interim storage methods that are used in many plants in the US and around the world," such as dry cask storage. While "the US nuclear industry has complained about dry cask storage because of the cost," the \$7 billion cost for dry cask storage cited in a 2003 DOE report "is a fraction of the cost of the Yucca Mountain project, which has been estimated at \$100 billion."

Application Submitted For Permanent Repository In Sweden. Meanwhile, the Financial Times (4/5, Ward, Soble, Pfeifer) reports from Sweden that a formal application has been submitted to build a permanent nuclear waste repository, which, if approved, would make the country the first to dispose of spent nuclear fuel in such a way.

INTERNATIONAL NUCLEAR NEWS

Japan Dumping Radioactive Water Into Ocean.

The CBS Evening News (4/4, story 12, 0:20, Couric) reported, "A desperate move today at that damaged nuclear plant in Japan. More than two and a half million gallons of radioactive water was dumped into the sea. It's contaminated at 500 times the legal limit, but officials say it poses no major health risk."

NBC Nightly News (4/4, story 8, 0:45, Williams) reported, "In Japan there at the plant workers are dumping storage tanks full of radioactive water directly into the Pacific Ocean in order to make room for even more highly radioactive water leaking from a crack in a maintenance pit as the photos from there show. They don't know why all that water is leaking and various fixes like filling the cracked pit with concrete have not worked."

Bloomberg News (4/5, Inajima) reports that Tokyo Electric Power Co. will discharge 10,000 tons of water, Hidehiko Nishiyama, Japan's main spokesman on nuclear safety, said, adding that "another 1,500 tons from pits outside two reactors will be drained over five days." Meanwhile, "Japan's government asked Russia for help processing radioactive waste from the Fukushima Dai-Ichi station, and is specifically interested in the Landysh facility, used to dismantle nuclear submarines," which is housed on a barge. The Washington Post (4/5, Nakamura) reports, "Japanese government officials said the Daiichi plant may continue to release dangerous radiation into the air for several months."

The New York Times (4/5, Tabuchi, A4, Belson) reports that removing the water "would help workers clearing radioactive water from the turbine buildings at the damaged reactors, making it less dangerous to reach some of the most crucial controls for their cooling systems." While "Tokyo Electric is rushing tanks to the plant...they may not arrive until mid-April." Also reporting the story are USA Today (4/5, Dorell, 1.83M), AP (4/5, Yamaguchi, Kageyama), the Wall Street Journal (4/5, Obe), BBC News (4/5), the Chosun Ilbo (4/5), and Reuters (4/5, Westall, Dahl) also cover this story.

South Korea Said To Be Concerned By Dumping. The AFP (4/5) reports that South Korea "conveyed concern that the dumping of radioactive water might be in breach of international laws." An unidentified South Korean foreign ministry official was quoted as saying, "It's the proximity between the two countries that makes Japan's release of radioactive water a pressing issue for us."

Water Barriers Considered At Japan's Leaking Nuclear Complex. Andrew C. Revkin writes in the "DOT Earth" blog for the New York Times (4/5, Revkin, 950K), "As I read reports about the release of more than 11,000 tons of radiation-laced water into the sea from the damaged nuclear

plant in Japan, I recalled reporting I did more than a decade ago on the many uses of silt barriers...to hold back everything from oil slicks to the bursts of polluted runoff flowing into coastal waters from city storm drains after heavy storms." Revkin goes on to say that "officials at the Tokyo Electric Power Company — three weeks into the emergency at Fukushima — have just started considering deploying such devices, according to a government official quoted in the Mainichi Daily News." He concludes, "It's a mystery to me why this option wasn't considered as soon as initial readings of ocean contamination were picked up — at the very least to alleviate public concern, even if the levels are very low."

Japan Withholding Radiation Forecasts From Public. The Daily Yomiuri (4/5) reports that Japan's "Meteorological Agency has been withholding forecasts on dispersal of radioactive substances from the Fukushima No. 1 nuclear power plant despite making the forecasts every day" for the IAEA, prompting domestic and international criticism and "raising new questions about the government's handling of information on the nuclear crisis."

Greenpeace To Check Radiation Of Milk, Vegetables Near Plant. AFP (4/5) reports, "Greenpeace on Monday widened its radiation tests near Japan's stricken nuclear plant to also include checks of milk and vegetables." Greenpeace radiation expert Rianne Teule said in the statement, "We hope to be able to provide independent analysis and clear advice to (affected) populations."

Siemens Sees Iran Profits Jump. The Wall Street Journal (4/5, Crawford, Fuhrmans) reports that despite Siemens AG's promise last year to withdraw from Iran, its profits in the country jumped. While Siemens didn't seek new contracts, its existing ones illustrate the limits of international pressure in curbing Iran's access to technology as well as the country's using the rules of international commerce to keep the company in the country. Siemens could be liable for up to €4 billion if it prematurely terminated its contracts. Still, the continuing business in Iran could complicate its business in the US, its largest market.

Germany Importing Power After Nuclear Plants Shut Down. The AP (4/5) reports that the German Association of Energy and Water Industries said German "Chancellor Angela Merkel's decision to take some atomic power plants offline in the wake of Japan's Fukushima disaster means Germany is now importing" about 50 gigawatt hours each day from "nuclear-reliant" France and the Czech Republic. However, "Environment Ministry spokeswoman Christiane Schwarte, however, said the country is still self-sufficient even without the seven nuclear power plants, and the imports only reflect normal fluctuation within the European grid system."

Reuters (4/5) reports that German deputy environment minister Juergen Becker said that the country plans to phase out all nuclear power by 2020. However, Merkel previously said that the government will analyze two commissions' reports prior to making a decision.

German Nuclear Shutdown Could Increase Emissions By 10%. Reuters (4/5, Gloystein, Cowhig) reports that Germany's decision to temporarily shutter seven of its nuclear power plants following the disaster in Japan in order to subject them to additional safety checks means the country will have to rely more on coal-fired power. Analysts believe that the need to replace 7,000 megawatts of nuclear power, could result in an increase in Germany's annual carbon emissions of 45 million metric tons, or around 10 percent.

Greenpeace: Chernobyl-Contaminated Food Being Eaten In Ukraine. The AP (4/5) reports, "Greenpeace said Monday that hundreds of thousands of Ukrainians are still eating food contaminated by radiation from the Chernobyl nuclear power plant explosion a quarter-century after the blast." According to the organization's report, "samples of milk, berries, potatoes and root vegetables in two Ukrainian regions show unacceptably high levels of the radioactive isotope cesium-137 from the 1986 blast." It added that while "most of the milk is consumed in the region where it's produced, the berries and mushrooms presented a wider danger because they could be sold at poorly supervised markets throughout the country."

Kazakhstan Expects Level Uranium Output Following 2013. Bloomberg News (4/5, Gizitdinov) report that Kazakhstan "expects to maintain [uranium] output in 2013 at a minimum level of 20,000 metric tons even as growth slows from recent years." Vladimir Shkolnik, chief executive officer of state-run Kazatomprom, said, "We grew sharply in the last two-three years and will have a planned slowdown in output this year, going toward a plateau gradually."

Iran Calls On Saudi Arabia To Withdraw Troops From Bahrain. The AP (4/5, Dareini) reports Iranian President Mahmoud Ahmadinejad called on Saudi Arabia on Monday to pull its troops out of Bahrain. "The Saudis did an ugly thing to deploy troops...the Bahraini government also did an ugly work to kill its own people," Ahmadinejad said. His comments came a day after the Gulf Cooperation Council "condemned what it said was an Iranian attempt to aggravate sectarian tension in Bahrain." Ahmadinejad, however, "brushed aside" the GCC statement, saying, "It's evident that this statement was made under pressure from the US and its allies."

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NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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NRC NEWS

Our Atom Plants Safe, US And Europe Regulators Say (REU)

By Sylvia Westall And Fredrik Dahl

Reuters, April 5, 2011

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

NRC Chairman Jaczko Says 'No Evidence' Of Fukushima Criticality (BLOOM)

By Jonathan Tirone

Bloomberg News, April 5, 2011

April 4 (Bloomberg) – Nuclear Regulatory Commission Chairman Gregory Jaczko said he has seen 'no evidence' of localized re-criticalities at Japan's damaged Fukushima Dai-Ichi plant. He spoke at a press conference in Vienna.

To contact the editor responsible for this story: Jonathan Tirone at jtirone@bloomberg.net

Japan To Dump 11,500 Metric Tons Of Radioactive Water (REU)

Reuters, April 5, 2011

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

IAEA: Japan Crisis Is A Major Challenge With Enormous Implications For Nuclear Power (AP)

Associated Press, April 5, 2011

VIENNA — Japan's reactor crisis poses a major challenge with enormous implications for nuclear power, the head of the U.N.'s atomic watchdog said Monday, appearing to criticize the operator of the crippled complex.

Yukiya Amano, head of the International Atomic Energy Agency, also stressed that the global nuclear community cannot take a "business-as-usual approach." Lessons must be learned from the fact that the Fukushima Dai-ichi plant has been leaking radiation into the environment ever since it was hit March 11 by a massive tsunami, he said.

Amano spoke at a meeting for experts from about 70 countries on scrutinizing the safety of nuclear power plants.

"I know you will agree with me that the crisis at Fukushima Dai-ichi has enormous implications for nuclear power and confronts all of us with a major challenge," Amano told delegates.

The worries of millions of people around the world about the safety of nuclear energy "must be taken seriously," Amano said, calling for transparency and "rigorous adherence to the most robust international safety standards."

"It is clear that more needs to be done to strengthen the safety of nuclear power plants so that the risk of a future accident is significantly reduced," he said.

Speaking to reporters later, Amano appeared to criticize Fukushima's utility, the Tokyo Electric Power Co., for not learning from earthquake-related incidents in 2007 at its Kashiwazaki Kariwa nuclear power plant. Until now, that was one of Japan's worst nuclear accidents, killing eight people, sparking fires and leaking radioactive water.

"The measures taken by the operators as a safety measure (were) not sufficient to prevent this accident," Amano said when asked if the Fukushima catastrophe could have been avoided.

Last month, Japan's nuclear safety agency criticized TEPCO for failing to inspect critical equipment such as 33 pieces of machinery parts crucial to the cooling systems needed to keep Fukushima's six nuclear reactors from overheating.

Previously, TEPCO had skipped 117 inspections at Kashiwazaki.

Amano said the IAEA would like to send an international expert mission to Japan as soon as possible to assess the accident. He also said nuclear experts should be in touch with each other faster in the future after problems like these.

"I am confident that valuable lessons will be learned from the Fukushima Dai-ichi accident, which will result in substantial improvements in nuclear operating safety, regulation and the overall safety culture," Amano said.

Amano's comments were seconded by Li Ganjie of China's National Nuclear Safety Administration, who is presiding over the meeting, which runs through April 14.

The conference began with a moment of silence for victims of the Japanese disaster.

"Needless to say, the Fukushima accident has left an impact on global nuclear power development and has become a major event in nuclear history," Li said.

The meeting, hosted by the Vienna-based IAEA, centers on the Convention on Nuclear Safety that came into being after the 1979 Three Mile Island and the 1985 Chernobyl nuclear accidents.

Adopted in 1994, it commits states to submit reports on the safety of their civil nuclear facilities for review by their counterparts at gatherings every three years. The idea is that questioning and peer pressure will keep countries on their toes. All countries with operating nuclear power plants are parties to the treaty.

The peer review process should be strengthened, Amano told reporters.

"In hind-thought, it was not sufficient," he said.

A separate side meeting focused specifically on the Fukushima Dai-ichi plant was scheduled for Monday evening.

No 'Business As Usual' On Nuclear After Fukushima: IAEA (AFP)

By Simon Morgan

AFP, April 5, 2011

VIENNA (AFP) – The world cannot take a "business as usual" approach to nuclear power in the wake of the disaster in Japan, UN atomic watchdog chief Yukiya Amano said Monday.

Amano suggested however that not enough was learned from an earlier incident in Japan where another nuclear power plant was damaged in an earthquake smaller than the one that caused last month's disaster.

"Thinking retrospectively, the measures taken by the operators as a safety measure (were) not sufficient to prevent this accident," Amano told reporters on the sidelines of a meeting on the Convention on Nuclear Safety (CNS).

The CNS is a treaty – currently with 72 signatory countries – drawn up after the 1986 Chernobyl disaster to ensure the safety of the world's atomic reactors.

Amano said the crisis in Japan caused by the March 11 earthquake and tsunami "has enormous implications for nuclear power and confronts all of us with a major challenge."

"We cannot take a 'business as usual' approach," he said.

The ageing Fukushima Daiichi nuclear power plant, 250 kilometres (155 miles) northeast of Tokyo, was hit by a 14-metre (46-foot) tsunami on March 11, triggering the world's worst nuclear accident since Chernobyl.

It is not the first such incident in quake-prone Japan: in 2007, the Kashiwazaki-Kariwa nuclear power plant was also damaged in an earthquake.

"That earthquake was much smaller than this one. And this time, the earthquake was followed by a huge tsunami," Amano said.

"I believe there are certainly ways to avoid the repetition of such an accident and for that purpose we are now thinking collectively and that is why we are preparing a ministerial meeting to launch the process."

The International Atomic Energy Agency (IAEA) is to host the conference with its 151 member states from June 20 to 24 to discuss lessons to be learned from the Fukushima disaster.

Li Ganjie of China's National Nuclear Safety Administration agreed that the Fukushima incident "has left an impact on global nuclear power development and has become a major event in nuclear history."

It had triggered "heated discussion on whether we should develop nuclear power."

IAEA chief Amano said that while the immediate priority at Fukushima "is to overcome the crisis and stabilise the reactors ... we must also begin the process of reflection and evaluation."

"The worries of millions of people throughout the world about whether nuclear energy is safe must be taken seriously," he said.

The Vienna-based IAEA, set up in 1957, is responsible for drawing up international safety standards for nuclear power plants, even if it has no powers to legally enforce those standards.

It has already dispatched expert teams to help monitor radiation release from the damaged reactors and sent two reactor experts to the plant to get first-hand information.

Amano said "more needs to be done to strengthen the safety of nuclear power plants so that the risk of a future accident is significantly reduced."

Many countries are reviewing their plans to set up nuclear power programmes in the wake of the Fukushima disaster.

But Amano insisted that the basic drivers behind the interest in nuclear power – which included rising global energy demand, concerns about climate change, volatile fossil fuel prices and energy security – "have not changed as a result of Fukushima."

He said he was "confident that valuable lessons will be learned from the Fukushima Daiichi accident which will result in substantial improvements in nuclear operating safety, regulation and the overall safety culture."

With Nuclear Power, Overconfidence Is Deadly (TREEHUG)

By Brian Merchant

Treehugger, April 5, 2011

After an accident in any high-profile industry that makes the public nervous, it's pretty common to see business interests, regulators, and public officials rush to assure everybody that the incident was a fluke, and that the power plants running elsewhere are safe, safe, safe. We saw it with the BP spill – major oil companies came forward to say that, well, they had properly updated contingency plans (even if they looked suspiciously like the one that failed BP), and that such an event was unlikely to occur again. And so it is with the nuclear crisis in Japan – American nuclear regulatory officials have come out to assuage the anxious public's fears. Our plants are entirely secure, they say, there's no reason to be afraid of a meltdown happening here. Except there is, actually – however slight chances of disaster may be. But we'd do best to address those concerns rather than sweeping them under the rug.

Slate's William Saletan has a smart piece on this phenomenon of nuclear overconfidence, which offers one of the best lines I've seen written about the nuclear debacle: On Wednesday, Gregory Jaczko, the chairman of the U.S. Nuclear Regulatory Commission, testified before a Senate subcommittee about the nuclear crisis in Japan. He assured the committee of "our continuing confidence in the safety of the U.S. commercial nuclear reactor fleet." In their opening statements, Jaczko and William Levis, an executive representing the industry's Nuclear Energy Institute, used variants of the words assure, ensure, and confident 21 times. I don't want to hear the industry and its regulators talk this way after Fukushima. I don't want to hear confidence and

assurances. I want to hear humility and a ruthless re-examination of assumptions ... I understand the need to put Fukushima in perspective. I agree with Jaczko and Levis about the relative safety of nuclear power. Measured by accidents, direct fatalities, and indirect health damage, nuclear energy is many times safer than fossil fuel production. It's even safer than hydroelectricity, which has killed thousands of people in dam failures. But the key to nuclear safety isn't confidence. It's doubt. (Emphasis mine). That's exactly right. It's still not clear how great the scope of the tragedy at Fukushima will be – some plant workers have been confirmed dead, super-radioactive waste is being discharged into the ocean as I tap this out, and radiation levels are still in question in various locations around the region. But regardless, it's absolutely the kind of disaster we must attempt to prevent from ever happening again. As such, we need to understand it, probe it, contrast it with previous failures, and investigate any potential analogs that the faulty systems at Fukushima may have to the applicable plants here in the US.

It makes no sense at all to assume that we simply have better regulations, better machinery of better luck than Japan, and to call it a day. With something that has the capacity to go disastrously wrong – and that's as loaded in the public imagination as nuclear power – brash overconfidence is the worst card to play. It's also the attitude that gets us blindsided when and if a comparable disaster were to strike here – that overconfidence can kill.

The Tale Of Nuclear Disasters Foretold (HUFFPOST)

By Elliott Negin

Huffington Post, April 5, 2011

If you studied Greek mythology in grade school, you may remember the story of Cassandra. Apollo fell in love with her and granted her the gift of prophecy. But she spurned him, so he placed a curse on her ensuring that no one would believe her predictions. Later, when she foresaw the destruction of Troy, her fellow Trojans ignored her. They called her a lunatic – and paid dearly for their disbelief.

Modern-day Cassandras have been sounding alarms about the risks of nuclear power for years, and those warnings, like Cassandra's, have fallen on deaf ears.

One of the most notable examples occurred in January 1979, when the Union of Concerned Scientists asked the government to shut down 16 nuclear reactors and re-examine the rest after the Nuclear Regulatory Commission repudiated the findings of a major nuclear safety study. UCS charged that the 1975 study, which erroneously concluded that the chance of a severe nuclear accident was as remote as one in a million years, was the agency's main justification for keeping the plants running. In mid-February, the NRC rejected UCS's request. The agency insisted the study was not a major factor in its reactor licensing decisions or regulatory enforcement. On March 28, one of the 16 plants UCS cited – Unit 2 at Three Mile Island – suffered a partial meltdown.

Fast forward to March 11 of this year, the day a 9.0 earthquake and resulting tsunami devastated Japan and overwhelmed the Fukushima Daiichi nuclear power complex. UCS had scheduled a lunch briefing on Capitol Hill to discuss two new reports on nuclear power. One warned against plans to lavish more federal subsidies on the industry at the expense of safer, more cost-effective low-carbon technologies. The other warned that the NRC, although capable of ensuring reactor safety, too often fails to prevent major lapses.

Only 12 congressional staff members showed up.

UCS's nuclear subsidies report found that despite more than 30 federal subsidies supporting every stage of the nuclear fuel cycle over the last half century, the industry is still not economically viable. Added together, these subsidies often have exceeded the average market price of the electricity the industry produced. "In other words," said Ellen Vancko, UCS's nuclear energy and climate change project manager, "if the government had purchased power on the open market and given it away free, it would have been less costly than subsidizing nuclear power plant construction and operation."

Pending and proposed subsidies for new nuclear reactors would shift even more costs and risks from the industry to taxpayers and ratepayers. The Obama administration, for example, is proposing to provide an additional \$36 billion in federal loan guarantees to underwrite new reactor construction, boosting the total amount of nuclear loan guarantees from \$18.5 billion to \$58.5 billion, leaving taxpayers liable if plant owners default on these loans.

Why does the industry want these loan guarantees? Without them, Wall Street will not risk financing new reactors, now estimated to cost between \$8 billion and \$10 billion each. Given the nuclear industry's abysmal financial track record, default is not an academic issue. The Congressional Budget Office estimated the potential for default for the industry at 50 percent.

The second UCS report focused on safety. Written by UCS Nuclear Safety Project Director David Lochbaum, it analyzed 14 special inspections the NRC performed last year when safety equipment problems or security shortcomings increased the chances of a reactor core meltdown by a factor of 10 or more. The report also reviewed other examples where the NRC

oversight process achieved particularly good outcomes – demonstrating that the agency can be an effective regulator; and particularly bad outcomes – indicating that the agency needs to do more to ensure public safety.

Lochbaum, a nuclear engineer who worked at U.S. reactors for 17 years, found that many of these significant events – or near-misses – occurred because reactor owners and the NRC tolerated known safety problems. "For example," he told the small gathering, "both of the nuclear reactors at the Calvert Cliffs nuclear plant in Maryland automatically shut down when rainwater leaked in through holes in the roof and dripped onto electrical equipment. Workers had noted numerous leaks across many, many months prior to this event, but management always deferred repairs. After all, the roof only leaked when it rained."

On March 11, UCS nuclear experts had an audience of a dozen. On March 12, when it became clear just how bad the situation in Japan was, our phones didn't stop ringing, and they haven't stopped ringing since. All of a sudden, everyone is interested in nuclear safety.

So what are the lessons from the last few weeks, besides the fact that it too often takes a catastrophe to wake people up from their indifference?

First and foremost, that it can happen here, whether triggered by human error, or by a hurricane, earthquake, tornado, ice storm or other natural disaster. To avoid that possibility, the NRC needs to do a lot more to protect the public. Among other things, the agency should require the owners of the 104 reactors currently operating across the country to transfer a significant percentage of their spent fuel from wet pools to dry casks, which are less vulnerable. It also must reassess plant emergency evacuation plans, which now only extend to a 10-mile radius. And it must ensure that plant owners have realistic plans to cool reactor fuel rods in the event their main and backup power fails.

The NRC has announced a two-phase response plan to Fukushima: a 90-day assessment followed by a more in-depth review. Given its past performance, the NRC likely will draft a solid action plan to address problems highlighted by the Japanese nuclear disaster, but then implement safety upgrades at a glacially slow pace. A comprehensive action plan does little to protect Americans until its goals are achieved. Congress must force the NRC to not merely chart a course to a safer place, but actually reach that destination as soon as possible.

Second, the Fukushima disaster likely will put the U.S. nuclear industry's "renaissance" on hold, if not derail it altogether, especially since it was faltering long before March 11. Spiraling construction cost estimates, declining energy demand, low natural gas prices, and the government's failure to place a price on carbon pollution already had put a damper on the industry's plans.

The good news is we do not need new nuclear reactors. The United States could meet projected electricity demand over the next 20 years and cut power-plant carbon emissions by 84 percent without them, according to a 2009 UCS report. How? By phasing out coal, significantly improving energy efficiency, and dramatically increasing our reliance on clean, renewable energy sources, including wind, solar, geothermal and bioenergy.

In the meantime, the federal government should heed UCS's recent warnings. The NRC needs to aggressively enforce its regulations, and the Obama administration should promote technologies that will swiftly achieve the biggest cuts in global warming emissions at the lowest cost and risk. Nuclear power today does not meet those criteria.

House Subpanel To Probe U.S. Response To Japanese Emergency (EED)

By Hannah Northey

E&E Daily, April 5, 2011

House lawmakers this week will scrutinize the federal government's response to the crisis at Japan's Fukushima Daiichi nuclear power plant, as well as the safety of U.S. reactors and the contentious closure of Yucca Mountain, Nev., as a nuclear waste storage site.

A House Energy and Commerce subcommittee Wednesday will review U.S. reactions to the ongoing emergency that began when the reactor was damaged by a massive earthquake and tsunami on March 11. The International Atomic Energy Agency (IAEA) said Saturday the situation at the plant remains "very serious," and that the U.S. Navy is helping carry fresh water to the site.

Tokyo Electric Power Co. recovered the bodies of two employees last week in the turbine building of Unit 4 of the Daiichi reactor, the IAEA said. The workers had been missing since the March 11 events.

In the United States, "very low levels of radioactive material" have been detected from the Japanese reactor, readings that were "expected" and "far below levels of public-health concern," U.S. EPA said in statement Saturday. The agency based its assertion on rainwater collected in California, Idaho and Minnesota, which picked up trace amounts of iodine-131 and other isotopes.

U.S. regulators have been simultaneously moving to quell fears of radiation in the United States and assure the safety of the country's 104 nuclear reactors.

In addition to sending experts to Japan to help with the Daiichi reactor, the Nuclear Regulatory Commission launched a nationwide review of U.S. nuclear plants to ensure they can withstand disasters and loss of power. On Friday the commission appointed six senior managers and staff to a task force that will examine NRC programs, processes and rule implementation in light of the Japanese disaster. The task force will make public a written report in 90 days and review the issues that need to be assessed in the longer run, according to NRC.

"Initially, the task force will identify potential near-term actions that affect U.S. power reactors, including their spent fuel pools," said NRC in a Friday statement. "Areas to be reviewed include station blackout (loss of all A/C power for a reactor), external events that could lead to a prolonged loss of cooling, plant capabilities for preventing or dealing with such circumstances, and emergency preparedness."

The task force will brief NRC on May 12 and June 16 on the status of the review, and recommendations will be reported at a July 19 commission meeting that will be open to the public, according to the commission.

Key lawmakers on the subcommittee are likely to tout their own responses to the disaster, including Rep. Ed Markey's (D-Mass.) introduction of legislation last week to impose a moratorium on all new nuclear reactor licenses or license extensions until new safety requirements are in place "that reflect the lessons learned" from the Japanese disaster.

Among other things, Markey's bill requires nuclear reactors to have 14 days worth of diesel fuel backup generation and battery generators that last 72 hours. Spent nuclear fuel would have to be moved into dry cask storage as soon as the fuel is sufficiently cooled to do so, he said.

Following the earthquake and tsunami in Japan, officials and utility workers there faced major challenges in continuously cooling spent nuclear fuel in pools at the damaged Fukushima Daiichi nuclear plant. That situation prompted lawmakers and environmental groups to question how nuclear waste is stored and secured in the United States. The country's lack of a permanent repository for spent nuclear fuel is likely to surface at Wednesday's hearing.

House Republicans have repeatedly criticized the Obama administration in the past for shuttering Yucca Mountain in Nevada without proposing an alternative site. The administration pulled its support to develop Yucca Mountain as a repository site, and the Energy Department is currently attempting to withdraw its application to develop it.

Last week, House Energy and Commerce Chairman Fred Upton (R-Mich.), who is also a member of the subcommittee, joined Rep. John Shimkus (R-Ill.), chairman of the Subcommittee on Environment and the Economy, in announcing a formal investigation into DOE's decision to shut down Yucca Mountain (E&ENews PM, March 31).

The lawmakers sent a letter to Energy Secretary Steven Chu and NRC Chairman Gregory Jaczko to notify the regulators of the investigation and state their concern that the government shuttered the project after "nearly three decades and billions of taxpayer dollars spent ... without even the sensibility of offering a viable alternative."

Schedule: The hearing is Wednesday, April 6, at 9 a.m. in 2322 Rayburn House Office Building.

Witnesses: Witnesses to be announced.

Accepted Nuclear Contingency Plans May Not Be Enough, Nuclear, Power, One (YUMAS)

Yuma Sun, April 5, 2011

Although the nuclear crisis in Japan is yet to be resolved, experts in the United States are already beginning to ask some troubling questions about the nuclear power industry here.

The difficulties being experienced in Japan are understandable, given the double disaster that hit the plant. The facility was staggered by a huge earthquake and then by a huge tsunami. Contingency plans were not adequate to cope with the situation and it became impossible to keep water flowing to cool the nuclear rods. The outcome is now evident.

The question on the minds of U.S. nuclear officials is whether American plants have proper contingency plans.

Surprisingly, one potential calamity involves a relatively common occurrence, one all of us have experienced. And that is a power outage. Not an ordinary one, of course, that may last a few hours, but one that could last for a day or more.

Yuma area residents have experienced some of these long-term outages after big storms. They are uncomfortable and inconvenient, but people manage to cope until power can be restored, sometimes after days without electricity.

If that were to happen at a nuclear power plant, the outcome could be disastrous.

A recent Associated Press investigation revealed that a meltdown could potentially start at some U.S. nuclear power facilities within a day if there were no electricity to power the pumps to cool nuclear rods - just as happened in Japan. Plants with very good battery backup systems and emergency generators could last a few days.

This possibility of a long-term power outage is seen as remote by nuclear power operations, but the disaster contingencies for the Japanese plant were also believed to be adequate.

President Obama has ordered a complete review of the U.S. nuclear power industry in the wake of the Japanese crisis. It needs to be a rigorous review that pushes beyond normally accepted standards. The future of the nuclear power industry may hang in the balance.

US Studies Fukushima Disaster For Safety Lessons (AFP)

By Jean-louis Santini

AFP, April 5, 2011

WASHINGTON — US engineers studying Japan's experience with its crippled nuclear plant have focused on two key weaknesses -- backup energy systems and spent fuel rod pools -- that could also plague reactors in the United States.

The Fukushima Daiichi complex largely withstood the massive 9.0-magnitude earthquake on March 11, but was damaged by the giant tsunami wave that following the quake.

The twin disasters knocked out the plant's reactor cooling systems, sparking a series of explosions and fires. Authorities have since struggled to keep the fuel rods under water inside reactors and storage containment pools.

If they are exposed to air, they could degrade further and emit large amounts of dangerous radioactive material.

Two of the plant's six spent fuel rod pools were apparently damaged following the quake and tsunami, said Gregory Jaczko, head of the US Nuclear Regulatory Commission (NRC).

"It was possible there was a leak," he told a US Senate hearing on March 30, soon after he returned from Japan.

US observers fear the fuel storage containment pools, located on an upper part of the reactor buildings at Fukushima, were cracked by explosions after the quake and tsunami and are leaking.

Jaczko said that in the United States, such pools are "robust structures equipped to withstand natural disasters like an earthquake and tsunami," strong enough to safely store nuclear waste for at least a century.

But he nevertheless ordered a 90-day review of the Fukushima disaster, which would go far to help assess the safety status at the spent fuel pools at 104 US reactors.

The US nuclear energy industry has come under the microscope in the wake of Japan's disaster, with critics pointing to inadequate emergency plans and recent violations at US nuclear plants.

David Lochbaum, an expert at the independent Union of Concerned Scientists, worried that tens of thousands of tons of irradiated fuel currently sit in spent pools across the country "with almost no protection."

Unlike the reactors, the spent fuel pools are not cooled by a multitude of redundant systems that can be kept running with multiple power backup systems, such as long-lasting batteries, in case the main power goes out -- which is what happened in Japan.

Also unlike reactors, which are encased in steel armor and thick concrete, the pools "are often housed in buildings with sheet metal siding" like that used for a storage shed, Lochbaum told the Senate panel.

Reducing the amount of irradiated fuel in spent fuel pools "would significantly reduce the safety and security risks from a nuclear power plant," he said.

"We have utterly failed to properly manage the risk from irradiated fuel stored at our nation's nuclear plants. We can and must do better," said Lochbaum.

Ernest Moniz, a physics professor at the Massachusetts Institute of Technology (MIT), said at the same hearing that a move from pools to safer dry casks "is essential."

"The Fukushima problems with spent fuel pools co-located with the reactors will undoubtedly lead to a reevaluation of spent nuclear fuel management strategy" in the United States, he said.

US Senator Dianne Feinstein of California worried that spent fuel removed from reactors in 1984 are being stored in an earthquake-prone area of her state, and were still being kept in cooling pools.

"Fuel removed from reactors in 1984 is still cooling in wet spent fuel pools" in California, said Feinstein, wondering why the NRC "has not mandated a more rapid transfer of spent fuel to dry casks."

With dry casks, the spent fuel rods are sealed inside concrete and steel canisters.

"It's clear that we lack a comprehensive national policy to address the nuclear fuel cycle, including management of nuclear waste," she said.

Lochbaum also said that the emergency backup batteries at US nuclear power plants are not designed to endure a long power outage.

He said that batteries in 93 of the 104 US nuclear reactors can power the plants for four hours, just half the time than the backup batteries at Fukushima, which was clearly not long enough.

Anthony Pietrangelo with the Nuclear Energy Institute, which represents the nuclear power industry, told the Senate that designers must consider batteries that last for "at least 48 hours and up to 72 hours."

Critics Zero In On DOE Projects, Urge Moratorium On New Reactors (GWIRE)

By Jenny Mandel

Greenwire, April 5, 2011

Congress and the Obama administration should put construction of new power plants on hold while an independent commission reviews the lessons to be learned from the continuing Japanese disaster, according to a group that campaigns against new U.S. reactor projects.

Michele Boyd, director of the Safe Energy Program at Physicians for Social Responsibility, said a moratorium on new reactors and a block on \$36 billion that President Obama has requested for new loan guarantees for nuclear power plants should be put in place immediately.

Meanwhile, a report modeled on one carried out by the Kemeny Commission to investigate the 1979 Three Mile Island accident should take stock of the public health and safety implications of the failures at the Fukushima Daiichi power plant in Japan, she said.

Physicians for Social Responsibility and other groups with membership in the Alliance for Nuclear Accountability are highlighting nine Energy Department projects that they say present the most significant risks for runaway federal spending along with environmental, public safety and nuclear proliferation hazards.

Among those are the Mixed Oxide Plutonium (MOX) Fuel Fabrication Facility under construction in Savannah River, Ga.; a waste treatment plant at the Hanford site in Washington; the National Ignition Facility at Lawrence Livermore National Laboratory in California; the Kansas City Plant, where most nuclear weapons components are made; and the Uranium Processing Facility in Oak Ridge, Tenn.

Tom Clements, the southeastern nuclear campaign coordinator for Friends of the Earth, said the MOX plant in Georgia is nine years behind schedule and projected to cost three times the amount originally budgeted, despite there being no existing domestic market for MOX fuel because full testing on it has yet to be carried out. "The MOX program has become an expensive project which enriches contractors," he said at a National Press Club briefing.

Tom Carpenter, executive director of a group called Hanford Challenge, said one element of the cost escalation associated with the Hanford Waste Treatment Plant is that DOE has missed deadlines under its legally binding cleanup agreements, resulting in fines and penalties.

He said an analysis found that hydrogen gas was likely to build up and catch fire or explode at the plant, leading to "small explosions" that DOE has said present an acceptable risk. But Carpenter and other critics believe that such explosions present a serious safety hazard that should be addressed through measures such as additional containment, if necessary.

In a waste treatment plant like the one under construction, Carpenter said, the reactions would take place inside a black box environment totally sealed from the outside, so personnel could not enter certain areas to address problems if an accident did occur.

Regarding the ongoing Japanese emergency, Clements, the Savannah River campaigner, said the federal Nuclear Regulatory Commission was undermining its own credibility by continuing to move forward with reactor licensing activities as though the event posed no questions for U.S. operations.

Accusing the commission of pretending that the Fukushima disaster didn't happen, he and others said the regulators are inherently biased toward industry because their operations are funded by fees collected from those they oversee.

GE's Immelt Defends Nuclear Industry Safety Record (REU)

By Taiga Uranaka And Osamu Tsukimori

Reuters, April 5, 2011

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

Many Concerned About WSU's Nuclear Reactor (TACOMA)

By Estelle Gwinn And Kasey Crawford

Tacoma News Tribune, April 5, 2011

PULLMAN – As workers in Japan struggle to cool nuclear power plants, the phone has been ringing with questions to Washington State University's Nuclear Radiation Center.

The 50-year-old reactor, which is kept in a 65,000-gallon tank of purified water, is the only nuclear research reactor in the state. It has a seismic sensor that triggers a shutdown if an earthquake is detected.

"This reactor can't melt down," said Corey Hines, reactor supervisor at the center. "The residual heat from the reactor is naturally convected away by the water without any forced cooling. This reactor can go from full power to shutdown in 0.9 seconds."

The center, established in 1961, provides research and teaching opportunities at WSU, and also produces isotopes for national laboratories and private companies across the country. It does not produce electricity for the campus.

"We knew there would be backlash from the crisis in Japan," Hines said. "It's unfortunate but the other alternative is coal-powered plants that run on fossil fuels, which are extremely harmful to the environment. Nuclear energy has to be a part of the solution."

Kelly Henry, a WSU graduate student in chemistry, spent months training and studying to become a licensed reactor operator through the U.S. Nuclear Regulatory Commission. "The training is really intense," Henry said.

The United States has more than 25 research reactors, including those at Idaho State University and Oregon State University.

WSU and OSU have reactors that produce one megawatt of energy. By comparison, the Columbia Generating Station near Richland – the only commercial reactor in the Northwest – can produce nearly 1,200 megawatts.

Japan's Fukushima Daiichi Nuclear Power Station complex has six reactors that produced more than 4,500 megawatts before the disastrous March 11 earthquake and tsunami.

The Oregon State University reactor "uses a small quantity of low-enriched fuel, so even if a catastrophic event caused all the water to leak out, the reactor would not melt down or explode," said Lyn Smith-Gloria, an OSU spokeswoman.

In Pullman, the reactor is generally shut down at the end of the day and restarted in the morning after an extensive series of safety checks, Hines said.

"Ninety-five percent of our job is maintaining the reactor," Hines said. "We do daily and routine system checks. We have an eight-page check procedure before starting up the reactor. We are constantly doing preventive and scheduled maintenance."

Editorial: Keep Nuclear Power In Mix (DETN)

Crisis in Japanese plant shouldn't foreclose nuclear power in the U.S.

Detroit News, April 5, 2011

The crisis at Japan's Fukushima Dai-ichi nuclear facility is likely to slow the development of nuclear energy in this country. And it should certainly prompt safety reviews of nuclear plants and plans. But nuclear energy must remain in the mix of power sources in the future.

Nuclear power plants generate about a fifth of our electricity in the United States. Nuclear power has its dangers, which are on spectacular display in Japan following a huge earthquake and tsunami, but it is also clean energy. It emits no carbon and is renewable. For this reason, President Barack Obama, in his recent speech on national energy policy, rightly reaffirmed this country's commitment to the development of nuclear power, along with other sources of energy.

The president also said the government would incorporate lessons learned from the crisis at the Fukushima Dai-ichi nuclear plant.

The Nuclear Regulatory Commission, the Wall Street Journal reports, has stepped up inspections at the three facilities out of 104 in this country that have been identified as having level-three safety issues. (The NRC has a five-point scale. Level five means a plant must be closed. Level one is the optimum.) The other plants are all at level one or level two. The three level-three plants are in Kansas, Nebraska and South Carolina.

The NRC is also looking at whether nuclear facilities have adequate backup power in the event of significant energy blackouts, the Journal notes.

All of these are prudent and necessary steps in assuring the safety of this country's nuclear facilities, as well as mapping which plants are near significant geologic faults which could make them vulnerable to seismic shocks.

But this does not mean that nuclear energy development should be foreclosed. According to the Economist magazine, two new nuclear reactors are under construction, but have yet to receive full regulatory approval, while about 20 plants have applied for renewed licenses. The magazine reports another 15 are expected to seek licensing renewal shortly.

While energy demand has slowed in this country because of the recession, the country is going to need additional baseline electric power. Nuclear energy capacity in particular has to be maintained as pressure increases on coal-fired plants. More

reserves of natural gas have been discovered in recent years, but the country shouldn't be dependent on one source of energy. The crisis in Japan is to some degree the result of poor planning — locating a plant in a low-lying coastal area where it was liable to a tsunami.

The installation has a poor safety record, as does Japan's nuclear regulatory regime. Reformers in Japan are now addressing these issues even as efforts continue to safeguard the damaged plants and protect nearby residents from high levels of radiation.

The Fukushima installation's crisis is properly being seen as precautionary tale for U.S. regulators and for industry executives. But it shouldn't be used as the pretext for closing off all nuclear power development.

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Safety Of Vt. Nuclear Plant Cables Questioned (AP)

By Dave Gram, Associated Press

Associated Press, April 5, 2011

MONTPELIER, Vt. — Federal regulators knew when they renewed the Vermont Yankee nuclear plant's license last month that electrical cables serving key plant safety systems had been submerged in water for extended periods of time, Nuclear Regulatory Commission documents show.

A nuclear watchdog group says the issue has new urgency following the nuclear disaster in Japan, in which tsunami flooding knocked cooling systems out of service, causing reactors to overheat at the Fukushima Dai-ichi nuclear station.

An NRC report in December said 23 reactors around the country had electrical cable failures between 1988 and 2004, with nine more instances since 2007 of cables improperly being submerged in water.

"Because these cables are not designed or qualified for submerged or moist environments, the possibility that more than one cable could fail has increased," the report said. "This failure could disable safety-related accident mitigation systems."

The agency's documents show it has been concerned about submerged electrical cables at U.S. nuclear plants for years. The cables, usually housed in concrete boxes or small tunnels underground, get wet from rain, melting snow or groundwater, the NRC said.

The December report said the agency would not require any changes by the industry. While some individual plants have been faulted for lax maintenance and promised to take corrective action, no accidents or near-accidents were attributed to the submerged cables.

The New England Coalition, the watchdog group, opposed the 20-year license extension the NRC gave Vermont Yankee on March 21, a year before its current license expires in 2012. A coalition technical adviser, Raymond Shadis, said allowing cables not designed for underwater use to be submerged violated a key NRC rule issued in the early 1970s, around the time Vermont Yankee went into operation.

NRC spokesman Neil Sheehan said the submerged cable issue had come up in several license renewal reviews at nuclear plants around the country. Vermont Yankee's owner, New Orleans-based Entergy Corp., agreed to inspect manholes for water accumulation at least once a year as a condition of its license renewal, he said.

The coalition said it would file an enforcement petition this week, asking the NRC to follow its own rules on the submerged cables.

"If (an enforcement) petition is filed regarding the issue of submerged electrical cables at Vermont Yankee, we will review it using our clearly defined process for doing so," Sheehan said.

Vermont Yankee spokesman Larry Smith said Entergy would have no comment until officials see the coalition's petition.

The coalition cited NRC papers that listed nine plants where cables have been improperly submerged in water since 2007. Those were at the Monticello nuclear plant in Minnesota; the Fermi plant in Michigan; the Point Beach plant in Wisconsin; the Beaver Valley, Three Mile Island and Peach Bottom plants in Pennsylvania; the Wolf Creek station in Kansas; the Callaway plant in Missouri; and Vermont Yankee.

The NRC rule cited by Shadis, which is in a recent agency report on Fukushima, says plant components have to be designed to withstand the worst their environments throw at them, including earthquakes, floods, or water seeping in.

The agency's December report said it had found during a May Vermont Yankee inspection that Entergy had "allowed the continuous submergence of safety-related cables that were not designed or qualified for continuous submergence and failed to demonstrate that the cables would remain operable."

It said the problem was of "very low safety significance" because the cables at Vermont Yankee had not actually failed to operate. But it also said "an increased potential exists" for a failure of "accident-mitigating system cables if they are subjected to the same environment and degradation mechanism for which they are not designed."

A loss of accident-mitigating systems — cooling water pumps — played a key role in the still-unfolding Fukushima disaster. The New England Coalition tried to make an issue of the submerged cables late in the five-year review process that ended when Vermont Yankee won its federal license extension, but the NRC ruled the group had not raised those objections in time. Shadis said the group this week will try to raise the issue again in a petition asking that the NRC enforce its own rules. "It's extremely important from a safety standpoint," Shadis said. "The Japanese experience adds urgency to it. It needs to be addressed."

Vermont is the only state where legislative approval is necessary for a nuclear power plant to continue operating, and the state Senate last year killed a bill to give regulators the green light to go beyond March 2012.

This Is Only A Test: Vermont Yankee Evacuation Zone To See Emergency Preparedness Drill (AP)

Associated Press, April 5, 2011

BRATTLEBORO, Vt. — Local, state and federal emergency responders will be converging on the area around the Vermont Yankee nuclear plant for a drill to prepare for a test of their readiness scheduled for next month.

The drill is being held Tuesday and Wednesday in and around the towns of Vernon, Guildford, Brattleboro, Halifax, Dummerston, and Marlboro.

Sampling teams who would check for radioactive contamination in an actual emergency will be out in the field on Wednesday.

If there is an actual emergency at the plant, established protocols will be followed to alert the public; including sirens, Emergency Alert System messages, and other forms of communication.

Vermont Yankee Emergency Drill (WCAXTV)

WCAX-TV Burlington, VT, April 5, 2011

People in towns near Vermont Yankee may see emergency workers taking radiation readings this week— but don't panic, because it's only a drill.

Local, state and federal first responders conduct regular disaster drills in towns that fall within the emergency zone around the Vernon plant. The drill taking place Tuesday and Wednesday involves radiological testing.

State officials say if you see people conducting tests, don't be alarmed. The drill is in preparation for an exercise in May that will be graded by federal regulators.

VY Asks Vt. To Nix Discharge Review (BRATBORO)

By Howard Weiss

Brattleboro Reformer (VT), April 5, 2011

VERNON — The owner of the Vermont Yankee nuclear power plant wants the state to reject an environmental group's request to have the Agency of Natural Resources review the plant's discharge permit.

Last week, Entergy Nuclear Vermont Yankee sent a letter to ANR Secretary Deborah Markowitz stating that a petition entered by the Connecticut River Watershed Council is meritless and should not serve as a basis to the company's pending discharge permit.

The letter was sent to Markowitz on April 1 from the company's legal counsel, Goodwin Procter.

On Feb. 17, the Connecticut River Watershed Council sent the petition to ANR asking the state to review Vermont Yankee's discharge permit, which allows the power plant to release heated water into the Connecticut River.

The petition was filed on behalf of CRWC by the Vermont Law School Environment and Natural Resources Law Clinic.

CRWC, in its petition, stated that the heated water released from the plant threatened the ecosystems in the river and the environmental group wanted ANR to evaluate the effects on the Connecticut River water.

The environmental group also wants ANR to open the permit process to the public.

But Entergy argues that Vermont Supreme Court and the Vermont Environmental Court have both considered the impact already and the company says the state should not use the CRWC's petition to drive its review.

Three years ago, the Environmental Court reviewed an earlier request by CRWC to determine if heated water discharged from the plant was safe for the river.

Yankee's discharge is nonradioactive water that is withdrawn from the river, run through the plant's condenser to cool reactor coolant water and released into the river at temperatures around 100 degrees.

The Environmental Court issued a decision limiting the times at which Yankee can release heated water into the river and at which river temperature it had to cease to do so.

Both courts have approved Entergy's plan to release water and the company says the watershed council has not raised any new issues that require further investigation.

The courts have already "reached the conclusion that Entergy's National Pollutant Discharge Elimination System permit has assured and will continue to assure the protection and propagation of the balanced indigenous populations of fish, shellfish and wildlife," the letter states.

"CRWC's claims also raise no reasonable concern about the environment," the letter states. "CRWC has provided no credible evidence of new material information that alters these determinations."

The nuclear power plant, which sits on the banks of the Connecticut River, has been operating with an expired discharge permit and ANR said in late March that it was ready to take a new look at the permit process.

Entergy says that while ANR could respond to the watershed council as a courtesy, the group's argument "cannot serve as the basis for any appeal or objection to any NPDES permit that ANR may issue to Vermont Yankee."

In the letter to ANR, Entergy says the environmental group does not provide "a coherent or credible explanation of why alternative closed-cycle cooling operation is warranted."

Wolf Creek Nuclear Plant Under Closer Scrutiny (KCTV)

KCTV-TV Kansas City (MO), April 5, 2011

BURLINGTON, Kan. --

Intensive oversight is still needed because of what regulators said are continuing problems with safety systems and unplanned shutdowns here at the Wolf Creek Nuclear Power Plant.

Officials told KCTV5 that despite the findings, they are running a safe facility.

In a congressional hearing Thursday, the Nuclear Regulatory Commission said the Wolf Creek Nuclear Power Plant in Burlington needs more oversight, inspections and scrutiny.

"We take their assessment of our performance seriously, and we are working to address the issues," Wolf Creek spokeswoman Jenny Hageman said.

Hageman said Friday there is no need for alarm at the plant. But regulators point to several reasons to take a closer look at the way this plant operates.

"The information we reported in 2010 is we had unplanned shutdowns and equipment issues ... which crossed us from a threshold of the green performance range into the white performance range," Hageman said.

One shutdown was the result of a lightning storm knocking out power in the area for a few moments.

"We are keenly watching what's going on in Japan," Hageman said. "We've already started looking at our processes and program to confirm we're prepared for something that's happened that's beyond how we are designed. So we have actions in place."

She said there are already two full-time inspectors inside the facility to check for potential problems.

Despite the unwelcome distinction of being one of only three plants needing the extra oversight, Hageman said the plant is doing what it takes to make conditions safe.

"We are a self-critical industry, and we're committed to sharing operating experience among ourselves," she said.

As part of this more intensive oversight, in February, regulators came to the plant to conduct a comprehensive review to identify whether the plant had corrected its previous problems or see if any new problems existed.

The results of that review are still pending.

Progress Nuke Plant Makes NRC's 'most Concerned' List (CharlotteBiz)

By John Downey

Charlotte Business Journal, April 4, 2011

Welcome to Power Weekend, catching up on stuff we've learned since Friday.

A Progress Energy nuclear plant in South Carolina is on the list of the three plants the Nuclear Regulatory Commission is "most concerned about" as it placed them under enhanced review because of operational issues.

NRC Chairman Gregory Jaczko discussed the problems in testimony before Congress last week.

He did not name the three plants, but The Associated Press quotes an NRC spokesman as saying the three are Progress' 710-megawatt H.B. Robinson plant near Hartsville in northeast South Carolina, the Omaha Public Power District's Fort Calhoun plant in Nebraska and Westar Energy and Kansas City Power and Light's 1,170-megawatt Wolk Creek plant in Kansas.

All three need a more intensive level of scrutiny, Jaczko told lawmakers. The NRC maintains that all the plants are still being safely operated. It says the heightened review of the three plants is routine following unexpected outages or unresolved problems.

Duke Energy's Oconee Nuclear Station had also been on that list until a couple of weeks ago, when it addressed operating issues raised by the NRC, the spokesman told the AP. Duke cleared to make merger filing

The N.C. Utility Commission has cleared Duke Energy and Progress Energy to make a filing with federal authorities on their \$13.8 billion merger proposal.

The commission had temporarily blocked the utilities from making a filing with the Federal Energy Regulatory Commission because the state's utility customer advocate had raised issues with the proposed filing. The Public Staff of the N.C. Utilities Commission felt the initial filing the utilities planned could have weakened the commission's authority over the merger by preempting the state's authority.

Duke and Progress intended to ask the federal agency for permission to treat the North and South Carolina power plants operated by the two utilities as one fleet following the merger.

Corporate parent Duke Energy Corp. intends to operate Duke Energy Carolinas and Progress Energy Carolinas as separate utilities after the merger. But it intends to dispatch energy from both fleets as if they were a combined utility. Duke and Progress contend this could save Carolinas customers up to \$800 million in fuel costs over five years.

Duke and Progress will also seek permission from North Carolina and South Carolina for the joint dispatch of power.

The Public Staff wanted to make sure that Duke's federal filing does not prevent the state commission from making its own decision on the issue. The staff and the utilities worked out an agreement on the filing that the Public Staff feels will preserve the state's authority.

The state commission approved that negotiated proposal on Monday. The ruling simply lets the utilities to make the federal filing. The ruling, the state commission says, does not indicate that the state will approve the joint dispatch plan. The state commission will hold separate proceedings on whether to approve the plan.

Duke and Progress have already filed a request for anti-trust review under the federal Hart-Scott-Rodino Act. Those filings are confidential. Progress and Dominion move away from coal

Progress Energy will close one of its aging N.C. coal plants this fall, years ahead of schedule, and Dominion Resources in Virginia wants to convert three coal plants to biomass.

CBJ sister publication the Triangle Business Journal reports Progress will soon close its 62-year-old W.H. Weatherspoon Plant in Lumberton. The plant had been scheduled to close in 2017. But the low cost of natural gas has made earlier retirement of the plant possible.

The Associated Press reports Dominion has asked state regulators for permission convert three coal-fired plants in Virginia to biomass operations. The conversion could start in 2013, if it is approved, the company says.

The biomass plants would burn mostly waste wood, Dominion says. John Downey covers the energy industry for the Charlotte Business Journal. [Click here to read more recent postings on Power City.](#) To get an RSS feed for Power City [click here.](#)

Reports Show Surry Nuclear Plant Safe; Public Meeting Wednesday (WILYDAILY)

By Kim Lenz

[Williamsburg Yorktown Daily](#), April 5, 2011

The safety of the Surry nuclear power plant will be up for discussion at a public meeting Wednesday.

The meeting is scheduled for 5 to 7 p.m. at the Surry Government Center, 45 School Street, in Surry. It will begin with a brief presentation, then U.S. Nuclear Regulatory Commission staff will be available to answer questions on the safety performance of the Surry plant last year. They'll also be prepared to explain the NRC's role in ensuring safe plant operation.

The Surry plant is operated by Dominion.

"Each year, the NRC evaluates the safety performance of nuclear plants in a detailed and systematic way," NRC Region II Administrator Victor McCree said in a press release. "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."

A letter sent from the NRC Region II office to plant officials addresses the performance of the plant during 2010 and will serve as the basis for the meeting discussion. It is available on the NRC web site by [clicking here.](#)

The NRC found that the performance of both units at the Surry plant met all of the agency's safety objectives in 2010 and was at a level that results in no additional NRC oversight. In 2010, all NRC inspection findings and performance indicators were "green" at the Surry plant.

The NRC uses color-coded inspection findings and performance indicators to assess plant performance. The colors start with "green," which has very low safety significance, to "white," which means low to moderate safety significance, to "yellow" or "red," based on the significance of the issues. Inspection findings and performance indicators are updated on the NRC's web site each quarter, and are available for public viewing by clicking here.

This year, the NRC plans to continue to conduct the very detailed inspections at Surry required at those plants that are operating well. In addition, the agency will complete some generic inspections related to managing gas accumulation in emergency core cooling, decay heat removal and containment spray systems.

'Near Miss' At Nuclear Plant Near Gaston (GASTON)

By Diane Turbyfill

Gaston County (NC) Gazette, April 5, 2011

A nuclear power plant a stone's throw from Gaston County is one of 14 in the nation that was cited in 2010 for "near miss" incidents.

The Catawba Nuclear Station in York, S.C., was listed along with 13 others in the U.S. for incidents that were reported to the Nuclear Regulatory Commission last year.

The NRC identified 40 violations of federal safety regulations in these "near misses."

Some of these violations resulted from problems during the event, but most were for safety problems known for months if not years. When known problems combine to cause near misses, they are not surprises. These were accidents waiting to happen, according to a recent study by the Union of Concerned Scientists.

The study was titled "Brighter Spotlight Needed" and outlined issues at nuclear plants across the nation. Recommendations followed the breakdown of all of the issues.

The study highlights near misses and points out the importance of keeping these facilities in check and not ignoring needed repairs.

The Union of Concerned Scientists is a watchdog group that combines independent scientific research and action from residents to develop solutions and promote changes in government policy, corporate practices and consumer choices.

The organization used reports to the NRC for the study.

The Catawba facility was listed in the report for a citation involving security-related problems. Because security procedures are highly sensitive, officials would not discuss exactly what the problem was. But the issue was addressed, according to Mary Kathryn Green, spokeswoman for the nuclear station.

The citation was issued in January 2010 and was listed as a "green violation," one of the lower level offenses, according to Green, who related it to a warning ticket from a police officer.

But the incident was serious enough to warrant a report to the NRC, which responded by sending an investigation team out to the site.

NRC inspectors are on-site at the nuclear station every day of the year, said Green. They have full access to conduct investigations at any time.

No incidents were reported in 2010 at McGuire Nuclear Station, the other facility near Gaston County located along Lake Norman.

Only one plant in North Carolina was listed in the study, a facility in Brunswick.

Those along the East Coast with near misses in 2010 include facilities in South Carolina, Virginia, Maryland and Florida.

Only one California station made the report.

The safety of nuclear stations is always under scrutiny but attention has been heightened since the devastating earthquake and tsunami in Japan that caused damage to reactors and caused evacuations and radiation leaks.

Officials say a natural disaster on the scale of the magnitude-9.0 earthquake that rocked Japan on March 11 is unlikely in the Charlotte-Gastonia region.

In the Southeast, Gaston County is unique for being in such close proximity to, not one, but two nuclear plants.

The 10-mile emergency planning zone for Duke Energy's Catawba station stretches into southeastern Gaston County. The emergency zone for the company's McGuire Nuclear Station in Huntersville extends well into northeastern Gaston.

Such 10-mile zones have customarily been used in this country for preparing immediate responses in the event of a radiation leak at a nuclear plant. But in the wake of Japan's disaster the United States urged Americans who live within 50 miles of the battered Fukushima Daiichi nuclear plant to evacuate — a distance more than four times what Japan's 12-mile evacuation plan calls for.

The worst earthquake in recorded history in North and South Carolina occurred in 1886 in Charleston, registering a magnitude of 7.6. Nuclear plants in the two states are constructed to withstand a temblor of that strength.

More than 1,000 people work at the Catawba Nuclear Station, said Green, and safety is always a focus whether or not there is a natural disaster.

"We have very high safety and security measures for our plant and our employees. Safety is our first priority," she said.

U.S. Nuclear Output Falls Near Lowest In Year As Reactors Refuel (BLOOM)

By Colin McClelland

Bloomberg News, April 5, 2011

U.S. nuclear-power output fell to the lowest level in almost a year as reactors from Connecticut to Washington shut in the spring refueling season, the Nuclear Regulatory Commission said.

Power generation nationwide decreased by 6,152 megawatts, or 7.4 percent, from April 1 to 76,840 megawatts, or 76 percent of capacity, the smallest amount since April 8, 2010, according to a report today from the NRC and data compiled by Bloomberg. Twenty-four of the nation's 104 reactors were offline.

Energy Northwest shut its 1,190-megawatt Columbia reactor in Washington over the weekend because the Bonneville Power Administration warned that weather conditions may produce excess water levels along the Columbia River hydroelectric dam system, according to an e-mailed statement from Mark Reddemann, Chief Executive Officer of Energy Northwest.

The plant, located 55 miles (89 kilometers) northwest of Walla Walla, will remain closed for refueling and maintenance, which was scheduled to begin on April 6. Work includes the \$113 million replacement of a condenser that converts steam into water for reuse, according to the statement.

It's the largest project in the plant's 26 years and will add 12 megawatts of power to its output, Brad Sawatzke, chief nuclear officer for the company, said in the e-mail.

South Texas Reactor

South Texas Project Nuclear Operating Co. idled its 1,410-megawatt South Texas 1 reactor. It was operating at full power on April 1. South Texas 2, another 1,410-megawatt unit at the plant, located 80 miles southwest of Houston, is operating at 100 percent of capacity.

Pinnacle West Capital Corp. (PNW) closed its 1,335-megawatt Palo Verde 2 reactor. It was operating at 90 percent of capacity on April 1. Units 1 and 3, which have the same capacities as Unit 2, are operating at full power. The plant is located about 45 miles west of Phoenix.

Dominion Resources Inc. shut its 884-megawatt Millstone 2 reactor in Connecticut. It was operating at full power April 1.

Another reactor at the site, the 1,227-megawatt Millstone 3, is at 100 percent of capacity. The plant is located about 3 miles southwest of New London.

The Tennessee Valley Authority closed its 1,123-megawatt Watts Bar 1 reactor, 55 miles southwest of Knoxville, Tennessee. It was operating at 82 percent of capacity on April 1.

Duke Energy shut its 846-megawatt Oconee 1 reactor in South Carolina. It was operating at 100 percent of capacity on April 1. Oconee 2 and 3, which also have capacities of 846 megawatts, are running at full power. The plant is located about 30 miles west of Greenville.

Energy Future Holdings Corp. idled the 1,150-megawatt Comanche Peak 2 reactor in Texas. It was operating at 100 percent of capacity on April 1.

Another unit at the site, the 1,200-megawatt Comanche Peak 1, is operating at full capacity. The plant is located 66 miles southwest of Dallas.

NextEra Energy Inc. (NEE) slowed its 839-megawatt Saint Lucie 1 reactor in Florida to 80 percent of capacity from 100 percent on April 1. Another reactor at the plant, the 839-megawatt Saint Lucie 2, was shut. The station is located about 45 miles north of Palm Beach.

PG&E Corp. (PCG) boosted its 1,151-megawatt Diablo Canyon 2 reactor in California to 100 percent of capacity from 35 percent on April 1. Another reactor, the 1,149-megawatt Unit 1, is operating at full power at the site, about 160 miles northwest of Los Angeles.

Southern Co. (SO) increased output from the 1,109-megawatt Vogtle 1 reactor in Georgia to 80 percent of capacity from 2 percent on April 1. The unit is returning from an outage that began March 7.

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

Dominion Resources Inc. raised power at its 556-megawatt Kewaunee reactor in Wisconsin to full power from 87 percent of capacity on April 1. The reactor is located about 27 miles southeast of Green Bay.

FirstEnergy Corp. (FE) slowed its 1,235-megawatt Perry nuclear reactor in Ohio to 80 percent of capacity from 89 percent on April 1. The plant is located on Lake Erie about 35 miles northeast of Cleveland. FirstEnergy is based in Akron, Ohio.

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.

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Power Plant Shuts Down Ahead Of Schedule (TACOMA)

Tacoma News Tribune, April 5, 2011

Energy Northwest's Columbia Generating Station temporarily shut down Saturday, starting a planned biennial refueling outage a few days early because of weather conditions.

Station operators started powering the reactor down Friday night following a request from the Bonneville Power Administration. Bonneville made the request to Energy Northwest on Wednesday because weather conditions could produce high water flows through the federal hydroelectric dam system.

The station was scheduled to power down Wednesday for its biennial refueling outage.

During the outage, workers will add new nuclear fuel, conduct maintenance and replace the plant's main condenser – the largest scope project ever undertaken in the 26-year history of the plant, a news release said.

The condenser converts steam back to water for re-use in the reactor. Replacing it will cost \$113 million and require 350 workers. The new condenser will provide up to an additional 12 megawatts of power generation.

Hanford Nuclear Plant Goes Offline For Refueling (AP)

Associated Press, April 5, 2011

RICHLAND, Wash. (AP) — The nuclear power plant on the Hanford nuclear reservation was taking off the Bonneville Power Administration grid on Saturday as it prepares for a refueling operation that begins Wednesday.

KVEW reports that in addition to the refueling Energy Northwest plans to replace the Columbia Generating Station's main condenser during the \$113 million project.

NRC To Discuss Safety At Cordova Plant (QUADCITY)

By Jennifer DeWitt

Quad-City Times, April 2, 2011

In the wake of Japan's nuclear plant problems caused by last month's tsunami, organizers of a meeting to discuss the safety record of Exelon Nuclear Quad-Cities Station expect more interest than in the past.

The Nuclear Regulatory Commission, or NRC, will hold an open house Tuesday to discuss the agency's annual safety assessment of the nuclear plant near Cordova, Ill. It will begin at 4 p.m. at the Cordova Civic Center on 11th Street, located off Illinois 84.

NRC staff will be on hand to answer questions about the agency's assessment of the plant's safety performance in 2010.

Jim McGhee, the NRC's senior resident inspector at the Quad-Cities Station, said the annual meeting has not drawn any members of the public for the past three years, but "we're expecting a bigger crowd this time."

He added that the meeting has shifted from a formal presentation of the NRC's safety assessment to an open house format. The open house also will have displays on different regulatory issues such as spent fuel storage and security nuclear operations.

McGhee said the meeting's purpose still is to deliver the message of the NRC's assessment. "But we also will be prepared to answer questions people might have about what is happening in Japan," he said, stressing that the NRC's technical information is limited on that situation.

Part of the open house's goal also is "to explain how the NRC works and answer questions from residents about nuclear regulation," NRC Region III Administrator Mark Satorius said in a news release. "The NRC continually reviews the performance of the Quad-Cities plant and the nation's other commercial nuclear power facilities."

According to the NRC, the plant was found to have operated safely in 2010. The plant will continue to receive the detailed inspection regime NRC uses for plants that require no additional oversight.

While the meeting is led by the NRC, Exelon also will have senior staff in attendance for questions.

"This is a great opportunity for local residents to talk directly with representatives of the United States Nuclear Regulatory Commission who oversee the operation of Quad-Cities Station," said Bill Stoermer, the plant's communications manager. "This is part of the NRC's normal process and is an annual event."

Lawmakers Briefed On Nuclear Plant Safety (NHPR)

New Hampshire Public Radio, April 5, 2011

State emergency and Nuclear Regulatory officials briefed legislators today/Monday on nuclear plant operation and safety.

As New Hampshire Public Radio's Amy Quinton reports, lawmakers are concerned in light of events at the Fukushima Nuclear Plant in Japan.

State emergency officials spent several hours answering questions from lawmakers about the safety of both Seabrook and Vermont Yankee Nuclear plants.

22 New Hampshire towns are within ten miles of Vermont Yankee or Seabrook station, but most of southern New Hampshire is within a 50 mile zone.

The Vermont Yankee plant has the same basic design of the Fukushima plant in Japan, and that has some lawmakers worried.

And Republican Representative Karen Hutchinson of Londonderry says Seabrook is built on an earthquake fault line.

"I'm concerned I want to make sure we have a second power source or water source, what are the plans, I think it's a good idea for us concerned with NH safety and in charge of safety for the people to make sure that it's got everything it needs."

Nuclear regulatory officials say the Mark I containment used by Vermont Yankee has seen a number of changes in design and safety since the late 1980's.

Officials say it's unclear whether the Fukushima Daiichi plant in Japan has seen similar changes.

For NHPR news, I'm Amy Quinton.

Westchester Emergency Officials Question 10 Mile IP Emergency Area (MIDHUD)

Mid-Hudson News, April 5, 2011

WHITE PLAINS – The emergency notification area around the Indian Point nuclear power plant is a 10 mile radius, so when Westchester County Emergency Services Commissioner Tony Sutton heard the NRC tell Americans near the failed Japanese nuclear plants to move 50 miles away, that raised a red flag.

Sutton told joint committees of the Westchester County Board of Legislators Monday that County Executive Robert Astorino has written to the NRC asking the agency for their take on if the Indian Point emergency area should be enlarged.

"There are so many things to make sure we examine this correctly," he said. "I know that the NRC is going to be looking into differences, the very fundamental things about the differences in plant designs, and what actions the staff took and when did they take them and was that appropriate or wasn't it appropriate, what counter-measures were put in place, was there a reluctance on the operators to pump sea water because maybe they had an economic interest they were focusing on?"

Westchester lawmakers also questioned the realities of sending students to shelters just out the 10 mile emergency zone radius because, as Legislator Michael Kaplowitz put it, nuclear impacts don't know boundaries on a map.

Indian Point Is Not Fukushima (WESTJN)

Westchester Journal News, April 5, 2011

The unfortunate events taking place almost a world away at the Fukushima Daiichi nuclear power plant in Japan have brought the Indian Point Energy Center in Buchanan back into the spotlight.

Regrettably, there are some opportunistic, anti-nuclear groups that are utilizing the events at Fukushima to further their longstanding goals of shutting down Indian Point by spreading fear-based rhetoric about nuclear power. Sadly, some of this also is being advanced by elected officials responding to the fears of some constituents.

While I fully support a healthy discussion about safety and our energy resources, we need to discuss facts, not emotion. Those in positions of leadership have an obligation to know the facts and help their constituents overcome their fears.

There are several important facts that we should all consider while discussing Indian Point:

The plant has operated at its current location safely and without incident for more than 30 years.

- While Indian Point is designed to withstand a 7.0-magnitude earthquake, the most intense earthquake ever recorded in this area was 5.0-magnitude and the highest projected is 6.0-magnitude. The force produced at those levels are hundreds of times less than the historic 9.0-magnitude earthquake that occurred in Japan.

- Because Japan sits in a subduction zone, the enormous 9.0-magnitude earthquake that happened there also caused the 33-foot-high tsunami that was the main reason for the damage to the Fukushima backup generators. Because there is no subduction zone off the East Coast of the United States, it is impossible for a similar seismic event and tsunami to occur in this region.

- While Fukushima only had two backup safety systems in place to provide cooling for its reactors, Indian Point has four. In addition, there are several redundancies in place to back up the diesel generators at Indian Point and they all sit above grade level so, unlike at Fukushima, it would be almost impossible for them to be flooded.

- Indian Point's plant safety staff already has procedures in place in preparation for loss of power from the grid.

- Long before Fukushima was an easily pronounceable word for the majority of local residents, nuclear power facilities throughout the United States were implementing safety precautions to prevent similar issues from happening here. We can be sure that the federal government and plant designers and operators will be studying what happened at Fukushima for years to come and taking additional measures based on what they learn to ensure the safety of U.S. citizens.

- As oil and gas prices rise to record highs, the electricity that Indian Point produces will be critical to the economic vitality of New York City and the region as we continue to recover from the recession.

Let's have an ongoing conversation about energy choices and promote the development of affordable, domestic energy to allow small businesses to grow. In my opinion, a diverse mix of fuels is our best energy security. However, when we talk about the safety of Indian Point and nuclear power, let's not be distracted from the facts; they are safe and vital to the region.

The writer is president/CEO of The Rockland Business Association, which describes itself as an advocacy organization promoting business-friendly legislation and supporting the elimination of legislation that is onerous to the business community.

Most Still Think US Nuke Plants Safe: Poll (AFP)

AFP, April 5, 2011

WASHINGTON — A majority of Americans is concerned that the United States could be hit by a nuclear disaster like the one unfolding in Japan, but many still think US nuclear power plants are safe, a poll showed Monday.

Conducted two weeks after the massive quake and tsunami unleashed a nuclear crisis in Japan, the Gallup poll found that seven in 10 respondents were more worried than they were that something similar might happen in the United States.

But 58 percent of the 1,027 poll respondents said they still think nuclear power plants in the United States – which includes 23 Mark I reactors identical to those at Japan's crippled Fukushima nuclear plant – are safe.

Gallup analyst Frank Newport said the poll showed that while Americans are "concerned about the dangers of a nuclear crisis in this country... support for nuclear power may be more stable than some might think."

Nuclear power is a key element of the White House strategy for weaning the United States off fossil fuels and moving towards "clean" energy.

Since the disaster in Japan, however, President Barack Obama has ordered a comprehensive review of US nuclear safety.

The 9.0-magnitude earthquake that struck off Japan's northeastern coast on March 11 set off a 14-meter (46-foot) tsunami that knocked out power at the Fukushima Daiichi nuclear complex, shutting down systems for cooling radioactive fuel rods.

Japan is still battling to prevent full reactor meltdowns at the plant, pouring thousands of tons of seawater onto overheating fuel rods, a stop-gap measure that has created highly radioactive run-off.

Majority Of Americans Say Nuclear Power Plants In U.S. Are Safe (Gallup)

By Frank Newport

The Gallup Organization, April 5, 2011

PRINCETON, NJ – Despite concerns about a possible nuclear disaster in the U.S., 58% of Americans think nuclear power plants in the U.S. are safe, while 36% say they are not. Americans are divided on the issue of increasing the number of nuclear power plants in this country, but these attitudes have not changed from 10 years ago.

Nuclear power remains very much in the news as workers in Japan continue efforts to contain the disastrous impact of the March 11 earthquake and tsunami on nuclear power plants along that country's northern coast. In a survey conducted just days later, Gallup found 7 in 10 Americans saying that as a result of the events in Japan, they were more concerned about a nuclear disaster occurring in the U.S. Still, a March 25-27 Gallup survey shows that a clear majority of Americans believe nuclear plants in the U.S. are safe.

There is no exact Gallup trend to which these results can be compared. However, Gallup asked Americans in 2009 about the perceived safety of "nuclear power plants" without specifying their location, finding 56% saying they were safe – almost identical to results for the current question about nuclear power plants "in the United States."

Results from the survey conducted days after the Japanese disaster show Americans are divided on whether they favor or oppose the construction of nuclear power plants in the U.S. In the late March poll, a separate question reveals that Americans are similarly split when asked to choose between two positions on either side of the issue of increasing the number of nuclear power plants.

Despite all that has changed over the last 10 years, responses to this question did not change materially between its prior asking in May 2001 and the current poll, though it may be possible that attitudes changed between these intervals in unknown ways. Still, this finding suggests there has been no substantial diminution in support for nuclear power plant construction over this past decade – despite the current, and highly visible, nuclear plant problems in Japan.

Gallup's annual energy update conducted in early March – just before the Japanese disaster – found that 57% of Americans favor "the use of nuclear energy as one of the ways to provide electricity for the U.S." This trend question, which does not directly address the issue of an increase in nuclear plants, has been fairly stable in recent years.

Implications

It may be months or years before the final impact of the Japanese disaster on American attitudes toward nuclear power can be assessed. In the short term, Americans are concerned about the dangers of a nuclear crisis in this country. But Gallup's most recent survey suggests that support for nuclear power may be more stable than some might think. A majority of Americans believe nuclear power plants in the U.S. are safe, and attitudes toward increasing their numbers do not appear to have changed in comparison with a previous measure 10 years ago.

Survey Methods

Results for this Gallup poll are based on telephone interviews conducted March 25-27, 2011, with a random sample of 1,027 adults, aged 18 and older, living in the continental U.S., selected using random-digit-dial sampling.

For results based on the total sample of national adults, one can say with 95% confidence that the maximum margin of sampling error is ± 4 percentage points.

For the "increasing the number of nuclear power plants in the country" question, based on the sample of 500 national adults in Form A, and for the nuclear power plant safety question, based on 527 national adults in Form B, the maximum margins of sampling error are ± 5 percentage points.

Interviews are conducted with respondents on landline telephones (for respondents with a landline telephone) and cellular phones (for respondents who are cell phone-only). Each sample includes a minimum quota of 150 cell phone-only respondents and 850 landline respondents, with additional minimum quotas among landline respondents for gender within region. Landline respondents are chosen at random within each household on the basis of which member had the most recent birthday.

Samples are weighted by gender, age, race, education, region, and phone lines. Demographic weighting targets are based on the March 2010 Current Population Survey figures for the aged 18 and older non-institutionalized population living in continental U.S. telephone households. All reported margins of sampling error include the computed design effects for weighting and sample design.

In addition to sampling error, question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of public opinion polls.

View methodology, full question results, and trend data.

For more details on Gallup's polling methodology, visit www.gallup.com.

Poll: Majority Say US Nuke Plants Are Safe, Divisions On New Reactors Remain (HILL)

By Ben Geman

The Hill, April 5, 2011

Fifty-eight percent of Americans believe U.S. nuclear power plants are safe, while 36 percent say they are not, according to a new Gallup poll released amid the ongoing radiation crisis in Japan.

The disaster at Japan's Fukushima Daiichi nuclear plant has prompted new questions about the safety of the 104 operating U.S. nuclear reactors.

U.S. officials have sought to provide reassurance about domestic nuclear safety even as the Nuclear Regulatory Commission undertakes a fresh review.

Gallup notes that the Japanese woes do not appear to be having a major effect on U.S. attitudes about nuclear safety.

"There is no exact Gallup trend to which these results can be compared. However, Gallup asked Americans in 2009 about the perceived safety of 'nuclear power plants' without specifying their location, finding 56% saying they were safe — almost identical to results for the current question about nuclear power plants 'in the United States,'" Gallup notes in a summary of the findings.

The poll of roughly 1,000 adults released Monday was conducted March 25 to 27.

The poll finds that the public is split on whether new reactors should be constructed in the United States. Several power companies including utility giant Southern Company are planning to build what would be the first new U.S. reactors in decades.

Gallup, in asking about views on increasing the number of U.S. plants, found that 46 percent called nuclear power necessary and 48 percent called the risks too high. Here's how they phrased the question:

"Which comes closer to your view about increasing the number of nuclear power plants in the country – nuclear power is necessary to help solve the country's current energy problems, or the dangers of nuclear power are too great, even if it would help solve the country's current energy problems?"

Gallup notes that views on the prospect of new plants have been stable for a decade.

"Despite all that has changed over the last 10 years, responses to this question did not change materially between its prior asking in May 2001 and the current poll, though it may be possible that attitudes changed between these intervals in unknown ways. Still, this finding suggests there has been no substantial diminution in support for nuclear power plant construction over this past decade — despite the current, and highly visible, nuclear plant problems in Japan," they state.

Most Americans Say US Nuclear Plants Safe -poll (REU)

Reuters, April 5, 2011

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

Gallup: Most Americans Say U.S. Nuclear Power Is Safe (USAT)

By Wendy Koch, USA Today

USA Today, April 5, 2011

Amid Japan's ongoing nuclear crisis, 58% of Americans think U.S. nuclear power plants are safe but remain split over the need for more plants, a Gallup poll Monday shows.

The March 25-27 survey of 1,027 U.S. adults found public confidence in nuclear safety changed little since 2009, when Gallup found 56% believed U.S. plants were safe. In new poll, 36% said it is not safe and 6 percent had no opinion.

As Japan tries to control the damage to several nuclear power reactors caused by a March 11 earthquake and tsunami, prior polls (including one by Gallup) showed a dip in U.S. public support for more nuclear power. President Obama is seeking federal loan guarantees to help finance the construction of new plants. Currently, the nation's 104 reactors at 65 plants supply 20% of U.S. electricity.

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The latest Gallup survey showed a slight uptick in concern that the dangers of nuclear power are too great to justify construction of more U.S. plants. Nearly half, 48%, said the dangers are too great, compared with 46% who said so in a March 18-20 poll.

"It may be months or years before the final impact of the Japanese disaster on American attitudes toward nuclear power can be assessed," Gallup said in announcing the findings, adding its most recent survey "suggests that support for nuclear power may be more stable than some might think." The poll's margin of error is plus or minus 4 percentage points.

At Obama's request, the Nuclear Regulatory Commission announced March 23 that it will conduct a safety review of U.S. nuclear reactors to apply lessons learned from the crisis at Japan's Fukushima Dai-ichi nuclear power plant northeast of Tokyo.

Anti-nuclear groups, including Environment America, have urged Americans to rethink the need for a greater reliance on nuclear energy in light of radiation leaked from the Fukushima plant. Trace amounts have been found in the rainwater of Boston and elsewhere in the U.S., but the Environment Protection Agency says the levels are too miniscule to pose safety risks.

Progress Energy Again Delays Restart Of Florida Nuclear Plant (DJN)

By Naureen S. Malik

Dow Jones Newswires, April 5, 2011

NEW YORK -(Dow Jones)- Progress Energy Inc. (PGN) said Monday that it again is delaying the restart date of its Crystal River, Fla., nuclear plant because of new cracks discovered in the containment building.

The single reactor, capable of generating 860 megawatts, had been expected to return to service in April. The latest delay is the second in recent weeks. Progress said it cannot estimate a new restart date.

Crystal River has been shut since 2009 when a steam generator was replaced.

The Crystal River containment building housing the reactor has steel tendons running through it that are used to control pressure at the nuclear reactor. The recent cracks were discovered along the external facade of the building in mid-March, when the company was in the process of tightening those tendons in preparation to restart the plant.

On Monday, Progress said that fresh cracks—called delamination—were discovered and the company needs to conduct a thorough engineering analysis of the situation. Walls of the reactor building are about 42 inches thick.

"We are doing a careful and systematic review of the new delamination and the options to return the plant to service," Vincent Dolan, chief executive of Progress Energy Florida, said in a statement. The plant remains in a safe condition and the company "will continue provide energy from other company and purchased resources, to meet our customers' needs for reliable electricity," Dolan said.

Progress has said it is making first-of-their-kind repairs. Very few U.S. nuclear plants have the share the same design as the Crystal River containment building, and this is the first time concrete separation has emerged as a problem.

The steel beams in the containment building had been loosened so that a cut could be made into the building to extract a large steam generator. The unit had been shut for maintenance and refueling when cracks were first discovered in September 2009.

Progress has spent \$150 million on repairs and \$290 million on replacement power costs, as of Dec. 31, 2010. The company received \$181 million in insurance payments.

The Crystal River site has one nuclear reactor, as well as four coal-fired plants that can produce 2,313 megawatts of power. The operating licenses for the nuclear reactor expires in 2016 and the company filed an applicaiton to extend operations by 20 years in 2008.

Progress operates two electric utilities serving 3.1 million customers in the Carolinas and Florida. Earlier this year, Progress agreed to be acquired by utility giant Duke Energy Corp. (DUK) for \$13.7 billion in stock.

Second Delamination Confirmed, Crystal River Nuclear Plant To Stay Shut Down For Further Analysis (STPETE)

St. Petersburg (FL) Times, April 5, 2011

Progress Energy Florida said Monday afternoon that its Crystal River nuclear plant, shut down since September 2009, will remain out of service while the company conducts an engineering analysis and reviews a delamination or separation of concrete in the plant's containment building.

Progress confirmed the existence of a delamination, the second for the plant, which the company said in March may have occurred during a recent "retensioning" of steel tendons lacing the containment building.

The utility said it has notified the Nuclear Regulatory Commission and Florida Public Service Commission of its plan to keep the plant, known as Crystal River 3 or CR3, shut down.

"Options to return the plant to service will be analyzed after the report is complete. The company cannot estimate a return to service date for CR3 at this time," Progress Energy Florida stated.

The company has anticipated several startup dates since 2009, the most recent being this month.

In March, however, company monitors detected a possible second delamination of the containment building.

"We are looking at all repair options," company spokeswoman Suzanne Grant said.

The decision to conduct a "thorough" engineering analysis has nothing to do with recent industry concerns over the safety and damage to several of Japan's nuclear power plants or with President Barack Obama's call for a comprehensive review of all U.S. nuclear plants, she said.

The Crystal River nuclear plant, which can generate 860 megawatts of power, went into service in March 1977. Its current license expires in 2016. The company filed for a license renewal with the NRC in 2008, requesting an additional 20 years of operation.

Since the September 2009 shutdown, the combined costs of CR3's repairs and the energy purchased to replace that from the out-of-service plant has approached \$500 million.

Nuclear Power Plant Outage Indefinite (POWGENWLD)

Power-Gen Worldwide, April 5, 2011

The 860 MW Crystal River nuclear power plant in Florida will remain out of service while Progress Energy Florida conducts an analysis and review of a separation in the concrete of Unit 3's wall of the containment building. The company said options to return the plant to service will be analyzed after the report is complete. The company said it cannot estimate a return to service date for the nuclear unit.

The plant was first shut down in September 2009 for refueling and maintenance and workers created an opening in the structure to replace a steam generator. Concrete at the periphery of the containment building was damaged at that time.

In March 2011, retensioning work on tendons was suspended while engineers looked into evidence of additional separation resulting from the retensioning work.

Progress Energy said it maintains insurance for property damage and incremental costs of replacement power resulting from prolonged accidental outages through Nuclear Electric Insurance Limited (NEIL). As of December 31, 2010, the company has spent approximately \$150 million on the repair and \$290 million on replacement power costs. NEIL has paid \$181 million during that time period, including \$117 million for replacement power and \$64 million toward covered repair costs.

Progress Fla. Nuclear Restart Delayed Indefinitely (REU)

By Eileen O'Grady

Reuters, April 5, 2011

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

Power Authority Approves Revised Plan For Hudson Cable (NYT)

By Patrick Mcgeehan

New York Times, April 5, 2011

With a trustee newly appointed by the governor taking the lead, the New York Power Authority on Monday hurriedly approved a revised deal for the construction of an \$850 million cable that would carry electricity to Midtown Manhattan from New Jersey.

The deal, which was reworked to appease some state lawmakers and other critics, was the main subject of a special meeting of the authority's trustees that was arranged on Friday. Though John S. Dyson, the newest member of the board, is not the chairman, he made it clear that he had a mandate from Gov. Andrew M. Cuomo to rescue the power-cable project.

Mr. Cuomo has called for the shutdown of the Indian Point nuclear plant in Westchester County, which provides as much as 30 percent of the power consumed in the New York metropolitan area. The proposed cable under the Hudson River is one potential source of replacement supply, though it would deliver less than one-third of the output of Indian Point's two reactors.

"I was asked by the governor, please, to intercede in this," Mr. Dyson told the authority's five other trustees. "I have done that."

Mr. Dyson served as chairman of the power authority in the first few years that Mr. Cuomo's father, Mario M. Cuomo, was governor. His nomination was confirmed by the State Senate last week on the eve of a meeting at which the trustees had planned to vote on a contract with the developers of the power cable.

But the matter was postponed after George D. Maziarz, an upstate Republican who is chairman of the Senate Energy and Telecommunications Committee, sent the trustees a letter expressing grave concerns about the deal and its potential effect on rates for electricity upstate. Mr. Maziarz cited estimates that the contract could have resulted in "a \$78 million annual loss to NYPA or its customers."

In what Mr. Dyson described as a "whirlwind negotiation" last week, he and authority staff members demanded that the developers reduce the authority's potential liability and the price at which it could buy the cable. The authority now has an option to buy the completed cable for \$850 million, down from as much as \$1.4 billion.

State officials have been talking to utility companies to gauge their interest in buying a stake in the cable, according to one state official who has been involved in the negotiations and spoke on the condition of anonymity. But first they must come to terms with some of the public agencies, like the Metropolitan Transportation Authority, that might buy electricity that would flow through the cable from the main power grid west of the Hudson.

Even with the changes, the power authority still stands to lose money on the contract, whose final terms Mr. Dyson is still working out with the developer. The state official said the authority would accept those losses as a cost of carrying out its mission of providing low-cost power to city and state agencies. The authority said the costs would not be passed on to consumers.

When completed, the 660-megawatt cable is expected to lower the cost of power throughout the city. Electricity tends to be significantly cheaper in the states served by the grid across the river.

Ed Stern, the chief executive of PowerBridge, the company that would build the cable, said, "We're delighted to have found common ground with the state on a few remaining matters and look forward to braking ground on a project that will benefit New York ratepayers with lower costs, greater reliability and increased access to renewable energy."

State officials declined to say how much they thought the authority would lose over the life of the 20-year contract with the cable's developers. But they said they expected it to be less than Mr. Maziarz's estimate of \$78 million a year.

Some trustees also expressed concerns about a related deal that the power authority struck with New York City officials to provide some city agencies with access to the cable. In that agreement, the authority promised the city that it would bear no liability for any risks associated with the building or operation of the cable, which would connect to a Consolidated Edison substation on West 49th Street. Having haggled for months with the authority, city officials were adamant that they had no interest in making any changes to that agreement.

U.S. May Build Five New Nuclear Reactors By 2020, New Energy Finance Says (BLOOM)

By Christopher Martin

Bloomberg News, April 5, 2011

The U.S. will build five new nuclear reactors by 2020 and ignore calls to scale back plans in the wake of Japan's nuclear accident, said Chris Gadowski, an analyst at Bloomberg New Energy Finance.

"We'll see a reassessment and reevaluation and then stay the course," Gadowski said today at a conference in New York today. Plans to build the five reactors are already underway, he said, and "We don't see that changing."

No new nuclear plants have been built in the U.S. since the 1979 near-meltdown at Three Mile Island. Interest in atomic energy has gained as a way to curb greenhouse gas emissions that contribute to global warming, and the Obama administration has offered loan guarantees to developers of reactors, which account for a fifth of total U.S. electricity.

"We are looking first and foremost at keeping our current fleet operating safely," said Andrea Sterdis, senior manager of nuclear expansion at Tennessee Valley Authority, a federal power supplier that operates four reactors in the U.S. South. She spoke at the conference hosted by New Energy Finance.

The biggest threat to new nuclear power plants may be the low cost of natural gas, which can be used to fuel power stations that are quicker and cheaper to build than atomic-fueled facilities, said Edward Kee, vice president of NERA Economic Consulting.

"Everything in the U.S. is challenged by cheap natural gas," Kee said at the conference.

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Radiation Is Everywhere, But How To Rate Harm? (NYT)

By Denise Grady

New York Times, April 5, 2011

Since the first reports last month of damage to nuclear reactors at the Fukushima Daiichi power plant, the lingering question has been whether drifting plumes of radioactive elements from the plant will harm people in Japan or other parts of the world. For many people, the biggest fear is cancer.

Certain levels of radiation exposure are known to increase the risk of cancer, but scientists disagree about the effects of very low doses of the sort that may have occurred so far in Japan.

Some researchers say it is reasonable to use data from high doses to calculate the risk of smaller and smaller doses. They argue that any exposure to radiation raises the risk of cancer, though probably by only a small amount in the case of small doses.

But others say that estimating risk for doses near zero is nonsensical, and some believe there is a threshold dose, or limit below which there is no risk from exposure.

Dr. John Boice, for example, a professor of medicine at Vanderbilt University who studies radiation effects in humans, warns that risk calculations based on tiny doses are themselves risky.

He argues that there is little data on doses below about 10 rem, but that some risk estimates nonetheless go down to a tenth of a rem or less. (He is also the scientific director of the International Epidemiology Institute in Rockville, Md., a private group that studies radiation with grants from government and industry.)

"I can take a low dose, multiply it by a million people and estimate a risk," Dr. Boice said, but he said professional groups like the Health Physics Society discourage it. "We say, don't do that. Don't multiply a tiny dose by millions and say there will be thousands of deaths. It's inappropriate, misleading and alarmist. You've gone orders of magnitude below where we have proof of any effects at all."

But Dr. David Brenner, director of the Center for Radiological Research at Columbia University, is among those who believe there is no threshold. Radiation damages DNA, he says, and just one damaged cell can become the seed of a cancer,

though it takes decades to develop. He is studying the possibility that in terms of causing cancer, low doses of radiation might be more dangerous than calculations based on high doses would predict.

Current estimates by government agencies for risks from low doses rely on extrapolation from higher doses. In the United States, most government agencies use a unit called the rem to measure radiation doses. (Europe and Asia use the unit millisievert, which equals 0.1 rem.) According to the Environmental Protection Agency, people receive 0.3 rem per year from natural background radiation.

If 10,000 people are each exposed to 1 rem, in small doses over a lifetime (above the natural background exposure), according to the agency, the radiation will cause five or six excess deaths from cancer. In a group that size, about 2,000 would normally die from cancers not caused by radiation, so the extra dose would raise the total to 2,005 or 2,006.

So far only minute amounts of radioactivity from the Japanese reactors have been detected in the United States, in milk on both the East and West Coasts, and in rainfall in Massachusetts. American officials say instruments can detect levels so vanishingly small — far below the natural background level of radiation — that they pose no threat.

In parts of Japan, radioactivity has been detected at various times in milk, meat, vegetables and tap water, on the ground and in the sea around the power plant.

Levels in tap water in certain areas have sometimes been high enough for authorities to tell people to drink bottled water, and the Japanese government has banned the shipment of milk and produce from some prefectures.

Milk from those regions has been found to contain radioactive iodine, which accumulates in the thyroid gland and can cause cancer, especially in children. Levels in the milk have exceeded those considered a cause for concern in the United States.

A quarter mile from the Fukushima plant (residents have been evacuated from a 12-mile zone around the plant) radiation levels of 0.1 rem per hour have been measured, and researchers agree that four days of such exposure would increase a person's risk of cancer. But some would argue that an even shorter exposure would raise the risk.

Many of today's risk estimates are based on a study of 200,000 people who survived the atomic bombing of Hiroshima and Nagasaki in August 1945. More than 40 percent are still alive.

The research has been going on for 63 years, and an article reviewing its findings was published in March in the journal *Disaster Medicine and Public Health Preparedness*.

So far, it is uncertain how relevant the results from bomb survivors are to members of the public in Japan who may have been exposed to radiation from the reactors.

"One concern is trying to find out what dose these people actually received" from the Fukushima reactors, said Dr. Evan B. Douple, the first author of the article on the bomb survivors and the associate chief of research at the Radiation Effects Research Foundation in Hiroshima, which studies the survivors and is paid for by the governments of Japan and the United States. It is the successor to the Atomic Bomb Casualty Commission, which was created in 1947.

Dr. Douple said the method of exposure was also different: The bomb survivors received their entire doses all at once to the full body, but exposure from the reactors may be gradual.

"Here radioisotopes are drifting in water and air, and not necessarily producing an external whole-body exposure and are being taken up in very small doses into the body," he said. "So far the information we've been receiving is that actually the doses of exposure are not what one would call intermediate or high doses, but are very low."

The bomb survivors received radiation doses ranging from negligible to high; high would be 200 rem or more, what Dr. Douple called a "barely sublethal dose." But 61,000 people were estimated to have received half a rem or less, and 28,000 received half a rem to 10 rem.

Their doses were calculated based on factors like how close they were to the center of the bomb and whether they were inside buildings. For comparison, the study also includes 26,000 people who lived in the same cities but were not exposed to radiation because they were not present during the bombings.

The researchers monitored the two groups — exposed and nonexposed — to determine whether radiation caused disease.

Radiation did increase the risk of cancer. "But the risk of cancer is quite low, lower than what the public might expect," said Dr. Douple. He said that the researchers themselves had expected to find more cancer than they did.

Among the survivors, leukemia was the first cancer to appear. Cases increased within five years of the bombing and then began declining at the 10-year mark.

Of 120,000 survivors in one study group, 219 with radiation exposure had died of leukemia from 1950 through 2002, the latest year with published data. But only 98 of those cases, or 45 percent, were excess deaths attributed to radiation.

However, when the leukemia deaths were sorted by radiation dose, it was clear that risk increased with dose. Among people who received the highest doses (100 rem or more), 86 percent of the leukemia deaths were a result of radiation, compared with only 36 percent of the leukemia deaths in those with exposures from 10 rem to 50 rem. Among those who

received half a rem to 10 rem, only 4 of 77 leukemia deaths, or 5 percent, were estimated to be excess deaths caused by radiation.

Solid tumors — affecting the colon, breast, liver, lung or other organs — took longer than leukemia to develop, Dr. Douple said.

In a study group of 100,000, there were 7,851 deaths from solid cancers among people exposed to radiation, but only 850, or 11 percent, were estimated to be excess cancer deaths due to radiation. As with leukemia, the risk increased with radiation dose. Some organs were more sensitive than others. For instance, radiation increased cancer risk in the breast, but not the prostate.

Dr. Douple emphasized that at very low doses, the risk was also very low. But he also said that there was no indication of a threshold, or a level below which acute radiation exposure would have no effect, or a smaller effect than would be predicted based on higher exposures.

Does the bomb data apply to Fukushima? Hiroshima and Nagasaki were the worst case, Dr. Douple said. It is possible to extrapolate from them to the very low-dose range detected so far, but in doing so, he said, there are “big uncertainties.”

But he added that Japanese scientists from the institute have been summoned to Tokyo, to help figure out what the potential health effects might be and to plan ways to detect and study them.

Japan Nuclear Crisis Fans Primal Fear Here (SDUT)

By Steve Schmidt

San Diego Union-Tribune, April 5, 2011

Murray Jennex has been in the belly of what many see as the nuclear beast.

For 17 years, the Vista engineer worked in the nuclear power industry. He tested the San Onofre Nuclear Generating Station and other facilities to make sure they kept any contaminants in check. He's been to Chernobyl in Ukraine to study lingering effects of the plant's 1986 explosions.

And to people spooked by the spread of radioactive material from reactors crippled by the March 11 earthquake and tsunami in Japan, here's what Jennex says: Don't be.

He and other nuclear engineers, along with social scientists, believe the biggest byproduct of the still-developing Japanese nuclear crisis — at least as it affects the United States — may be fear itself. They note that radiation traveling thousands of miles from Japan becomes no more of a threat than CT scans, the sun and other common sources of radiation in San Diego County.

But they also extend sympathy to the concerned.

To them, the emergency at the Fukushima Daiichi nuclear plant is fanning a primal fear in the American psyche, an anxiety rooted in years of incomplete or outright false government information, decades of exaggeration in popular culture and the public's general ignorance of nuclear science.

“Our fears are rarely in proportion to the dangers around us,” said Nicholas Christenfeld, a professor of psychology at the University of California San Diego.

Jennex, nuclear scientists, academics who have analyzed the field and other experts said worries about radiation often are tied to age. They said younger Americans — born after the Chernobyl disaster or the partial meltdown at Three Mile Island in 1979 — appear more accepting of nuclear power, while older people tend to harbor deeply rooted suspicions.

The skepticism is usually tied to memories of transformative and ominous events in the 20th century, including the dropping of atomic bombs on Hiroshima and Nagasaki in 1945, dozens of above- and underground atomic tests from Nevada to atolls in the Marshall Islands, and Cold War-era fears that Earth was a push of a button away from a nuclear holocaust.

“I think there is a generational switch,” said Gwyneth Cravens, author of the 2007 book “Power to Save the World: The Truth About Nuclear Energy.”

“The younger generation doesn't remember the Ban the Bomb movement and aboveground tests,” she added.

Cravens said popular culture has reflected and reinforced themes of radiation poisoning, going back to Hollywood and Japanese horror films such as “Godzilla.”

“In the 1950s, every movie had a creature that was created somehow by radiation,” she said. More recently, concerns over contamination have been fueled by TV shows such as “24.”

Christenfeld said the unseen nature of radiation also feeds the fear factor.

“The invisibility of it and corrupting nature of it adds to those concerns,” he said. “It's like an alien life form that takes over.”

Clearly, extensive exposure to heavy doses of radiation can harm or kill. Japanese officials have ordered evacuations affecting tens of thousands of residents from a 12-mile area around Fukushima Daiichi.

But the small amount of radiation reaching California and the West, carried here by the jet stream, poses no significant risk, nuclear experts in the United States and Europe have said repeatedly in recent days. They said that other hazards of daily life, such as smoking and driving, present far more risk of injury and death. In another comparison, an estimated 3,000 to 4,000 people die in the U.S. each year from air pollution caused by the burning of coal and oil to produce electricity.

All Americans are exposed to some level of radiation each day, from minerals and other natural sources, as well as man-made ones like X-rays, according to the U.S. Environmental Protection Agency.

The EPA estimates that people living in the mile-high city of Denver are exposed to 50 millirem of cosmic radiation each year, while women undergoing a mammogram receive 30 millirem. Those living next to a nuclear power plant are exposed to 1 millirem annually from the generating facility, the agency said.

When concerns over Fukushima escalated last month, Jennex began carrying around a hand-held radiation detector. He wanted to show that the air in San Diego County remained safe.

Jennex, a former engineer for the Navy, said his readings have never exceeded what locals normally get from the background radiation produced by rocks, the sun and other everyday sources.

As a consultant for the nuclear power industry in the 1980s and '90s, he probed the integrity of nuclear containment buildings and checked for leaks. The cumulative amount of radiation Jennex has been exposed to over the years is relatively small — and far below the U.S. government's danger levels.

"I know what it's like to be contaminated, but I've never really been afraid of it," said Jennex, 54. When individuals don't understand the risks, he added, "that's when they start getting nervous."

Youngblood: How Will Japan's Nuclear Plant Disaster Affect Us? (BLUEEXAM)

By Lynn Youngblood

Blue Springs (MO) Examiner, April 5, 2011

The first time I remember dealing with radiation was when I was having X-rays taken of my teeth. That was a number of years ago (I won't divulge how many years), but I will tell you that a lead apron wasn't put on me and the hygienist didn't stand behind a window, or protective wall. Times have changed. Now they even put on protective glasses when they take dental X-rays. I guess radiation can cause cataracts.

Funny then that we are now hearing that the levels of radiation escaping the Fukushima Daiichi nuclear plant in Japan poses no health risk. On Sunday, officials were attempting to conceal the discovery of a large crack in a concrete pit found by reactor two, which is believed to have been leaking radiation into the ocean. Attempts to close the crack have failed. Tests have confirmed that radiation levels of contaminated seawater are 4,000 times higher than the legal limit, yet Japanese authorities have emphasized that there is no public health risk in terms of seafood contamination due to a fishing ban within a 12 mile radius of the plant — and what about a risk to all of the sea life?

Scientists further state that ocean currents quickly dilute the contaminated waters and disband the radioactive iodine-13 throughout the sea, eliminating the risks to people and to the environment. Again, I guess that depends on how much you really believe them. Radioactive iodine doesn't just disappear — it has to go somewhere! Sure, it may be diluted, but it is still affecting organisms and creatures it comes in contact.

The Japanese nuclear plant suffered grave damage after an earthquake and resulting tsunami three weeks ago that left more than 12,000 people dead and nearly 15,500 people missing. Four of the six reactors in the plant are damaged and have been experiencing meltdowns and explosions ever since. It is considered the world's worst nuclear crisis since the Chernobyl nuclear disaster in 1986 in the Ukraine.

Twenty-five years after Chernobyl, people in the Ukraine are still dealing with the effects. They continue to eat radiation from the mushrooms and things they gather from the forests. The world has been told that the effects of Chernobyl have ended and, "it has been cleaned up," and yet it goes on and on.

It is not only foreign countries that have these nuclear disasters. We had our own here in the United States.

Remember Three Mile Island? On March 28, 1979, there was a relatively minor malfunction in the secondary cooling circuit in reactor 2. Through a chain of events, including not having a proper instrument or two and training, led to part of the core to melt and the Three Mile Island reactor 2 was destroyed.

Samples throughout the two-day event were taken, but they never showed any levels of radiation (or its related elements) in the air, soil or water. State and federal authorities worried about possible cancer causing effects, studied and tracked over 30,000 people from surrounding areas until 1997 when not one person showed signs of radiation related cancer. A class action lawsuit was filed, but after 20 years when the plaintiffs could not find one victim of the crisis the judge threw the case out. More than a dozen major, independent studies have assessed the radiation releases and possible effects on the people and the

environment around Three Mile Island since 1979; the most recent was a 13-year study on 32,000 people. Not one of the studies has found any adverse health effects, such as cancers, which might be linked to the accident.

But with Chernobyl and now with Fukushima, how long will the levels of radiation and its companion elements need to be tested? How long will the people of these lands be living and dealing with the horrible effects of radiation? If you need a heavy lead apron for a quick zap for an x-ray, imagine what kind of protection your body really needs if you are actually eating radiation!

Nuclear energy exists because we put the demand on our resources for more energy. We can only make our world safer and cleaner, if we cut our demand and support renewable energy sources like wind and solar. We have got to make changes now, so there are some parts of our world that are still healthy for our grandchildren.

Radiation From Japan Detected In Southwest Michigan Miniscule (HERAPAL)

By Scott Aiken

Herald Palladium, April 3, 2011

ST. JOSEPH -Tiny amounts of radioactive isotopes from a crippled Japanese nuclear power plant are being detected in Southwest Michigan, but the public should not be concerned, an expert said Friday.

The level of radiation in samples collected at the D.C. Cook Nuclear Plant is barely detectable, said David Miller, the plant's principal nuclear specialist. Miller holds a doctorate in bionucleonics, the study of how radioactive materials or certain chemical isotopes interact with living things.

Iodine-131 isotopes reaching the plant are at a level 1,000 times less than a person would get in a chest X-ray. This type of iodine is man-made, so it isn't normally found in the environment. And the isotope has a half-life of eight days, meaning it decreases 50 percent in that time.

After 80 days it will be undetectable, said Miller, who has an extensive background in working to reduce worker exposure to radioactivity.

On Friday Miller and another plant official demonstrated the air collection and filtering equipment used to monitor radiation and the environment.

It's been an ongoing task at Cook since before the plant opened in the 1970s.

The plant is one of 104 nuclear facilities in the United States, along with others in Canada and Mexico, that provide air monitoring data to the federal Environmental Protection Agency. The EPA also collects data through its RadNet system of monitors.

The Fukushima Dai-ichi nuclear plant in Japan was extensively damaged March 11 after an earthquake and tsunami crushed the region.

The I-131 isotope, emitted in large quantities, was carried into the atmosphere as vapor, allowing it to travel long distances.

Miller said the radiation was first detected in North America in Juneau, Alaska, on March 18. Soon after, tiny amounts were recorded in the state of Washington and California.

The sophisticated Cook plant monitoring equipment first measured I-131 on March 25 in the amount of 0.05 millirems.

That compares with 0.06 millirem from a luminous watch dial, 1-2 millirems from watching television, and 26 millirems from cosmic rays from outer space at sea level, all yearly exposure rates.

On average, a person is exposed to 360-620 millirems each year. The maximum for occupational exposure is 5,000 a year.

Miller said radiation from the 1986 Chernobyl nuclear plant accident in Ukraine took longer to reach the United States and was at higher levels.

"This release is much lower, barely detectable," he said.

I-131 is now showing up in milk on the West Coast and, as a result, the EPA said it is increasing its nationwide monitoring of radiation.

"It was expected to show up in milk," said Miller.

The radioactive isotopes settle on grass, where grazing cows ingest the material.

Miller said that Cook, as part of its radiological environmental monitoring program, regularly tests the water in 19 wells on the plant property. Fish in area bodies of water are tested monthly to quarterly, and milk samples collected at area dairy farms are also checked.

Cook now has the lowest occupational radiation dose level of any of the Westinghouse Electric Co. reactors in North America, officials said.

After Chernobyl, radiation was detected in the United States for a couple of months, and that could be the case with the Japanese plant.

"We expect this to be a long-term recovery," Miller said.

Radiation From Japanese Disaster Detected Locally (MORRISDH)

By Jo Ann Hustis

Morris (IL) Daily Herald, April 5, 2011

Exelon Nuclear spokesmen say there's no danger to the public from minute levels of radiation detected outside Dresden Generating Station, probably from the troubled Fukushima plant in Japan.

"What we saw in our testing was in the 10 to 15 picocuries range, or almost nothing," Exelon headquarters representative Craig Nesbit noted Thursday.

"Our tests were from different kinds of surface water, like rainwater. There is absolutely no reason for alarm. People are exposed to far more general radiation every day than what this amounts to."

The Illinois Emergency Management Agency said in a March 30 news release that radioactive iodine was found in grass clippings collected in Will County during a radiological assessment field team drill last week of the emergency plan for Dresden Station, about nine miles east of Morris.

IEMA said both the grass and air samples taken outside the agency's lab in Springfield showed the iodine detected is 200,000 times under the regulatory limit for effluent from nuclear power plants.

The agency has enhanced its monitoring program to detect and quantify material from the Japanese reactors, and includes analyzing air, milk, egg, and grass samples from around the state.

Meanwhile, Saprodani Associates, a senior consulting agency in Jupiter, Fla., claims the potential perils posed by radioactive iodine-131 are being downplayed, since it loses half its radiation every eight days.

Also, that amounts of Cesium-137, which has a 30-year half-life, have soared, with a sample taken Wednesday showing levels 27 times the standard.

A Saprodani Associates news release said Thursday the levels of radiation in the ocean at Japan's damaged Fukushima Daiichi nuclear generating station continue to skyrocket, with "no clear sense of what's causing the spike or how to stop it."
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Nuclear Rupture In Japan Raises Questions About Plants At Home (WUVM)

By Susan Bence

WUVM-FM Milwaukee (WI), April 5, 2011

Major concerns remain over the ruptured Fukushima nuclear power plant in Japan.

The combined force of a powerful earthquake and tsunami crippled the facility along with northern Japan.

There are fears about dangerous radiation levels and impacts on human health.

The disaster has spurred questions and an in-depth review by the Nuclear Regulatory Commission over safety at the 104 nuclear plants around the United States.

WUVM Environmental Reporter Susan Bence sought information about the operations here in Wisconsin.

Sara Cassidy is accustomed to fielding questions.

She handles communications for the Point Beach power plant outside Two Rivers, along Lake Michigan. Since March 11, Cassidy says the question posed to her most frequently is...

"How can you guarantee it's not going to happen here? And the best thing that we can say is that we're located out of a high-hazard zone; we have emergency operating procedures; we're constantly preparing and drilling and practicing for emergencies that we hope never happen," Cassidy says.

The two nuclear reactors at Point Beach were built during the same era as was Japan's Fukushima installation, but, Cassidy adds.....

"We are a different design and it appears that our nuclear plants, have additional safety systems. It's all about redundancy out here," Cassidy says.

In Japan, the tsunami also crippled the back-up systems.

They're designed to continue providing cooling operations, if the main system fails, so that there is no meltdown at the plant and so radioactive particles don't escape into the environment.

Mark Kanz borrows Cassidy's term "redundancy" when describing the Kewaunee power plant, 25 miles north of Point Beach.

"All of our systems here are powered by offsite power, so in the event that the station would go off line, we would be getting power off the electrical grid," Kanz says.

The plant spokesperson says two diesel generators serve as back-ups; then the next line of defense is batteries.

"We also have a turbine driven auxiliary feed-water pump which can operate without power, to also provide cooling," Kanz says.

Not only is reliable power critical to stave off a potential meltdown in the reactor, it's also essential to cool down hot spent fuel.

That's the radioactive waste plants generate.

"Every bit of fuel that we've used here since we began operations in 1974 is still here on site. Most of it is located in a concrete pool lined with stainless steel and so the spent used fuel rods are kept in there under water. A few years ago, the pool was reaching capacity, so we decided to add a dry cask storage system," Kanz says.

Kanz says when the spent fuel rods have been sufficiently cooled; they're transferred from the pool into giant double-walled stainless steel cans.

They, in turn, are loaded into storage modules about the size of a single-car garage, fashioned of steel-reinforced concrete.

"We've got enough storage through the term of our license which is 2033," Kanz says.

Kewaunee, like other U.S. nuclear plants, did not expect to be in the business of storing spent fuel for decades.

In 1982, a law made the federal government responsible; scientists then set to work figuring how to best accomplish the task.

Kanz says the decision was made to store the waste underground, and the geography of Nevada's Yucca-Mountain seemed to fit the bill.

"Unfortunately those plans have not gone according to what we had thought. The President now has a blue-ribbon commission together studying what should be done," Kanz says.

According to the Nuclear Energy Institute, 72,000 tons of spent radioactive fuel had accumulated at plants around the country as of last year.

Wisconsin tallied in at 1400 tons; a bit of which is housed along the Mississippi River at a long-decommissioned plant.

The La Crosse Boiling Water Reactor was built in 1967 and closed 20 years later.

Plant manager Mike Brasel calls the spent fuel "old and cold."

"It's been cooling for a minimum of 24 years and some fuel assemblies up to 40 years," Brasel says.

With no national repository in site, Brasel says it's his job to coordinate the construction of a dry cask module for the facility's 41 tons of waste.

Pam Kleiss is putting every ounce of her energy into ensuring that no new nuclear power facility is ever again constructed in Wisconsin.

She represents Physicians for Social Responsibility Wisconsin and part of her concern about nuclear technology is the potential harm of its spent fuel.

"Imagine a state would allow nuclear power plants to continue to produce waste for which there is no appropriate and safe repository," Kleiss says.

The United States should move ahead expeditiously with the formation of a national repository, according to MIT scientist Charles Forsberg.

But he does not have major concerns about the ability of power plants here to safely store waste and cope with possible crisis.

"I'm sure this is all going to get revisited after the Japanese accident. And of course the Japanese do have a serious problem; they were not expecting a four-story high tsunami to come in on top of them, which was way beyond what anybody expected," Forsberg says.

Forsberg says fortunately places like Wisconsin needn't fear that type of potentially catastrophic natural event.

This story is part of a group. [Click for more.](#)

Nuclear Waste At Some N.E. Plants Piles Up, Draws Concern (WBUR)

By Bob Oakes

[WBUR FM Boston](#), April 5, 2011

BOSTON — In Boston, as state lawmakers prepare to discuss the safety of New England's nuclear plants at a hearing this week, it appears rate-payers could be in for some serious sticker shock in terms of the cost of storing the growing pile of spent nuclear fuel.

A new report from the New England Center for Investigative Reporting and the Hearst Connecticut media group found New England's nuclear plants generate 20 metric tons of nuclear waste a year.

In the last three decades electricity consumers shelled out nearly \$1 billion to store nuclear waste — and will likely pay a lot more.

Shay Totten, one of the reporters who worked on the story, joined Morning Edition Monday to provide more details.

Potassium Iodide Pills Available Wednesday (WILNJ)

Those within 10 miles of N.J. plant are eligible

By Robin Brown

Wilmington News Journal, April 4, 2011

As efforts continue to contain problems at Japan's earthquake- and tsunami-damaged nuclear plants, Delaware officials finalized plans to address radiation concerns here.

While experts say Japan's situation poses no radiation risk to the United States, calls of concern from state residents led to the Delaware Emergency Management Agency's plan to distribute pills this week that fight one radiation-related illness.

Potassium iodide, also called KI, will be given out free, but only to Delaware residents who live, work or own businesses within a 10-mile radius of Salem/Hope Creek Nuclear Generating Stations in New Jersey, said DEMA spokeswoman Rosanne Pack.

The distribution will run from 1 to 7 p.m. Wednesday at Volunteer Hose Company of Middletown, 27 W. Green St. State officials said the site was chosen because most public inquiries about the pills were from that area.

Potassium iodide is considered helpful in keeping the thyroid gland from absorbing radioactive iodine that is inhaled or ingested. Experts say the pills have most effect on children and pregnant women, but less on adults.

Still, the Japan crisis has fueled a run on the pills, which do not require a prescription but may be hard to find. Nationwide and globally, they are in big demand and small supply.

Delaware has a substantial supply, with pills secured at several sites and a backup supply at DEMA headquarters, officials said. They said the pills do not protect any other part of the body.

DEMA and the state Division of Public Health are working together on the upcoming pill distribution.

"Tablets will be available to those who have received potassium iodide during previous distribution dates and to those who have never received potassium iodide," the agencies said in a statement.

Anyone who has expired pills from earlier distributions should take them to Wednesday's distribution for replacement.

All eligible recipients are asked to bring photo identification such as a driver's license and a utility bill or other proof of their residence, Pack said. Those who work or own businesses within the 10-mile radius also should carry proof of that.

DEMA staff, public health officials and a pharmacist will be on hand throughout the distribution to answer questions, Pack said.

They also will have free, informational materials about potassium iodide use, the nuclear industry and radiation.

For more information on the state's pill distribution or preparedness for nuclear incidents and other emergencies, visit www.dema.delaware.gov.

Residents with questions may call the Delaware Emergency Management Agency Radiological Emergency Planning Section at 659-3362, Pack said.

DEMA's regular hours are 8 a.m. to 4:30 p.m. weekdays.

Potassium Iodide Available For Del. Residents Near NJ Nuclear Plants (NEWSWORK)

By Mark Fowser

NewsWorks, April 5, 2011

The Delaware Emergency Management Agency and the Division of Public Health are making potassium iodide tablets available free of charge for Delawareans living within a ten-mile radius of the Salem - Hope Creek nuclear power plants.

The recent explosions at a Japanese nuclear plant, brought on by an earthquake and tsunami, have a lot of Americans thinking about nuclear safety.

DEMA says "evacuation remains the primary method of protecting Delaware residents" in the event of a nuclear incident. Potassium iodide can offer additional protection against the effects of ingested or inhaled radioactive iodine.

The distribution takes place this Wednesday April 6th from 1:00 p.m. until 7:00 p.m. at the Middletown Volunteer Hose Company, 27 West Green Street.

People who work within the ten-mile radius of the nuclear complex and those who own businesses in that area are also eligible to receive the tablets. Anyone who is eligible is asked to bring photo ID and proof of residence, such as a utility bill.

DPH staff and a pharmacist will be available to answer questions during the session.

Anyone with questions may call the DEMA Radiological Emergency planning section at 302-659-3362 or visit www.dema.delaware.gov

Diablo Canyon Nuke Plant Reactor Back In Service (AP)

Associated Press, April 5, 2011

Water pump repairs are complete on a Diablo Canyon nuclear power reactor that was shut down for a week after sensors detected a problem at the California coastal plant.

Plant operator Pacific Gas & Electric Co., a subsidiary of PG&E Corp., says Unit 2 at the twin-reactor San Luis Obispo County facility was back in service Saturday afternoon. PG&E spokesman Kory Raftery says the Unit 2 reactor was returned to full power at 2:27 p.m.

It was shut down March 26 because of a feed water pump problem in a non-nuclear portion of the plant that supplies water to the unit's steam generators.

The Unit 1 reactor remained in operation.

Diablo Canyon's twin reactors produce about 2,300 megawatts of electricity, enough to supply three million homes.

Officials Lobby To Suspend Diablo Relicensing (ADOBEPR)

By April Charlton

Adobe Press, April 5, 2011

The San Luis Obispo County Board of Supervisors will ask Pacific Gas and Electric Co. to withdraw its application to renew licensing for Diablo Canyon Power Plant until a full analysis of earthquake faults near the nuclear facility is completed.

PG&E has applied to the Nuclear Regulatory Commission to extend the power plant's current operating licenses for an additional 20 years. One of Diablo's reactor's license expires in 2024 and the other in 2025.

The entire relicensing process can take anywhere from four to 10 years, according to officials.

Last year, the supervisors sent a letter to the NRC requesting a delay in the relicensing for Diablo Canyon until seismic studies are completed, reviewed and findings are incorporated into the application process.

Federal nuclear regulators currently aren't requiring that the results of the studies be part of the licensing renewal application process for Diablo Canyon.

PG&E, which owns and operates Diablo Canyon, has proposed studying the ocean floor around the power plant and creating three-dimensional maps to learn more about earthquake potential.

The new studies would determine, in part, whether the newfound Shoreline Fault intersects the Hosgri Fault, which was discovered when the plant was constructed.

Fault locations offshore of Diablo Canyon, their activity rate and the spatial extent of those faults also would be part of the proposed high-tech studies.

The studies, if approved for funding by the California Public Utilities Commission, are expected to take two to three years to complete.

Tuesday's decision by the supervisors to ask the electric company to withdraw its relicensing application comes in the wake of a nuclear crisis at the Fukushima Daiichi power plant in Japan, where a 9.0-magnitude earthquake hit March 10.

"It's the most credible way to move forward," said Chairman Adam Hill, whose district includes Diablo Canyon. "It's in all of our best interests to have the studies completed ... and then move forward."

Although the board has no authority over the NRC, it does have the power to be the voice of the electorate, which showed up in force to ask the supervisors for help.

Speaker after speaker implored the supervisors to do what they could to ensure county residents are protected from a possible nuclear disaster at Diablo Canyon.

"The safety records (for Diablo Canyon) are pretty much out the door; Japan had the best safety record," said John Hostetter, an Avila Beach resident. "Why are we any different? It could happen to us. It would be so catastrophic. It will be unfathomable."

PG&E officials have repeatedly said Diablo Canyon is safe and that everyone shares the common goal of operating a safe plant.

Electric company officials also have opposed delaying the renewal process for any length of time because they say it will increase costs in the long run.

Hill said it was the board's job to be the voice of the people, and that it had an obligation to ask PG&E to voluntarily stop the relicensing process and reach out to elected officials in Sacramento where the average citizen isn't heard.

"This is an important job of ours," Hill said.

Warning System Test (KEYT)

KEYT-TV Santa Barbara (CA), April 5, 2011

On Tuesday and Wednesday, officials at Diablo Canyon Nuclear Power Plant will test their Early Warning System sirens. Each siren will be tested for a period of a few seconds.

The siren system can be used for any major, local emergency where there is a need to alert a large number of people to tune to a local radio or television station to get emergency information.

The Early Warning System covers an area extending from Cayucos to the Nipomo Mesa.

Zion Nuclear Plant To Be Shut Down And Eventually Eliminated (WLS)

By Paul Meincke

WLS-TV, April 5, 2011

The nuclear power plant in far north suburban Zion is being shut down and eliminated.

In 10 years there won't be anything left but the spent nuclear fuel, which will be entombed in steel and concrete and stored on site, under armed guard for who knows how long.

A company named Energy Solutions now holds title to the plant and its nuclear license. Last fall it started the decade-long process of decommissioning a plant that stopped producing nuclear power 13 years ago.

Right now, there is only one man in the old control room of the Zion nuclear plant and he doesn't actually need to be there. The former control room will go dark in about a year and a half, about the same time, the spent nuclear fuel will be moved from its cooling pool to more permanent on site storage.

There are over 2,200 nuclear fuel assemblies submerged at the plant. They range in age from 14 years to 40. Each will be transferred, while underwater, to three-inch thick stainless steel tubes. Then they will be vacuum dried, welded shut and placed in even larger concrete containers.

"There's no chance of a meltdown. The water temperature is below 100 degrees. These units have been cooling for 13 years," said Val Christensen, Energy Solutions CEO.

Until and unless the government chooses a more permanent destination, Zion's spent fuel will be stored in giant concrete casks, placed atop a super-strength concrete pad a short distance from where the plant stands today. The pad is engineers to withstand earthquake, flood, tornado, and man-made assault.

"There is nothing to leak out. There's no liquids. There's no gases. There's no radioactive gases that could out into the atmosphere. It's just steel, ceramic, metal and concrete," said Pat Daley, Zion Solutions plant manager.

Still, the encased spent fuel would be resting roughly 1,200 yards from Lake Michigan. Senator Mark Kirk has long argued that that's a bad idea whatever the safeguards though others believe that it's not unsafe.

"The risks of storing it next to Lake Michigan are manageable and reasonable and they're being managed by the regulator," said Dr Mark Peters, Argonne National Lab.

It will take four years to move the spent fuel to its dry storage at Zion after which the plant will come down

Energy Solutions will sell a good bit of it for scrap, and when done in seven to 10 years, the lakefront land is to be returned to its original state. And that won't come cheap.

"All in all, it'll be about a billion dollars over the life of the project, and part of our cost model is turning over a refund to the rate payer if we can come in on budget," said Christensen.

Most of that billion dollar decommissioning cost came from ComEd ratepayers. Until the end of 2006, ComEd customers paid a tenth of a penny for every kilowatt-hour of electricity they used, and that money went into a trust to pay for decommissioning.

Nuclear plants have been taken down before in the U.S., but this is the first time that a big, dual reactor nuclear plant has been decommissioned.

Nuke Plants Must Report Safety Issues (SALEMOH)

Salem (OH) News, April 5, 2011

As Americans continue to watch events at a stricken nuclear power plant in Japan, the last thing we want to hear is that atomic energy safety regulations in this country are "contradictory and unclear."

Yet those very words were used by the Nuclear Regulatory Commission's inspector general in a report about the 104 nuclear power plants in this country. They referred to guidelines used by nuclear plant operators to report potential safety risks.

Nuclear plants generate about 20 percent of the electricity used in the United States. We have no reason to believe a disaster such as that in Japan would occur at a U.S. facility.

But the inspector general's report should be of concern. In it, NRC officials cited at least 24 situations in which nuclear plant equipment defects were noted by operators - but not reported to the government. That occurred between December 2009 and September 2010.

NRC officials should take a look at those "contradictory and unclear" reporting rules. To put it bluntly, any equipment malfunction that threatens the safety of plant workers or the public in any way should be reported immediately. If rules changes are needed, they should be made immediately.

—
Tax-and-spend liberals in Washington don't want the public to realize it, but they are winning the war to retain budgets the American people cannot afford.

For several weeks this year, Congress has been focused on attempts to approve a budget for the remaining half of the current fiscal year. Conservatives have insisted on spending cuts, while liberals maintain, in effect, that the sky will fall if even modest reductions are approved.

Clearly, fiscal conservatives are on the defensive. "If the government were to shut down, I don't think it's because we asked for too much," said one of them, U.S. Rep. Scott DesJarlais, R-Tenn., last week. He referred to the sword Democrat leaders are holding over Republicans' heads, of a shutdown of many government services if a new budget is not approved.

As a result of two extensions, Congress now has until April 8 to approve a new appropriations plan. But liberals still are holding firm - with only \$10 billion in cuts approved thus far.

Put that in context: The spending deficit for this year is expected to be about \$1.6 trillion. Unless conservatives take a more firm stance, the liberals will win on spending.

Roses to the Cleveland Cavaliers. They beat You Know Who and his Miami Heat a few days back. Revenge? Most certainly. A franchise benchmark??Not really. The team ranks with the worst in the league and will continue to be for at least the near future. But for that single night it was wonderful again to be a Cavs fan. Let's hope that loss prevents Miami from obtaining home court advantage in the playoffs. Roses to Cleveland management for not permitting members of You Know Who's posse of entitlement into the select parking area underneath the Q. Petty??Yes. Nevertheless great to hear - and perhaps smirk - about??Absolutely.

Roses to the Leetonia Board of Education. Members on Wednesday eliminated three certified positions and established a new - read reduced - pay scale for principals. While we don't applaud job loss and wage reduction per se, sometimes it has to be done. Leetonia, like many districts, is confronting student enrollment shrinkage. And tax revenue shrinkage too. The natural assumption is that teaching staff rosters shrink accordingly. This kind of stuff happens in other businesses too. Making these cuts also show the voters you mean business in watching bottom lines which, in turn, make voters more likely to support a given levy.

Roses to Virginia Commonwealth University making the NCAA Final Four. So what if the Rams screwed up everyone's bracket sheets? It's a little guy makes good success story for a school whose initials sound like something that has to do with TV reception.

Roses to good fortune surrounding that sinkhole in Leetonia. It certainly was and is an interesting topic of discussion. But think of the tragedy should a car have been driving along that stretch of road the same time it collapsed. Or how about a kid on a bike? Nobody got hurt and it will get fixed which is good. You have to wonder how many more potential sinkholes are around here.

Thorns, now that the warmer weather is approaching (we think), to bicyclists who basically think they own the road when it comes to park trails and such. We heard some complaints from walkers last year who use the popular Little Beaver Creek Greenway Trail. They complain of bikers (some, not all)?coming too close for comfort to walkers, sometimes while moving at high speeds. A biker versus walker collision wouldn't benefit anyone. There is enough room for everyone on trails including the Greenway Trail which does get a lot of traffic. Just use common sense and proper etiquette.

Thorns over the fighting and squabbling emerging from the Wednesday meeting of the Columbiana County Board of Elections. A whole five months removed from the November election an argument breaks out between people who should know better than to get into a heated exchange at a public meeting. Again, as is the ongoing routine around here, who is right and who is wrong depends on your party affiliation. Sick and tired are words that quickly come to mind. As in sick and tired of hearing and reading about the same people fighting with each other. No wonder the average guy out in the public gets disgusted of it all. If there was an impropriety or law violation, there are proper ways to handle it besides a screaming match.

Measuring Radiation Routine Even Before Japan Disaster (NASHUAT)

By David Brooks

Nashua (NH) Telegraph, April 5, 2011

Measuring radiation in New Hampshire jumped into the news recently because of the ongoing disaster at a Japanese nuclear power plant, but there's nothing new about it. Thanks to Seabrook, we've been doing it for years.

Atop the Department of Environmental Services building in Concord, an awkward-looking device sucks down 1,000 liters of air every minute and counts the resulting release of gamma particles, the most dangerous of the various sub-atomic particles released when isotopes of some elements naturally decay. Then it beams the results to a federal facility in Alabama.

The rooftop count has been going on for 3/2 years as part of Radnet, an EPA program designed to keep track of environmental radiation around the country due to causes ranging from solar storms to power plants. (Fun fact: Coal-fired plants produce more environmental radioactivity than properly running nuclear plants because burning coal concentrates and releases the very tiny amounts of radioactive material in most coal).

Last month the state announced that it has detected some radiation from Japan; about 40 mrem, to use a unit of measurement we'd all prefer not to be familiar with. This is a tiny amount, roughly the amount of extra radiation received from cosmic rays by flying across the country 12 times in a year and the Nuclear Regulatory Commission calculates it reduced our life expectancy "equivalent . . . to crossing the street three times (or) taking three puffs on a cigarette."

That measurement wasn't made by the air detector, however, because the radiation floating here from Japan was too diluted. It was made via what Department of Public Health Director Jose Montero jokingly calls the accompanying high tech precipitation-measuring device: A 5-gallon bucket.

The state put snow from the roof in the bucket and measured the radiation in the melted water. (Normally, New Hampshire does radiation tests of precipitation only in the summer, when there's no risk of the water freezing.)

Montero said the state will continue precipitation monitoring while the situation in Japan remains unstable, if for no other reason than to establish a short-term baseline to compare later on.

Aside from this rooftop measurement, New Hampshire also runs five stations within the 10-mile radius of nuclear plants – three near Keene, across the Connecticut River from Vermont Yankee, and two near Seabrook Station. Plus, every month or so, the state gathers samples of water, milk, farm silage, and sediment around to make sure that radiation isn't building up in the environment.

The only Nashua-area sampling site is the Pomeroy dairy farm in Mont Vernon, on the edge of the 50-mile-radius zone around Vermont Yankee.

New Hampshire also tests mussels and lobsters, which as aquatic bottom-feeders are likely to encounter any radioactivity that has settled in the environment, which means they act as "bio-accumulators," or as canaries in the aquatic coalmine.

Analyzing these creatures sounds fun.

"We make a puree of them," explained toxicologist Debanond Chakraborty of the state Public Health Laboratories, sounding more like a chef than a scientist.

That puree, or whatever material is tested, is analyzed in what looks like a grossly over-engineered crock pot, to continue the culinary metaphor. They have with walls some six inches thick to keep out stray radiation that would skew results, and liquid nitrogen is used to keep the sample at minus 196 degrees to allow accurate detection by the germanium semiconductor that detects the tiny, tiny charge carried by these radiation particles.

How tiny? For iodine-131, the isotope detected from Japan, they can spot one radioactive atom in a kilogram of material, said Chakraborty – a mind-boggling level of precision.

All this sampling is good, but is it enough? That's the sort of difficult-to-answer question that makes public health so thorny.

"We can spend a gazillion dollars, we can do this test every day," Montero said. "Will it change anything? No. Will it change our standards? No. . . . We need to use resources intelligently."

But he admits that more testing, even if deemed unnecessary from a scientific point of view, might help reassure the public – and since stress can lead to bad health, reassuring the public can be a legitimate public-health maneuver.

Sampling and testing aren't the only expenses related to our two local nuke plants. (The Pilgrim nuclear plant on Boston's South Shore is too far to be factored in.)

New Hampshire runs exercises several times a year that are overseen by the Nuclear Regulatory Commission. State officials pretend a problem has arisen and see how they would react as, say, the wind changes direction or different isotopes are found: When should they release the state's stockpile of potassium iodide pills, which can prevent radiation build-up in our bodies; when should they recommend that people stay indoors; when should they mandate evacuation?

The mere fact that such tests exist is a reminder that nuclear power, for all its carbon-free energy heft that makes it a necessary part of the modern world, has a very scary side that we must be aware of. Although with the situation in Japan, we probably don't need reminding.

Granite Geek appears Mondays in the Telegraph, and online at www.granitegeek.org. David Brooks can be reached at 594-5831 or dbrooks@nashuatelegraph.com.

Where Are The Isotopes Of Yesteryear? (CHIST)

By Neil Steinberg

Chicago Sun-Times, April 5, 2011

Nostalgia and radiation are not a natural pair. If I asked 100 Chicagoans what the "Chicago Pile" was, I'd get 99 wild guesses like "a Bears defense?" Maybe one would know it was the name given the reactor Enrico Fermi used for the first self-sustained nuclear fission at the University of Chicago late in 1942.

Considering what that led to, from the atomic bombing of Japan to the ongoing crisis at the Fukushima Daiichi nuclear power plant, it isn't difficult to see why being the birthplace of fission isn't high on the old civic pride scorecard. Nuclear stuff scares us.

Not me. I grew up around it. While I've mentioned before that my dad is a nuclear physicist, I never really considered what that meant until recently, after weeks watching the Japanese struggle to cage the nuclear beast that last month's earthquake angered.

Boys often have happy memories of their fathers' occupations, and while that makes sense if your dad is a baker and came home flour-dusted and bearing doughnuts, it can seem odd when those happy memories are of cloud chambers and master-slave manipulators (first because you have to explain everything. A cloud chamber is a Plexiglas box filled with vapor that lets you see the tracks of subatomic particles. A master-slave manipulator is a device where you put your fingers into tubes to control a mechanical arm handling radioactive material).

It's amazing, the questions you don't ask your parents. My dad worked at NASA's Lewis Research Center in Cleveland. As a child, when my father said he was shooting particles at targets, I thought the targets were concentric circles, like targets to shoot arrows at. It wasn't until now — I hate to say as a benefit of the Japanese crisis, but even disasters bring benefits — we talked and I finally asked him what he was actually doing.

"I was measuring the Maxwellian distribution of neutrons," he said. "We had a neutron generator. You fire protons and hit a target, neutrons come off it, and they would have a certain standard energy distribution."

(Does that help you? Me neither. Physics is a subject where the more some people — such as me — inquire, the more lost they become. Fermilab once invited me to tour its particle collider while it was being cleaned. I went with one goal — to grasp the elusive "Top Higgs Boson" and express it in words — and left more confused than when I went in).

Radioactivity can perplex even scientists. Time was, not everyone agreed on its peril.

"A branch chief in the nuclear group would have radioactive sources in his pockets," my father told me. "I would say, 'I need a source,' and he'd say, 'I've got one here.' That scared the hell out of me. There were some people who did not believe that nuclear emissions — gamma and beta rays — would affect you. It took all kinds."

It is human nature to focus on new dangers while ignoring those we have grown accustomed to. Harvesting coal power kills more people every year than nuclear plants have in the past 50, but which do we fear?

Fear is a matter of focus. For instance, one of the difficulties measuring subatomic particles is interference — stray particles screw up readings. Water is a good shield, but building a tank around your lab is expensive. So my father hit upon a cheaper solution.

"Wax has a cross-section similar to water," he said. "I ordered a boxcar of paraffin."

He lined his lab with bricks of Navy surplus wax. I remember them. The wax worked marvelously, my father happily gathering his subatomic data, until one day, the research center's deputy director came by.

"He said, 'What's this?' my father said. "I explained to him what I was doing. I was very proud. He said, 'Do you realize that if these blocks of paraffin ever caught fire, they would burn the building down? Get rid of them.'"

"I had never thought of that," my father, a cautious man, said. "I was only interested in shielding. I was proud of my measurements, but from a safety point of view, he was right."

Which is the moral of the story. The Japanese are famous for safety, but obviously didn't work through the worst-case scenario here ("An earthquake AND a tsunami? Who'd have thunk that might happen? That's like finding jelly in proximity to peanut butter!")

Everyone needs oversight, not because they're lax but because their focus — Make cheap energy! Filter stray neutrons! — might not reflect other concerns, like what happens if there's a tsunami, or the place catches fire.

His lab didn't burn, nor did 30 years at NASA harm my dad, now 78, happily painting in Colorado. To me, radiation is as nostalgic as baseball; I'm looking at a "RADIATION HAZARD" sticker I got as a kid. It's still cool.

Our Nuclear Past (MJS)

By John Gurda

Milwaukee Journal Sentinel, April 4, 2011

When you're driving past the cornfields and cow pastures of rural Manitowoc County, you might be surprised, and a little perplexed, to suddenly find yourself crossing Nuclear Road. The Atomic Age seems far removed from this bucolic corner of America's Dairyland. If you turn east, however, Nuclear Road will take you directly to the twin reactor buildings of the Point Beach power plant, Wisconsin's oldest atomic facility.

The unfolding nuclear disaster in Japan has focused new attention on this venerable powerhouse. Point Beach has been operating in broad daylight for more than 40 years without serious incident, but fears of a catastrophe, never far below the surface, have been renewed even here in the heartland.

The history of Point Beach is essentially the story of nuclear power in America. In 1954, less than 10 years after American bombs caused Japan's first nuclear disaster, the Atomic Energy Act made the underlying technology available to private industries and public utilities.

The Wisconsin Electric Power Co., predecessor of We Energies, was quick to jump on the nuclear bandwagon. In 1952, WEPCO joined a consortium of firms that developed Fermi 1, a nuclear plant that went on line south of Detroit in 1963. Although it was ultimately a flop, Fermi 1 demonstrated that the atom could indeed be harnessed to generate electricity on a commercial scale.

Wisconsin had already experienced its first nuclear chain reaction. Allis-Chalmers, a major producer of traditional generating equipment, was experimenting with atomic power after the war, and in 1959 the company began to split atoms in a modestly scaled test reactor. It was located in Greendale, of all places, on the site that would later become the home of Reiman Publications.

There is a common misconception about the nature of nuclear power. Many of us have a vague notion that all those particles pinging around inside a reactor somehow give off enough energy to light our homes. What a chain reaction produces, however, is not electricity but massive amounts of heat. For America's utility industry, atomic power was basically a new way to boil water. It is the steam from boiling water that drives the turbines that generate electricity; everything past the reactor operates just as it does in plants fueled by coal, oil or natural gas.

In the mid-1960s, facing an economic boom and fearing that there wouldn't be enough power to sustain it, Wisconsin Electric began to weigh its options. Coal and nuclear were close in cost, but WEPCO chose nuclear for its next plant in 1965, citing "improved continuity of operation for nuclear units, and recognition of the part that nuclear energy must necessarily play in meeting the rapidly expanding energy requirements of the country."

The utility already was using Lake Michigan water in its plants at Oak Creek, St. Francis and Port Washington. After combing the shoreline all the way to Escanaba, Mich., WEPCO settled on a site just north of Two Rivers. Named Point Beach for a nearby state forest, the property lay attractively close to the utility's Fox Valley customers.

Wisconsin Electric originally had planned to install a single 454-megawatt reactor at Point Beach, but when Westinghouse, the unit's manufacturer, offered a too-low-to-say-no price on a nuclear twin, WEPCO doubled the plant's capacity. Ground was broken in late 1966, and the nation's 19th nuclear facility went into service on Dec. 21, 1970.

In sharp contrast to subsequent projects, Point Beach was greeted with open arms. Not a single opponent testified at multiple public hearings. The area's congressman called the plant "a tremendous boost," and the Two Rivers city manager said, "I can't begin to tell you how pleased we are." WEPCO officials were just as enthusiastic, describing nuclear as "the most environmentally compatible" power source and Point Beach as "a culmination of historic progress."

The new facility did, in fact, become a workhorse of the WEPCO system and one of the most reliable nuclear plants in the country. Its role became even more vital with the energy crisis of 1973-'74. The Arab oil embargo triggered sharp spikes in the price of both crude oil and coal, making the decision to build Point Beach seem positively inspired.

Other Wisconsin utilities had joined the nuclear parade by that time. In 1974, a coalition of state companies dedicated another atomic plant a few miles up the lakeshore in Kewaunee County, which soon had a Nuclear Road of its own. The turning point

Not everyone shared the rosy prognosis of the nuclear advocates. By the early 1970s, environmentalists were raising concerns about both runaway radiation and thermal pollution - the discharge of water at temperatures high enough to harm aquatic life. Those concerns helped to create a new regulatory climate, but nuclear power remained a viable option.

Then came Three Mile Island. In 1979, a series of malfunctions at the Pennsylvania power plant caused a partial meltdown of the reactor core and the evacuation of thousands of nearby residents. Occurring just 12 days after the premiere of "The China Syndrome," an anti-nuclear drama starring Jane Fonda, the incident fed a rising sense of panic.

Although there was no lasting damage, the nuclear near-miss at Three Mile Island had a chilling effect on America's atomic power industry. WEPCO and its partners were forced to abandon plans for a third nuclear plant on the Lake Michigan shoreline north of Sheboygan. The site they had in mind is now Whistling Straits golf course.

And so matters have stood from that day to this. Existing plants have continued to operate, but there has been a virtual moratorium on new construction. Every time nuclear power seems on the verge of a comeback, another disaster occurs, notably Chernobyl in 1986 and now Japan in 2011.

Concerns about climate change, in the meantime, have boosted demand for energy sources that don't rely on fossil fuels or emit clouds of pollutants. That would seem to include nuclear, but nothing says forever like radioactive waste. Spent fuel rods remain dangerous for centuries - well beyond any future we can see in our headlights - and the dangers posed by radiation in any form are insidious. There is a science-fiction quality to a force that you can't see, smell, touch or taste but that can kill you just as effectively as cyanide or dynamite.

On the other hand, nuclear power is highly efficient and generally unobtrusive when the plants are operated and maintained properly. If you exclude recent events in Madison, the chances of a meltdown in Wisconsin are remote. We live on what geologists call the "stable craton," a zone virtually immune to major tectonic activity, and safety requirements are stringent. The late Sol Burstein, who had charge of WEPCO's power plants, once compared the redundant nuclear safeguards at Point Beach to a man who wears a belt, puts on suspenders and then sews his pants to his shirt.

Nuclear energy is hardly alone as a problematic power source. Coal, oil and gas all pollute the air. Hydroelectric dams kill rivers. Only the most gigantic solar panels can generate meaningful power, and they're useless when the sun doesn't shine. Wind turbines kill birds, and they're useless when the wind doesn't blow. Once the novelty wears off, they can also be downright ugly. If you stand in the middle of a Fond du Lac County wind turbine "farm" after dark, the effect of their warning lights is like dozens of digital alarm clocks blinking "12:00" in unison all night long. Looking ahead

The point is that there is no panacea, no single perfect power source, and choosing between them is a little like picking your poison. Unless we're willing to give up our computers, our cellphones and our iPods, we're all part of the problem; electricity is the lifeblood of modern civilization.

The current emphasis on alternative fuels and renewable energy should by all means be continued but, in our insatiable appetite for power and our simultaneous urge to rein it in, Americans seem at times like alcoholics trying to limit the output of a distillery. Even if we could solve our own problems, there's a whole world out there that's hungry for energy. Global demand is going up, not down, and we can hardly blame the people of India and China for wanting what we already have.

Wisconsin consumers have been driving down Nuclear Road for more than 40 years now. Atomic energy has helped maintain our way of life for two generations. The wizards among us may someday develop new sources of base load energy. Until that day comes, nuclear power, like its byproducts, is sure to be with us for a very long time to come.

John Gurda, a Milwaukee historian, writes for the Crossroads section on the first Sunday of each month.

Recalling Chernobyl (MORRISDH)

By Jo Ann Hustis

Morris (IL) Daily Herald, April 2, 2011

As a journalist born and raised in Russia, Viktoria Mittyng interviewed and wrote about first responders to the Chernobyl nuclear disaster of 1986.

"I had the honor of spending a significant amount of time with the firefighters who were involved in still trying to put out fires later on as the situation developed," she said Wednesday.

"The initial brigade of firefighters was from the plant. Three of those who died had bodies so radioactive they had to be buried in lead coffins."

The most serious accident in the history of the nuclear industry to date, the explosion took place on April 26, 1986, at Unit 4 of the Chernobyl Nuclear Power Station. The plant was located in the former Ukrainian Republic of the Soviet Union.

The explosion ruptured the reactor vessel. The fire that followed burned a good 10 days, and forced large amounts of radioactive materials into the environment. About 116,000 people near the plant were evacuated that spring and summer. They were followed later by another 220,000 evacuees.

The cloud from the burning reactor spread numerous types of radioactive materials like iodine-131 and caesium radionuclides over much of Europe. Iodine-131 has an eight-day half-life and mostly disintegrated within weeks. Caesium-137 has a 30-year half-life, and can still be measured in the soil and some foods in parts of Europe.

Viktorija's family lived about 100 miles from the town of Chernobyl. She was in school when the accident occurred. She returned to Russia after the Soviet Union fell apart, and was invited by the Moscow Times, an English language daily, to work at the newspaper in Moscow. She wrote a lot about post-Soviet politics, and many of her pieces received worldwide distribution.

She began on the news desk, then was assigned a feature page to fill with what she pleased, as she was a native Russian who spoke the language and knew the country and many, many people.

"I got in touch with what the Russians and Chernobylites called the Chernobyl Liquidators. This was the term they used for the thousands of people who responded to the disaster, from the first group of firefighters — the first wave or crew who went onto the roof of the turbine building that was on fire, and the roof of Reactor No. 3, to make sure there would not be another explosion," she said.

Reactor No. 4 had blown in the disaster. Reactor No. 2 was adjacent to No. 4. The first wave of firefighter crews were company workers. They were fighting fires on the building in efforts to prevent another explosion or accident at Reactor No. 2.

"The original crews went onto this hot tar roof. It was a highly radioactive environment. The crews weren't suited up — they didn't have decontamination suits on, or have breathing apparatuses," Viktorija said.

"They were not protected in any way. They just went onto the roofs and put out the fires. They died of acute radiation poisoning. Some of them collapsed on the roof, and some were taken to the hospital. The end result is a number of firefighters died of acute radiation poisoning."

Plant personnel were sent into an exclusion area not open to the public. Certain workers were told to clean up basically what had happened at the reactor. They were to remove the radioactive debris near the reactor.

"It was a huge explosion. There were huge pieces of graphite on the ground emitting radiation, and they needed to be removed. Some folks were sent in to build shelters for the cleanup crews. Others were working to build sarcophagi around the reactors," she said.

"There were thousands of these people, but the Soviets did not keep records, so we don't know how many. But I have seen where about 70,000 or so were involved in the cleanup."

The second wave of firefighters came from Pripyat, others from the town of Chernobyl, and from Kiev, about 60 miles distant from the reactors. Viktorija worked with members of the crews from Chernobyl.

"At the time they went, they had no idea of what they were going into," she said. "They didn't know how severe the accident was, or how much danger they were in. But they knew if it wasn't a kamikaze mission, they were putting their health on the line because it was an accident at a nuclear power plant."

The stories she wrote from the interviews went to a number of different publications, including the New York Times and Chicago Tribune.

Reliable information about the Chernobyl plant and the release and spread of radioactive material was unavailable to citizens of the Soviet Union at first, and was inadequate for years after. This led to widespread public distrust of official information and wrong attribution of many other health conditions to radiation exposure.

Today, Viktorija lives in America with her husband and children. Professionally, she serves as senior communications spokesman for the Nuclear Regulatory Commission's Region 3 at Lisle, Ill.

"I don't mean to put on my NRC shoes, but the major reason I took the job with the NRC is that I believe being informed and having opportunity to demand information from your government is your first line of defense," she said.

"The people in Chernobyl were exposed to radiation for a day and a half without their knowledge. Their children played on radioactive streets and didn't know it. Here, I feel like I work for an agency where if there is a safety violation, it's made public. We are required to report it. The public here has a right to know and be informed.

"I come from a country where no one knew anything, while the government sat and sat on this information because it was an embarrassment to the Soviet Union. The citizens had no access to anything that has to do with nuclear. There was not a system for providing any kind of information. Evacuation plans? There were none. There was no evacuation plan, no escape route. The government just told you to leave."

Nuclear Energy Risk Undervalued (CHIT)

By Steve Cohn

Chicago Tribune, April 5, 2011

The recent reactor accidents in Japan make clear that the potential for very dangerous releases of radiation needs to be included in assessments of the merits of nuclear power versus other energy options. The way market economies traditionally include hazard risks in economic calculations is through liability for hazard damages. This mechanism has been subverted in the nuclear industry by the Price Anderson Nuclear Industry Indemnity Act's cap on private firms' liability for nuclear accidents. Although the de facto cap is high by conventional standards (more than \$12 billion), it is far less than the potential economic costs and health damages caused by a serious reactor accident (totaling hundreds of billions of dollars, if not much more).

The industry's adamant refusal to give up the liability cap belies recent claims by nuclear industry representatives that a serious nuclear accident cannot happen in the United States. The nuclear industry cannot have it both ways. Either there is no possibility of a serious reactor accident, in which case they should not oppose repeal of Price Anderson, or there is significant risk, and that is why they demand that the public, rather than their stockholders, assume the risk.

Besides subsidizing nuclear power insurance, the liability cap has distorted the incentives for technological development in the nuclear sector. Existing U.S. light-water reactors tolerate the hypothetical possibility of reactor meltdowns, but rely on active delivery systems to bathe the fuel rod environment with coolant. Passively safe reactors are prohibited by design from meltdown accidents, due to features such as their small size and modest concentration of nuclear fuel. Without the Price Anderson Act, the industry would have probably tilted towards the development of passively safe designs. While even these reactors carry serious risks, due to the dangers of terrorist attacks, the diversion of nuclear fuel into weapons material and uncertainties about long term waste disposal, they are the only sound basis for a second try at nuclear power.

Passive reactor designs should be pursued as research rather than commercial projects. They should be treated as last resort options (much like geo-engineering responses to global warming) if other greenhouse abatement alternatives fail to curb climate change. Marginally competitive light-water reactors, pressured to cut corners by tough economic competition and insulated from full accident liability, invite unacceptable risks.

Nuclear Reactions (3 Letters) (NYT)

New York Times, April 5, 2011

Nuclear Reactions

To the Editor:

Re "When All Isn't Enough to Stop a Catastrophe" (March 29): I was surprised that more discussion was not given to the inherent risks of nuclear plants' spent fuel pools. Most spent fuel repositories do not have a hardened containment vessels, like reactors themselves. This makes the repositories vulnerable to terrorist sabotage, which could lead to significant radiation releases. We have seen at Fukushima how serious a lack of cooling can be for spent fuel. An additional problem is that American spent fuel pools were never intended for long-term storage and are holding more spent fuel than they were designed for.

Mark Swann

Washington.

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To the Editor:

Much of the angst about power generation, especially nuclear power, could be alleviated by adopting a less centralized strategy. Huge generating installations have been built because they appear to be cheaper and more efficient, but this is true only if the widespread risk of failure and fragile public support is downplayed. New technology allows power production more locally, either in towns (as was done historically in local conventional power plants) or in the household (solar or wind generation). Costs per kilowatt-hour might be somewhat higher, but these generators are intrinsically safer.

Martin S. Ewing

Branford, Conn.

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To the Editor:

"Idiotic" would be a more accurate than "probabilistic" as a characterization of the risk model used by the nuclear industry.

The Indian Point nuclear power plant, 24 miles from New York City, exemplifies the defiance of common sense. The plant has an extensive history of safety problems, including fires, explosions, cooling system malfunctions, backup generator failures, emergency communication system breakdowns, pipe breaks and radiation leaks.

A few years back, testing revealed that a fire protection system for critical electrical cables was defective, subject to rapid disintegration and a potential threat to safe reactor shutdown in the event of fire. The Nuclear Regulatory Commission simply

recalibrated potential fire duration to 24 minutes and gave Indian Point an exemption to federal fire safety rules. (The nuclear plant fire which had led to the rules, by the way, had lasted nearly seven hours.)

Michel Lee
Scarsdale, N.Y.

TVA: Valve Failure At Ala. Nuke Plant Not A Threat (AP)

By Kate Brumback

Associated Press, April 5, 2011

Operators of a nuclear plant in Alabama where a key valve failed last year told federal regulators Monday that a manufacturing deficiency in a part of the valve caused the problem and that it was never a safety threat.

Officials from the Tennessee Valley Authority, which operates the Browns Ferry Plant near Athens, Ala., met with Nuclear Regulatory Commission officials in Atlanta to respond to the federal report on the valve failure. The mechanical problem in the plant's Unit 1 reactor was discovered by TVA employees while the reactor was shut down for refueling in October and reported to the NRC.

TVA officials said the failure was not caused by plant operator error. The failed valve has been repaired and the plant is addressing the problem in similar valves in that reactor and others, officials said.

The NRC had raised concerns that the valve failure could have left a residual heat removal system unable to do its job, particularly in the case of a fire.

Plant operators turned off the valve when they noticed that it wasn't working during the shutdown in October and used another one to perform the necessary function, TVA officials said. But during an accident they would not have turned it off and, according to laboratory tests, the failed valve would have kicked in within seven minutes, TVA officials said.

The NRC has asked TVA to provide answers to other questions, and once it has, the federal regulator will use objective and subjective factors to determine the significance of the failure within 30 days, said NRC regional administrator Victor McCree. If the NRC decides that the failure was significant, it could require additional inspections at Browns Ferry.

"My interest at this point is making sure we have a satisfactory response to the questions that we asked," McCree said. "They were very open with us today, and I have every reason to believe they will continue to be very open in their responses to our questions."

Past problems at the Browns Ferry Plant have at times led to increased NRC oversight. The plant is internationally known in the industry as the site where a worker using a candle to check for air leaks in 1974 started a fire that disabled safety systems.

"We don't want to speculate on the action they'll take," TVA spokesman Ray Golden said. "We'll deal with whatever happens."

TVA Nuclear Plant Tells Why Valve Stuck (AJC)

Atlanta Journal-Constitution, April 5, 2011

Federal regulators will soon hear why a key valve apparently failed at a nuclear plant in Alabama.

Tennessee Valley Authority officials will get an opportunity Monday in Atlanta to speak about why a valve on a coolant system appears to have gotten stuck in the shut position at its Unit 1 reactor at the Browns Ferry Plant near Athens, Ala.

NRC officials said in a report that the failure of that valve could have left a residual heat removal system unable to do its job, particularly if there was a fire.

TVA officials say the mechanical problem was discovered, repaired and reported while the reactor was shut down for refueling. They say it was never a safety threat. The reactor has other cooling systems.

Nuclear Regulators Probe Fault At Alabama Reactor (REU)

By Matthew Bigg

Reuters, April 5, 2011

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

TVA Officials To Discuss Valve Failure At Nuclear Plant (BIRMBIZ)

Birmingham Business Journal, April 5, 2011

The Tennessee Valley Authority will soon tell federal regulators why a key valve malfunctioned at the agency's Alabama nuclear power plant.

According to the Associated Press, TVA officials will discuss the failure of a valve on a coolant system at its Brown's Ferry Plant, which is located near Athens, with the Nuclear Regulatory Commission.

The NRC has said the failure of the valve could have left a residual heat removal system unable to do its job, particularly if there was a fire.

Nuclear Neighborhood: Residents In Towers' Shadow Feel Untouched By Japan Crisis (CHTNGA)

By Dave Flessner

Chattanooga (TN) Times Free Press, April 5, 2011

Despite the radioactive fallout around one of Japan's biggest nuclear power plants, Rodney Fuller has no fears about the nuclear plant only a few hundred yards from his North Hamilton County residence.

As a licensed electrician, the 49-year-old former TVA employee says he knows first hand the many backup systems the Sequoyah Nuclear Plant has to protect the public.

"I don't think we're in any danger of a tsunami coming this far inland like what happened in Japan," Fuller said while washing his car this week at his 12-year-old house in the Hunter Trace subdivision.

Fuller owns one of the nearly 75,000 homes and businesses within the 10-mile emergency management zone around TVA's two nuclear plants in Southeast Tennessee.

The crippling of the Fukushima nuclear plant in Japan has heightened public concerns over nuclear power and created a demand for anti-radiation potassium iodine, or KI, tablets in many parts of the globe.

But in the Tennessee Valley where American scientists first worked to harness the power of the atom more than a half century ago, neighbors to the reactors seem less concerned.

"Since the tsunami in Japan, a total of about 10 people have requested KI from the county health departments in our Southeast Region," said Shelley Walker, marketing coordinator for the Tennessee Department of Health.

Jeremy Heidt, a spokesman for the Tennessee Emergency Management Agency, said fewer than 200 of the households around TVA's Sequoyah and Watts Bar plants in Tennessee have requested the KI tablets over the past couple of years.

On request, the state provides the tablets that help limit how much radiation is absorbed in the thyroid.

"This is a safer neighborhood than most areas and I really don't think much about the plant, other than it provides a great walking area for me," said Blanche DeVries, who moved near Sequoyah three years ago.

But nuclear power critics contend that the quake-damaged nuclear plant in Japan should serve as a warning to those who live around reactors.

"What we're seeing in Japan shows that the impacts from a nuclear plant accident can be very severe and felt a long ways beyond the 10-mile zone," said Edwin Lyman, senior scientist for Union of Concerned Scientists. "I would be surprised if this is not a wake-up call to folks who live around the plant because the radiation levels for those living around that plant are very high in some circumstances. Even if the residents don't face up to that, the insurance companies will."

Sandy Kurtz, an anti-nuclear activist who lives in Hixson less than 20 miles from Sequoyah, said Fukushima shows that the improbable can happen.

"Despite all the insistence that there is no danger, we have to believe that an accident could happen here and we need to be better prepared to handle such a disaster," she said.

Heidt said that state and local emergency responders conduct annual drills on how to respond to a host of potential problems in and around a nuclear plant, including natural disasters, terrorist attacks and a confluence of weather and accidents.

"We have drills and graded exercises every year to make sure we are ready," he said.

Contact Dave Flessner at dflessner@timesfreepress.com or at 757-6340

Georgia Watch Urges PSC To Adopt Cost Controls On Vogtle Nuclear Construction (PTCWEEKLY)

Commissioners Decide Tomorrow Whether to Spread Financial Burden of Cost Overruns

Peachtree Corners (GA) Weekly, April 5, 2011

ATLANTA, Ga., (April 4, 2011) – The Public Service Commission will decide tomorrow whether to reduce Georgia Power's profit margin if construction costs for the two new nuclear units at Plant Vogtle exceed the \$6.1 billion price tag originally approved by the Commission.

Georgia Watch Consumer Energy Program Director Clare McGuire is urging commissioners to adopt a cost control plan that creates incentives for Georgia Power to finish the Vogtle units on time and under budget.

"We need a deal that spreads out the financial risk so ratepayers aren't carrying sole responsibility for cost overruns," said McGuire. "I hope commissioners do the right thing tomorrow and make sure ratepayers aren't left footing the bill if costs spiral out of control."

The two new units – Vogtle units 3 and 4 – are expected to be completed in 2016-17. PSC Staff has formally recommended a risk-sharing mechanism (RSM) that calls for a slightly lower profit margin for Georgia Power if construction costs rise above \$6.4 billion, or \$300 million over budget.

Georgia Watch fully supports PSC Staff's proposal.

"By adopting Staff's RSM proposal, it will more equitably align ratepayer and shareholder interests," said McGuire. "A risk-sharing mechanism is appropriate, it's in the public interest, and it's necessary to protect ratepayers interests."

Georgia Power has come out strongly against Staff's RSM proposal, saying it should be judged on its conduct during the construction process, not the project's final cost.

"I think if we can find an incentive mechanism that incented us to control things we can control, we'd be much closer to resolving this. But we can't live with a results-oriented process here," said Georgia Power attorney Kevin Greene.

On those grounds, Georgia Power is asking ratepayers to bear the entire financial burden of cost overruns at the same level of profit as if the project were coming in at budget. Currently, Georgia Power's allowed profit margin is 11.15 percent.

"It's ironic that Georgia Power says it shouldn't have to share the financial burden for delays and ballooning costs because it has no way of predicting what those will be. If Georgia Power doesn't know, ratepayers certainly don't know. Yet ratepayers should be solely responsible for cost overruns? It's just a raw deal for customers," said McGuire.

Under Staff's RSM proposal, Georgia Power would still recover all cost overruns from ratepayers deemed prudent by the Commission. In addition, Georgia Power would continue recovering substantial profits. If total construction costs increased to \$7 billion – \$900 million over projected cost – then Georgia Power's allowed profit margin would decrease from 11.15 percent to 9.3 percent. If total construction costs ballooned to \$9 billion – \$2.9 billion over projected cost – then Georgia Power's allowed profit margin would decrease to 6.99 percent. The PSC will vote on Staff's RSM proposal Tuesday, April 5th at 10 a.m. at 244 Washington Street, Atlanta, Georgia, 30334.

Nuclear Waste Repository In NM Seeks Contract Bids (AP)

By Philip Klein

Associated Press, April 5, 2011

The U.S. Department of Energy is seeking bids to continue hauling nuclear waste to a federal nuclear waste repository in southeastern New Mexico.

Trucks carry the waste in specially designed trailers to the Waste Isolation Pilot Plant near Carlsbad from Energy Department sites around the nation.

The contract is estimated at \$80 million to \$100 million over five years.

Contractors must turn in their proposals by May 17.

The two current carrier contracts expire next year, in March 2012 and September 2012.

The repository receives 20 to 35 contact-handled waste and five remote-handled waste shipments a week.

It buries defense-related radioactive waste in rooms mined from an ancient salt formation 2,150 feet below the desert floor.

US Anti-nuclear Activists Slam Reprocessing Plan (AFP)

AFP, April 5, 2011

WASHINGTON — US anti-nuclear groups Monday condemned a project to build a plant where plutonium from weapons would be reprocessed into fuel for nuclear power plants, saying the plan was costly, dangerous and would benefit mainly the French group, Areva.

A mixed-oxide, or MOX, plutonium reprocessing plant that is being built in South Carolina has become "an expensive effort that enriches contractors, led by the French government-owned company Areva," Tom Clements of Friends of the Earth said at the launch of a report by an anti-nuclear alliance.

"In my opinion, it is primarily because of Areva's influence inside the Department of Energy that the US is pursuing a plutonium fuel program and it's because of Areva's influence that there's a push for the US to also reprocess commercial spent fuel to remove plutonium, like France does," he said.

According to Areva's website, the reprocessing plant will help the United States to fulfill an agreement struck in 2000 with former Cold War foe Russia, under which each country committed to eliminating 34 metric tons of surplus military plutonium by recycling it as fuel for civil nuclear applications.

After some delays, construction of the reprocessing plant in South Carolina began in August 2007, the report by the Alliance for Nuclear Accountability (ANA) says.

Once finished, the 600,000-square-foot facility will be able to turn 3.5 metric tons of weapons-grade plutonium into MOX fuel assemblies each year, and the facility will be licensed for 20 years and operate into the 2030s, Areva says.

The plant, on the Department of Energy's Savannah River site, is roughly one-third finished and three times over budget, with a price tag so far of \$4.9 billion dollars, Clements maintained.

But even as the nuclear disaster in Japan highlights the dangers of MOX fuel – which the ANA report says was used in one of the reactors at Japan's crippled Fukushima power plant – the US government is failing to rethink construction of the South Carolina facility, Clements told reporters.

"As plutonium leaks from the damaged reactors in Japan, the US Department of Energy (DoE) continues planning for the use of dangerous mixed-oxide fuel in US nuclear reactors of the same design as the Fukushima reactors in Japan," Clements said.

MOX fuel pellets "make reactors harder to control and, in the case of a severe accident, the radiation plutonium releases will be worse than uranium fuel," said Clements.

But Areva spokesman Jarret Adams told AFP there was "not a significant difference" between weapons-derived MOX fuel and MOX made from recycled nuclear fuel.

The latter is currently being used "in about 40 reactors in five different countries, and the performance of MOX fuel has been widely tested," Adams said.

He defended the US MOX fuel facility being built by Areva and Shaw as an "important project to help convert former weapons material into useable material for American power plants.

"It removes former weapons material from possible future use," Adams said.

Anti-nuclear activists would prefer encasing the plutonium left over from dismantled US nuclear weapons in glass, and then storing it as high-level waste.

That method, called vitrification, is "cheaper, quicker and safer" than converting plutonium into MOX fuel, says the report released Monday by ANA, a network of three dozen organizations.

Areva Executive Praises Nuclear Power, Urges Loan Guarantees (WSJ)

By Yuliya Chernova, Dow Jones Venturewire

[Wall Street Journal](#), April 5, 2011

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

A Nuclear Boondoggle (LVS)

Congress leaves taxpayers on the hook instead of using nuclear waste fund

[Las Vegas Sun](#), April 5, 2011

As Japan works to contain radiation at a nuclear power plant badly damaged by a massive earthquake and tsunami, American officials have been expressing concern about the safety of nuclear waste in the U.S.

Japanese officials have had problems containing radiation from spent fuel that is kept in cooling pools, which sit next to the reactors. The systems to cool the pools failed and explosions in the containment buildings left the pools open to the elements.

Nuclear industry officials say the best answer to prevent problems like this is to get the spent fuel away from the reactors, and they think they have an answer. The industry renewed its call to haul the nation's nuclear waste across country and stuff it in Yucca Mountain, a porous volcanic ridge 90 miles northwest of Las Vegas. As we have pointed out for years, the Yucca Mountain plan is faulty, dangerous and expensive.

And pushing ahead on Yucca Mountain wouldn't address the problem of waste in cooling pools. As long as nuclear plants are operating, they are bound to have spent fuel in those pools. When the spent fuel comes out of the reactor, it is so hot that it needs to sit in a cooling pool for at least five years before it cools enough to be moved.

Instead of pushing the foolish Yucca Mountain plan, the industry should be talking about interim storage methods that are used in many plants in the U.S. and around the world. Many plants take waste, once it is cool enough to move, and put it in huge concrete-and-steel containers known as dry casks. The casks are then safely placed in a secure site away from the reactor.

The troubled Japanese plant has waste sitting in dry casks and hasn't reported any problems with them. So why not make them standard here?

The U.S. nuclear industry has complained about dry cask storage because of the cost. A 2003 report by the Energy Department said it would cost up to \$7 billion to move all of the movable spent fuel then at U.S. nuclear reactors to dry casks. That is a fraction of the cost of the Yucca Mountain project, which has been estimated at \$100 billion.

As the investigative journalism site ProPublica.com reported recently, the federal government has \$24 billion set aside from utility ratepayer fees to pay for nuclear waste storage, but by law, it can't use it for anything other than Yucca Mountain. In 2007, Nevada's senators tried to change the law but their proposal went nowhere. The nuclear lobby is powerful in Congress, and the industry is determined to forge ahead with Yucca Mountain, despite the fact that President Barack Obama moved to shut it down.

In the meantime, many utilities have had to pay for dry cask storage out of their own pockets. Many have sued the federal government for failing to live up to its promise to take nuclear waste off their hands. There is more than \$6 billion of claims pending against the government, which has paid out nearly \$1 billion in claims and spent more than \$170 million defending itself. The claims, which officials say could total more than \$16 billion, and legal costs come out of the Treasury because of the restrictions on the nuclear waste money.

So, just so we're clear: Utility ratepayers are paying into a fund to store nuclear waste, but the government can't touch that money to pay for dry cask storage. And taxpayers are on the hook for billions of dollars because Congress won't change the law.

This is ridiculous.

Even the nuclear industry's supporters in Congress, many of whom claim to be fiscal conservatives, should see the folly in this. Lawmakers should end this nonsense and release the nuclear waste money to pay for dry cask storage.

Sweden Tries To Solve Nuclear Storage Issue (FT)

By Andrew Ward, Jonathan Soble, And Sylvia Pfeifer

Financial Times, April 5, 2011

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

INTERNATIONAL NUCLEAR NEWS

Japan Dumps Toxic Water, Seeks Russian Processing Ship (BLOOM)

By Tsuyoshi Inajima

Bloomberg News, April 5, 2011

Tokyo Electric Power Co. is pumping millions of gallons of radioactive water into the sea from its crippled Fukushima Dai-ichi station, and Japan has asked Russia to send a ship capable of processing nuclear waste.

The company known as Tepco will discharge 10,000 tons (2.6 million gallons) of water from a treatment building until 6 p.m. local time to make room to store fluids that are more highly contaminated, Hidehiko Nishiyama, Japan's main spokesman on nuclear safety, said today. Another 1,500 tons from pits outside two reactors will be drained over five days, he said.

"There was no choice but to take this step to prevent highly radioactive water from spreading into the sea," Chief Cabinet Secretary Yukio Edano said at a media briefing in Tokyo today. "The fact that radioactive water is being deliberately dumped into the sea is very regrettable, and one we are very sorry about."

High radiation levels have hindered efforts to restart cooling pumps that were knocked out 25 days ago after Japan was struck by its strongest earthquake on record and a tsunami, triggering the world's worst nuclear crisis since Chernobyl in 1986. Tepco shares slumped to the lowest in 60 years today.

The contaminated water is unlikely to harm the environment as it will be diluted in the sea, said Brendan Kennedy, a member of the Australian Institute of Nuclear Science and Engineering Inc. and a professor of chemistry at the University of Sydney.

"I don't think this dumping of the low-level waste that's going on now is any great environmental problem," Kennedy said on Bloomberg Television's "First Up" with Susan Li. "What they've got to not dump is more heavily radiated waste material," he said. "You don't want to release that into the ocean."

Japan's government asked Russia for help processing radioactive waste from the Fukushima Dai-ichi station, and is specifically interested in the Landysh facility, used to dismantle nuclear submarines, Sergei Novikov, a spokesman for Russia's state-run Rosatom Corp., said in Moscow yesterday.

Landysh is a radioactive waste treatment plant housed on a barge and was built with Japanese assistance, according to information on the website of The Nuclear Threat Initiative, a non-profit group that opposes atomic weapons proliferation.

Tepco plunged by the daily limit of 80 yen, or 18 percent to close at 362 yen on the Tokyo Stock Exchange, the lowest since its listing in August 1951. The stock has lost 83 percent since March 10, the day before the magnitude-9 earthquake, compared with a drop of 9 percent by the Topix index.

The cost of insuring Tepco debt jumped 27 basis points to 391 basis points, according to CMA prices for credit-default swaps. The contracts, which rise as perceptions of credit quality deteriorate, reached a record 447 basis points March 31.

"The news of the discharge of contaminated water was negatively received, while there is no sign" of the situation stabilizing," said Satoshi Yuzaki, Tokyo-based head of the market information department at Takagi Securities Co.

Tepco has delayed its full-year earnings report as it assesses the financial impact of the earthquake, the company said in a faxed statement today. The company, which was due to announce the results April 28, may do so sometime next month, Vice President Takashi Fujimoto said at a news conference.

The utility is considering seeking government assistance to compensate people affected by Japan's worst civilian nuclear accident, Fujimoto said in Tokyo today. Tepco is paying 20 million yen (\$237,135) each to 10 local governments, he said.

The United Nations nuclear watchdog said yesterday that the partial meltdown of some of the station's six reactors was the result of "errors" from the time the quake and tsunami knocked out pumps used to cool reactors and spent fuel.

"Such an accident should not have happened," Denis Flory, deputy director general of the International Atomic Energy Agency, said at a press briefing in Vienna. "Something was not done from the very beginning."

Tepco estimates there is about 60,000 tons of contaminated water in basements and in trenches outside reactors No. 1, 2 and 3, spokesman Takeo Iwamoto said today. Tepco plans to pump half of that to a waste treatment facility and the rest to a floating storage to be provided by Shizuoka city, he said.

The Fukushima Prefectural Federation of Fisheries Co-operative Associations has written to Tepco asking it to stop dumping radioactive water into the sea because it may damage their fishing ground forever.

The potential additional radiation dose to a person eating seaweed or seafood caught near the plant every day for a year would be 0.6 millisievert, the IAEA said in a statement. That compares to 0.85 millisievert from a year of exposure to granite that comprises the U.S. Capitol, according to the U.S. Army Corps of Engineers.

Radioactive iodine in seawater near the plant was 630 times the regulatory limit, Tepco said in a statement. The sample was taken 330 meters south of where the water was discharged.

The company released the information after being ordered by Japan's Nuclear and Industrial Safety Agency to reevaluate radiation data after publishing errors.

Tepco had also been struggling to stop contaminated water from reactor No. 2 from leaking into the ocean through a conduit used to draw in seawater. The company said today it plans to place a steel plate at the water intake.

The company first tried to plug a crack in a power-cable storage pit near the reactor by filling it with concrete on April 2, and subsequently attempted to clog it with a mix of sawdust, newspaper and absorbent polymer used in baby diapers.

The utility plans to build an undersea silt barrier to stop the leak of radioactive fluids and help contain toxic water within the conduit, Nishiyama, deputy director-general of Japan's Nuclear and Industrial Agency said yesterday.

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Japan Utility Dumps Radioactive Water Into Pacific To Ease Storage Woes (WP)

By David Nakamura

Washington Post, April 5, 2011

TOKYO — Tokyo Electric Power Co. began dumping water tainted with low levels of radioactivity into the Pacific Ocean on Monday night so that a central waste facility could be used to store more dangerously radioactive water, officials said.

The company, which operates the Fukushima Daiichi nuclear plant that was crippled in the March 11 earthquake-tsunami disaster, said it could release up to 11,500 tons of radioactive water into the sea. The water had collected in the waste facility and a drainage pit, officials said.

"We are causing trouble and inconvenience to the local people, but to have to force on them further hardship we are extremely sorry," said a Tepco official who spoke to reporters in Fukushima, trying to hold back tears.

A spokeswoman for Japan's Nuclear and Industrial Safety Agency said the less-contaminated water must be disposed of so that workers can secure a place to store more highly contaminated water on the site. Otherwise, there is a possibility of danger to emergency crews.

On Sunday, Japanese government officials said the Daiichi plant may continue to release dangerous radiation into the air for several months.

Japan Releases Low-Level Radioactive Water Into Ocean (NYT)

By Hiroko Tabuchi And Ken Belson

New York Times, April 5, 2011

TOKYO — The Tokyo Electric Power Company began dumping more than 11,000 tons of radioactive water from the Fukushima Daiichi nuclear plant into the Pacific Ocean on Monday, mostly to make room in storage containers for increasing amounts of far more contaminated runoff.

The water, most of it to be released over two days, contains about 100 times the legal limit of radiation, Tokyo Electric said. The more contaminated water has about 10,000 times the legal limit.

The effort would help workers clearing radioactive water from the turbine buildings at the damaged reactors, making it less dangerous to reach some of the most crucial controls for their cooling systems, which were knocked out by the 9.0-magnitude earthquake and tsunami that struck northeast Japan on March 11. The hopes are that the cooling systems can be revived and bring the plant back under control.

But the pumping effort is not expected to halt, or even alter, a gushing leak from a large crack in a six-foot-deep pit next to the seawater intake pipes near the No. 2 reactor. The leak, discovered Saturday, has been spewing an estimated seven tons of highly radioactive water an hour directly into the ocean; attempts to trace and plug it have so far failed.

Tokyo Electric, the plant's operator, has been pumping hundreds of tons of water into four of the plant's six reactors to cool nuclear fuel in the cores of three and in spent-fuel storage pools at those three and a fourth.

But leaks whose source is unclear — from the reactor containment units themselves or from pipes, valves or other connected units — have flooded areas of the plant, creating new complications in the effort to stave off full meltdowns of the fuel.

Workers have been pumping the runoff into storage tanks, most urgently the highly radioactive water flooding the turbine building of the No. 2 reactor. But the storage system is now full, and adding capacity will take time.

Tokyo Electric is rushing tanks to the plant, though they may not arrive until mid-April, a company spokesman said. The company also plans to moor a giant artificial island off the coast to store contaminated water, though getting the island in place will take at least a week, he said.

Tokyo Electric said it would dump about 4,800 tons of water a day for two days. An additional 1,500 tons will also be released from the No. 5 and No. 6 reactors, after runoff was found flooding parts of their turbine buildings.

The concern there is that the water could damage the backup diesel generators for the reactors' cooling systems, said Yukio Edano, the chief cabinet secretary. That water will be released 300 tons at a time over five days.

"Unfortunately, the water contains a certain amount of radiation," Mr. Edano said. "This is an unavoidable measure to prevent even higher amounts of radiation from reaching the sea."

Mr. Edano said he had ordered the company to monitor the effects of radioactive materials in the water on sea life. Consuming seafood caught in the area every day for a year would result in the intake of about 0.6 millisieverts of radiation, or about a quarter of the average annual exposure to radiation in Japan, a company spokesman said at a news conference.

But the Japanese government has said it could take months to stem the release of radioactive material from the plant, and marine biologists expressed concern.

"We're seeing the levels of radioactive materials in the water increase, which means this problem is going to continue to get worse and worse," said Kenya Mizuguchi, emeritus professor of maritime science and technology at Tokyo University.

Elements like cesium 137, which has a half-life of 30 years, collect in larger fish as they consume smaller fish, which means the problem may grow over time.

Iodine 131 and other elements that have far shorter half-lives are not as dangerous because it can take weeks for fish to make it to supermarkets and restaurants, according to Hiroki Otani, who teaches in the health and welfare department at Tokyo Metropolitan University.

But Mr. Otani said the government needed to share more data on the impact on shellfish and different types of seaweed that do not move around the ocean.

Mixing radioactive water with uncontaminated seawater can lead to a rapid decrease in radiation levels, according to an analysis by the International Atomic Energy Agency on Friday.

The agency, citing samples taken by the Japanese authorities on March 24 and 27, said radiation levels in the water about 19 miles offshore from the nuclear plant were only about one-thousandth the level closer in, at about 360 yards from the shore. Nevertheless, the level of radiation at 19 miles offshore was still hundreds to thousands of times as high as levels sampled in the same site in 2005.

The agency said in a different analysis that the short-term concern from radioactive water would be iodine 131, owing to "possible enrichment in the marine food chain."

Seafood businesses are being hurt. The price for some fish like inada, or young yellowtail, has fallen by half or more in recent days, according to Seizaburo Tsuruoka, deputy chief of the Isumi-East Fisheries Cooperatives in Chiba Prefecture, south of Fukushima.

Mr. Tsuruoka said his fishermen tested their fish and had not found that they were radioactive. He added that the ocean current was traveling from south to north this season. He worries, though, what will happen when the tide reverses in autumn.

"While the government says, 'Don't worry,' the company says it will release water from the plant," Mr. Tsuruoka said. "I'm sure the general public feels very uncomfortable, and we get hurt."

To try to prevent radioactive silt from drifting deeper into the ocean, Tokyo Electric intends to drape a curtain in the waters off the plant, Reuters reported, quoting Hidehiko Nishiyama, deputy director general of Japan's Nuclear and Industrial Safety Agency.

In Vienna on Monday, Japan's crisis was a major focus as the International Atomic Energy Agency began a 10-day gathering of representatives of dozens of countries on nuclear safety.

Japan Plant Pumps Radioactive Water Into Ocean (USAT)

By Oren Dorell, Usa Today

USA Today, April 5, 2011

Nuclear plant operators in Japan began pumping 3 million gallons of low-level radioactive water into the Pacific Ocean to free up room within their plant to store more highly contaminated water. That immediately raised fears that radiation could impact faraway fisheries.

"As the current moves that material across the Pacific, how many other fisheries are going to be damaged?" asked Damon Moglen, director of the climate and energy program of the conservation group Friends of the Earth.

Others say the danger will not be great if the discharge doesn't last long.

Concentrations of radioactive iodine and cesium at the point of discharge from the Fukushima Nuclear Power Station "are very, very, very high, but they get diluted quickly as they enter the ocean," said Kathryn Higley, an expert on how radioactive material moves through the environment at Oregon State University's Department of Nuclear Engineering. "Dilution is really going to minimize that impact."

After the magnitude-9.0 earthquake and subsequent tsunami on March 11 knocked out the plant's cooling pumps and backup diesel generators, Japanese authorities have dumped water from helicopters and fire hoses into spent-fuel pools and reactor cores to keep them from overheating. That water has accumulated in underground pits and passageways.

Tokyo Electric Power Co. (TEPCO) said Monday that it began pumping 11,500 tons of low-level radioactive water from pits and basements under the power plant. The procedure will make room for high-level radioactive water from the turbine building of Unit 2, the company said in a statement.

Water is also "piling up" in drain pits and running into buildings where it could submerge equipment needed to maintain the power plant, TEPCO said.

The company estimates that if someone eats seafood from around Fukushima every day for a year, he or she would receive 25% more radiation than normal.

That doesn't calm Moglen.

"This is an historic nuclear dumping" and a threat to the food chain, he said.

Radiation builds up over time in organisms such as seaweed, clams and mussels that filter radioactive particles out of contaminated water. As those animals are eaten by others, the radiation can be passed on to humans, Moglen said.

David Lochbaum, director of the nuclear safety program at the Union of Concerned Scientists, said the emergency at the Fukushima plant doesn't allow for an ideal treatment of contaminants.

"One of the problems is they don't have enough tanks on site" to store the contaminated water, Lochbaum said. "If they had to wait to get tanks there, it would be too late."

Some aquatic life could be affected nearby, but most of the water is "going to be diluted by a large ocean," he said.

Alaskan and Hawaiian fisheries are not going to be affected, Lochbaum said.

"At the moment, they're going to be able to confine this to a regional disaster and not a global disaster," he said.

Jon Johnson, a former executive at the Nuclear Regulatory Commission, said the more pressing issue is to treat the water that is much more radioactive.

That water will likely be processed through a series of resin and charcoal filters, which remove radioactive particles and salts, Johnson said.

Japan Nuke Plant Dumps Radioactive Water Into Sea (AP)

By Mari Yamaguchi And Yuri Kageyama, Associated Press

Associated Press, April 5, 2011

TOKYO – Workers began pumping more than 3 million gallons of contaminated water from Japan's tsunami-ravaged nuclear plant into the Pacific Ocean on Monday, freeing storage space for even more highly radioactive water that has hampered efforts to stabilize the reactors.

It will take about two days to pump most of the less-radioactive water out of the Fukushima Dai-ichi nuclear complex, whose cooling systems were knocked out by the magnitude-9.0 earthquake and tsunami on March 11.

Radioactivity is quickly diluted in the ocean, and government officials said the dump should not affect the safety of seafood in the area.

Since the disaster, water with different levels of radioactivity has been pooling throughout the plant. People who live within 12 miles (20 kilometers) have been evacuated and have not been allowed to return.

The pooling water has damaged systems and the radiation hazard has prevented workers from getting close enough to power up cooling systems needed to stabilize dangerously vulnerable fuel rods.

On Saturday, they discovered that some radioactive water was pouring into the ocean.

The less-radioactive water that officials are purposely dumping into the sea is up to 500 times the legal limit for radiation.

"We think releasing water with low levels of radiation is preferable to allowing water with high levels of radiation to be released into the environment," said Junichi Matsumoto, an official with plant operator Tokyo Electric Power Co.

Workers need to get rid of the highly radioactive water, but first they need somewhere safe to put it. Much of the less-radioactive water being dumped into the sea is from the tsunami and had accumulated in a nuclear waste storage building.

The building is not meant to hold water, but it's also not leaking, so engineers decided to empty it so they can pump in the more-radioactive water. The rest of the water going into the sea is coming from a trench beneath two of the plant's six reactors.

More water keeps pooling because TEPCO has been forced to rely on makeshift methods of bringing down temperatures and pressure by pumping water into the reactors and allowing it to gush out wherever it can. It is a messy process, but it is preventing a full meltdown of the fuel rods that would release even more radioactivity into the environment.

"We must keep putting water into the reactors to cool to prevent further fuel damage, even though we know that there is a side effect, which is the leakage," said Hidehiko Nishiyama, a spokesman for Japan's Nuclear Safety and Industrial Agency. "We want to get rid of the stagnant water and decontaminate the place so that we can return to our primary task to restore the sustainable cooling capacity as quickly as possible."

Engineers have been using unusual methods to try to stop the more highly radioactive water leaking into the sea.

They thought it was coming from a crack in a maintenance pit they discovered Saturday, but an attempt to seal the crack with concrete failed, and clogging it with a special polymer mixed with sawdust and shredded newspapers didn't work, either.

They dumped milky white bath salts into the system around the pit Monday to try to figure out the source of the leak, but it never splashed out into the ocean.

In the meantime, workers plan to install screens made of polyester fabric to try to stop some of the contamination in the ocean from spreading.

Although the government eventually authorized the dumping of the less-radioactive water, Chief Cabinet Secretary Yukio Edano said officials were growing concerned about the sheer volume of radioactive materials spilling into the Pacific. It is not clear how much water has leaked in addition to what is being dumped purposely.

"Even if they say the contamination will be diluted in the ocean, the longer this continues, the more radioactive particles will be released and the greater the impact on the ocean," Edano said. "We are strongly urging TEPCO that they have to take immediate action to deal with this."

Experts said Monday that at this point, they don't expect the discharges to pose widespread danger to sea animals or people who might eat them.

"It's a very large ocean" with considerable powers of dilution, noted William Burnett of Florida State University.

Very close to the nuclear plant — less than half a mile (800 meters) or so — sea creatures might be in danger of problems like genetic mutations if the dumping goes on a long time, he said. But there shouldn't be any serious hazard farther away "unless this escalates into something much, much larger than it has so far," he said.

Also Monday, a spokesman for the Russian nuclear agency Rosatom, Sergei Novikov, told reporters that Japan has requested Russia send it a vessel used to decommission nuclear submarines, and that Moscow was considering the request.

"If the Japanese side arranges answers to the questions we sent them, it can be transferred ... within a very short period," Novikov said, according to a statement on Rosatom's website. The nature of the questions wasn't specified.

Novikov said the vessel, called the Landysh, was built with Japanese funds under the "Global Partnership" program to help dispose of liquid nuclear waste from decommissioned submarines.

The crisis has unfolded as Japan deals with the aftermath of twin natural disasters that devastated much of its northeastern coast. Up to 25,000 people are believed to have died and tens of thousands lost their homes.

The situation at the Fukushima plant has brought protests in Japan and raised questions around the world about the safety of nuclear power. Yukiya Amano, the head of the International Atomic Energy Agency, told delegates at a nuclear safety conference Monday that the industry cannot afford to ignore these concerns.

"We cannot take a business-as-usual approach," Amano said.

General Electric CEO Jeff Immelt, who was in Tokyo this week to meet with TEPCO's chairman, defended the industry when asked by a reporter if the Fukushima incident would cause global concern about nuclear safety.

"This is an industry that's had an extremely safe track record for more than 40 years," Immelt said. "We have had more than 1,000 engineers working around the clock since the incident began and we will continue in the short, medium and long term working with TEPCO due to this horrific natural disaster."

All of the plant's reactors were designed by GE, and Immelt offered assistance in dealing with the electricity shortage brought on by damage to the Fukushima Dai-ichi facility and other power plants. Japan is expecting a shortfall of at least 10 million kilowatts in summer, and Immelt said gas turbines with both short- and long-term capabilities are on their way from the U.S.

Associated Press writers Ryan Nakashima and Noriko Kitano in Tokyo and Jim Heintz in Moscow and science writer Malcolm Ritter in New York contributed to this report.

Japan Utility Dumps Radioactive Water (WSJ)

Plant Operator Hopes Release of Low-Level Radiation Into Sea Can Blunt Threat

By Mitsuru Obe

Wall Street Journal, April 5, 2011

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

Japan Earthquake: Radiation Tests In Fukushima Schools (BBC)

Officials in the Fukushima region of Japan have started an emergency programme to measure radiation levels in school playgrounds.

BBC News, April 5, 2011

More than 1,400 schools and nurseries will be tested over two days amid anxiety among parents over leaks at the Fukushima Daiichi nuclear plant.

The plant was crippled by last month's earthquake and tsunami.

Officials say there should be no risk to children if they keep outside a 30km (19mile) exclusion zone.

Meanwhile, workers at the nuclear plant are continuing to discharge water with low levels of contamination into the sea to free up room to store more highly radioactive water leaking at the site.

They have been pumping water into reactors to cool fuel rods after the quake knocked out cooling systems but must now deal with waste water pooling in and below damaged reactor buildings. 'Another burden'

Discharge work began late on Monday, with about 11,500 tonnes of water to be released in all.

Managing water is priority

"Even though it was an inevitable step to prevent contaminated water with higher levels [of radiation] from flowing into the sea, the fact that we had to intentionally release water contaminated with radioactive substances is very regrettable and we are very sorry," said top government spokesman Yukio Edano.

Officials have said that the water being released does not pose a threat to human health.

But at a news conference, an official from the plant operator Tepco (Tokyo Electric Power Company) appeared close to tears as he apologised for imposing "another burden" on local residents.

Once the water is discharged, highly radioactive water leaking from the No 2 reactor can be contained in waste storage buildings.

Efforts to stem the leak in a concrete pit at the No 2 reactor with a polymer mix are continuing.

"We tried pouring sawdust, newspaper and concrete mixtures into the side of the pit, but the mixture does not seem to be entering the cracks," said Hidehiko Nishiyama of Japan's Nuclear and Industrial Safety Agency (Nisa).

Tepco said seawater samples taken on 2 April close to the sluice gate of the No 2 reactor contained 7.5 million times the legal limit for radioactive iodine.

It said that the figure had dropped to 5 million by 4 April and that measurements several hundred metres further offshore had fallen to about 1,000 times the legal limit, the Associated Press news agency reported.

Russia says Japan has asked it to send a radiation treatment ship used to dispose of liquid nuclear waste from decommissioned submarines.

The ship, called Suzuran, treats radioactive liquid and stores it. Russia was considering the request, a spokesman for its nuclear agency said. Compensation

Farm Minister Michihiko Kano says he will increase inspections of marine products because of the leaks, focusing on areas to the south of the nuclear plant.

Elevated levels of radioactive iodine had been found in young launce (a small fish) caught off the coast of Ibaraki prefecture south of Fukushima, Kyodo news agency reported, citing the health ministry.

Levels of 4,080 becquerels per kg had been detected, the ministry said. The limit for vegetables is 2,000 becquerels per kg - officials said there was no fixed limit for fish but they planned to set one.

Tepco, meanwhile, says it will begin paying money to residents and farmers who live and work around the plant by the end of this month.

Some 80,000 residents have had to evacuate, while restrictions on sales have hit farmers.

Tepco has already begun paying money to local governments to help evacuees from the plant exclusion zone.

On Tuesday, shares in the power giant hit a record low of 362 yen (£2.65) amid concern over the Fukushima plant.

Across Japan, more than 161,000 people from quake-ravaged areas are living in evacuation centres, officials say.

The official death toll from the 9.0-magnitude earthquake and tsunami which struck on 11 March stands at 12,344, with more than 15,000 people still unaccounted for.

More than 80% of the victims have been identified and their bodies returned to their families.

Japan Asks Russia For Help In Disposing Radioactive Water (CHOSUN)

Chosun Ilbo, April 5, 2011

Japan has asked Russia to send a special radiation treatment vessel to help dispose of contaminated water from a Japanese nuclear power plant crippled by last month's massive earthquake and tsunami.

A spokesman for Russia's state-controlled nuclear agency, Rosatom, said Monday Russian officials are considering the request.

The Russian vessel treats radioactive liquids as part of the decommissioning of nuclear submarines. It was built in a joint venture between Russia and Japan.

Also Monday, operators of Japan's crippled Fukushima plant began releasing more than 10,000 tons of contaminated water into the ocean to make room in their storage tanks for water even more radioactive, marking the latest effort to bring overheating reactors at the plant under control.

Chief Cabinet Secretary Yukio Edano said the step is "unavoidable" to ensure safety. He said the water to be released is much less radioactive than the water that will be pumped into the storage tanks, mainly from the Fukushima plant's No. 2 reactor.

Officials have recorded levels of radioactivity thousands of times higher than the legal limit in waters near the Fukushima plant, where cooling systems for all six reactors were knocked out by a massive earthquake and tsunami on March 11. Repair crews have identified the probable cause for the leak as a crack in a storage pit near the No. 2 reactor.

Repeated efforts have failed to stop the leak. The Tokyo Electric Power Company tried Sunday to seal the crack in the pit with a mixture of sawdust, shredded newspaper and a plastic polymer that is supposed to expand to several times its size when it hardens. However, there was no noticeable reduction in the radiation level in the ocean.

On Monday, TEPCO began pouring a liquid dye into the water in hopes of tracing the leak. Officials said they will try again to cut off the flow once they determine its path.

The top UN atomic energy official said Monday the ongoing disaster at the Fukushima plant has led to global concerns about the safety of nuclear energy. Yukiya Amano said maintaining robust safety standards and transparency are crucial to restoring confidence in the sector.

General Electric's Chief Executive Officer Jeffrey Immelt, whose company designed the Fukushima plant, said Monday that 1,000 engineers from GE and its partner, Hitachi, are working to help mitigate the disaster.

The nuclear crisis has distracted attention from the enormous job of helping survivors from the March 11 quake and tsunami, which washed away whole towns and villages along Japan's northeastern coast. More than 12,100 people have been confirmed dead and more than 15,400 are reported as missing.

Almost 160,000 people are living in temporary shelters.

VOA News / Apr. 05, 2011 07:41 KST

S.Korea Tells Japan Of Ocean Radiation Fears: Report (STRAITS)

Straits Times, April 5, 2011

SEOUL - SOUTH Korea has expressed concern to Japan about its pumping of radioactive water into the ocean to help stabilise a crippled nuclear plant, a report said on Tuesday.

Japan on Monday started to dump more than 10,000 tons of low-level radioactive water into the Pacific to make space for run-off from water used to douse overheating fuel rods at its Fukushima plant.

A massive earthquake and tsunami on March 11 shut down cooling systems at Fukushima, causing fuel rods to overheat dangerously.

Seoul's embassy in Tokyo on Monday conveyed concern that the dumping of radioactive water might be in breach of international laws, Yonhap news agency quoted unidentified South Korean foreign ministry officials as saying.

'It's the proximity between the two countries that makes Japan's release of radioactive water a pressing issue for us,' one official was quoted as saying. A foreign ministry spokesman declined to comment on the report.

'For now, we have no clear standards to determine how much is how bad for us,' another foreign ministry official told Yonhap. 'We're working with scientific and legal experts to come up with a clear guideline.' – AFP

Water Barriers Mulled (Belatedly) At Leaking Nuclear Complex (NYT)

"DOT Earth" blog

By Andrew C. Revkin

New York Times, April 5, 2011

As I read reports about the release of more than 11,000 tons of radiation-laced water into the sea from the damaged nuclear plant in Japan, I recalled reporting I did more than a decade ago on the many uses of silt barriers — essentially curtains suspended in water — to hold back everything from oil slicks to the bursts of polluted runoff flowing into coastal waters from city storm drains after heavy storms (the water can be pumped and treated once the system is not overloaded).

Here's a diagram from the company Gunderboom that shows how such curtains work:

I asked Andy McCusker, vice president for technical services for the company, about whether the basic situation at the Fukushima plant complex appeared tractable using this well established technology. You can read his thoughts below.

As it turns out, officials at the Tokyo Electric Power Company — three weeks into the emergency at Fukushima — have just started considering deploying such devices, according to a government official quoted in the Mainichi Daily News:

While efforts are continuing to track down the water flow, the company known as TEPCO is considering installing "silt fence" barriers in areas where radioactive water is suspected to be flowing into the sea, Hidehiko Nishiyama, a spokesman for the government's nuclear safety agency told a press conference in the morning.

"We would like to set up these fences as soon as possible," he said, before adding that it would likely take "several days" to complete the work.

In a telephone interview, I asked McCusker of Gunderboom whether this kind of incident seemed to call out for the floating curtains. He said the barriers can be set up for a variety of contaminants and have been used in areas with strong currents and tides.

He deferred from judging the specific situation without more information, but said: "If they're releasing a finite amount of water, with a little more detail I would tell you this is something that could be done to reduce the spread substantially."

It's a mystery to me why this option wasn't considered as soon as initial readings of ocean contamination were picked up — at the very least to alleviate public concern, even if the levels are very low. This is not rocket science.

Govt Holding Radiation Data Back (YOMIURI)

IAEA gets info, but public doesn't

Yomiuri Shimbun, April 5, 2011

The Meteorological Agency has been withholding forecasts on dispersal of radioactive substances from the Fukushima No. 1 nuclear power plant despite making the forecasts every day, it was learned Monday.

Meteorological institutions in some European countries such as Germany and Norway have been publishing their own radiation dispersal forecasts on their Web sites based on their own meteorological observations.

Nuclear experts at home and abroad are criticizing the Japanese government for not releasing its own forecasts, raising new questions about the government's handling of information on the nuclear crisis.

The agency is making daily forecasts at the request of the International Atomic Energy Agency. When contamination by radioactive substances across national borders is feared, weather organizations of the member nations cooperate to make forecasts on possible migration of the substances.

The Meteorological Agency has been calculating its forecasts on the migration once or twice every day since March 11, when the great earthquake hit the Tohoku and Kanto regions.

The agency inputs observation data sent from the IAEA—such as the time when radioactive substances are first released, the duration of the release and how high the substances reach—into the agency's supercomputer, adding the agency's observation data, including wind directions and other data. The supercomputer then calculates the direction in which the radioactive substances will go and how much they will spread.

However, the agency has only been reporting the forecasts to the IAEA and not releasing them to the public at home.

The IAEA analyzes the data from Japan by adding observation data from other countries it similarly asked for cooperation, such as China and Russia, and notifies nuclear authorities of countries, including Japan, of the results.

Whether to announce the IAEA analysis is left to each government's judgment. The Japanese government's Nuclear Emergency Response Headquarters has so far not released the IAEA analysis.

"Japan has its own Education, Culture, Sports, Science and Technology Ministry- operated System for Prediction of Environmental Emergency Dose Information (SPEEDI) for dispersal forecasts. The government in its Basic Disaster Management Plan defines forecasts by SPEEDI as official forecasts," a Meteorological Agency official explained.

"We don't know whether the IAEA basic data the agency uses for the forecasts really fit the actual situation. If the government releases two different sets of data, it may cause disorder in the society."

However, the SPEEDI forecast was announced only once, on March 23. The Nuclear Safety Commission has been refusing to announce subsequent forecasts. "We can't do it because the accuracy is still low," Seiji Shiroya, a commission member said.

(Apr. 5, 2011)

Greenpeace Widens Tests Near Japan Nuclear Plant (AFP)

AFP, April 5, 2011

TOKYO (AFP) – Greenpeace on Monday widened its radiation tests near Japan's stricken nuclear plant to also include checks of milk and vegetables, the environmental watchdog said in a statement.

A Greenpeace field team charged with food testing would join another group near the Fukushima Daiichi nuclear plant surveying surface contamination, according to the statement.

"The official response to the radiation risk continues to be sporadic and contradictory, leaving local populations confused and at risk," Greenpeace radiation expert Rianne Teule said in the statement.

"We hope to be able to provide independent analysis and clear advice to (affected) populations."

The Fukushima plant was hit by a massive quake and tsunami on March 11 that knocked out its cooling systems, threatening a meltdown in four of its six reactors.

In the more than three weeks that have passed since then, the plant has leaked radiation, triggering fears about the health consequences for locals and the impact on food produced in the vicinity of the plant.

Greenpeace last week urged the Japanese government to evacuate inhabitants of a village 40 kilometers (25 miles) from the plant.

Siemens' Business Surges In Iran (WSJ)

Company Weighs Its Contracts Against Risks of Working in a Sanctioned State

By David Crawford And Vanessa Fuhrmans

Wall Street Journal, April 5, 2011

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

Utilities: Germany Now Imports Energy After Taking Nuclear Power Plants Off The Grid (AP)

Associated Press, April 5, 2011

BERLIN — Chancellor Angela Merkel's decision to take some atomic power plants offline in the wake of Japan's Fukushima disaster means Germany is now importing power from its nuclear-reliant neighbors, an umbrella organization of the country's utility companies said Monday.

Germany now imports about 50 gigawatt hours — or the capacity equivalent of about 1 1/2 reactors — from France and the Czech Republic a day, the German Association of Energy and Water Industries said.

Electricity imports from France — which relies on nuclear energy for almost 80 percent of its power supply — doubled from the first to the second half of March, the group said. Exports to the Netherlands and Switzerland, in turn, almost entirely ceased.

Merkel's government announced the shut down of nuclear power plants built before 1980 — seven of the country's 17 reactors — only four days after Japan's March 11 earthquake and tsunami hit the Fukushima Dai-Chi nuclear facility.

Germany is normally a net exporter of energy, but nine of the country's 17 reactors were offline at the end of March due to the closures and maintenance.

Nuclear power has been very unpopular in Germany ever since radioactivity from the 1986 Chernobyl disaster drifted across the country. Germany has decided to phase out the technology over the next 25 years, gradually supplanting atomic energy with other sources.

Merkel has emphasized that shuttering Germany's reactors must be timed so that the country doesn't simply end up importing nuclear power from its neighbors, where safety standards might not be better. She has also said moving away from nuclear energy must not lead to an increase of Germany's carbon emissions.

On Monday, the chancellor said in the wake of the changes implemented after Fukushima, a new comprehensive road map for Germany's energy future without nuclear power "toward the era of renewable energies" will be finished by mid-June. She said it would also address the issues of how to meet Germany's ambitious "climate targets and the import of electricity."

ENTSO-E, the Brussels-based group overseeing Europe's electricity grid and tracking cross-border flows, confirmed that Germany turned from exporting to importing electricity toward the end of March.

"From our preliminary data, we can deduct an average net import of electricity between March 19 and April 3 of about 1.8 gigawatt during any one hour, which implies an average import per day of 43 gigawatt hours," said ENTO-E's secretary general, Konstantin Staschus.

Environment Ministry spokeswoman Christiane Schwarte, however, said the country is still self-sufficient even without the seven nuclear power plants, and the imports only reflect normal fluctuation within the European grid system.

Germany currently gets some 23 percent of its electricity from nuclear power, 17 percent of from renewable energies, 13 percent from natural gas and more than 40 percent from coal.

The Environment Ministry maintains that in 10 years renewable energy will contribute 40 percent of the country's overall electricity production.

A center-left government a decade ago penned a plan to abandon the technology for good by 2021, but Merkel's government last year amended it to extend the plants' lifetime by an average of 12 years. The government has now performed a U-turn and put that plan on hold in the wake of Japan's nuclear crisis.

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Germany To Phase Out Nuclear Power-deputy Minister (REU)

Reuters, April 5, 2011

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Analysis: German Nuclear U-turn Means Jump In Emissions (REU)

By Henning Gloystein and Jackie Cowhig

Reuters, April 5, 2011

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

Greenpeace Says Chernobyl Contamination Of Ukraine's Food Persists In Milk, Berries, Potatoes (WP/AP)

Associated Press, April 5, 2011

KIEV, Ukraine — Greenpeace said Monday that hundreds of thousands of Ukrainians are still eating food contaminated by radiation from the Chernobyl nuclear power plant explosion a quarter-century after the blast.

In a report, the environmental group said samples of milk, berries, potatoes and root vegetables in two Ukrainian regions show unacceptably high levels of the radioactive isotope cesium-137 from the 1986 blast. The regions are in northwestern Ukraine, outside the so-called "exclusion zone" around the plant, where residency is generally prohibited.

Greenpeace researcher Iryna Labunska criticized the government for halting counter-radiation measures in the regions two years ago. Those measures included supplying uncontaminated hay for dairy cattle.

Ukrainian government officials were not immediately available for comment.

A reactor at the plant exploded on April 26, 1986, spewing a cloud of radiation over much of the Northern Hemisphere. A zone of about 30-kilometer (19-mile) radius around the plant was declared uninhabitable, although some plant workers still live there for short periods and a few hundred other people have returned despite government encouragement to stay away.

The samples cited by Greenpeace were taken in the Rivne and Zhitomir regions, which were in the direct path of the radiation cloud.

In one village in the Rivne region, milk samples showed radioactive contamination up to 16 times higher than the accepted norms, Greenpeace said. Mushroom and berry samples showed radiation levels four times as high as acceptable.

The report said that although most of the milk is consumed in the region where it's produced, the berries and mushrooms presented a wider danger because they could be sold at poorly supervised markets throughout the country.

Kazakhstan To Hold Uranium Output Level In 2013 After Slowdown (BLOOM)

By Nariman Gizitdinov

Bloomberg News, April 5, 2011

Kazakhstan, the biggest producer of uranium, expects to maintain output in 2013 at a minimum level of 20,000 metric tons even as growth slows from recent years.

"We grew sharply in the last two-three years and will have a planned slowdown in output this year, going toward a plateau gradually," Vladimir Shkolnik, chief executive officer of state-run Kazatomprom, said in Almaty today. "Whether we will sign new contracts to boost output will depend on the market."

Kazakhstan plans to increase production of the nuclear fuel by about 2 percent in 2012 to almost 20,000 tons, compared with 10 percent growth this year, Kazatomprom said last month. Output will increase to 27,000 tons to 28,000 tons by 2020, it said.

Countries including China, Germany and the U.S. reviewed atomic energy plans after the nuclear emergency at a power plant in Fukushima, Japan, the world's worst since Chernobyl, Ukraine, in 1986. The disaster spurred speculation building of nuclear generating capacity may slow, and with it demand for uranium.

Long-term expansion of Kazakhstan's uranium output may be affected by the Japan crisis, Industry and New Technologies Deputy Minister Duisenbai Turganov said today in Astana. The ministry has drafted a bill seeking "to regulate uranium output," he said in an interview, without elaborating.

"We are ready to implement any government order, whether it will be a restriction of output or an increase," Shkolnik said, adding Kazatomprom doesn't plan to sell debt.

Kazakhstan has 15 percent of the world's uranium reserves, the largest after the 23 percent estimated to be in Australia, according to the World Nuclear Association's website.

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Iran Presses Rival Saudi Arabia Over Gulf's Unrest (AP)

By Ali Akbar Dareini, Associated Press

Associated Press, April 5, 2011

TEHRAN, Iran — Iran's President Mahmoud Ahmadinejad called on regional rival Saudi Arabia to pull its troops out of Bahrain, where they are helping a Sunni monarchy put down a Shiite-led protest movement demanding equal rights and a political voice.

Since the wave of Arab unrest hit Bahrain nearly two months ago it has reverberated well beyond the tiny island nation's borders. Its sectarian element — a key difference from other Mideast uprisings — quickly pit Sunni Arab nations on their side of the Gulf against Shiite power Iran.

"The Saudis did an ugly thing to deploy troops ... the Bahraini government also did an ugly work to kill its own people," Ahmadinejad said at a press conference in Tehran.

A day earlier, it was the Gulf Arab nations' turn. Their political bloc, the Gulf Cooperation Council, condemned what it said was an Iranian attempt to aggravate sectarian tension in Bahrain.

The Gulf bloc, at an emergency meeting in the Saudi capital, expressed its deep concern "over the continuing Iranian intervention in the internal matters of GCC countries by conspiring against their national security."

The acrimony goes back well before the outbreak of serious unrest in Bahrain, all the way back to the 1979 revolution that brought Shiite clerical rule to Iran. Since then, Gulf Arab nations have feared Iran was seeking to stir up dissent among pockets of Shiites in their countries and have watched warily as it built up its military and pushed ahead with its nuclear program.

Sunday's GCC meeting also discussed an alleged Iranian spy network in Kuwait.

But it is in Bahrain that the issue has been the most dramatic in recent years. The kingdom's population is mostly Shiite although it has been ruled by a Sunni dynasty for two centuries. For several years, Shiites have protested discrimination and a government policy to naturalize Sunnis from other nations to try to offset the demographic imbalance.

The anger periodically exploded into street clashes in which Shiite youths hurled stones and fire bombs at police.

Then in February, taking inspiration from uprisings in Egypt and Tunisia, Bahrain's Shiite-dominated political opposition took to the streets in numbers never seen before in the country, occupying a central square. A government crackdown killed at least 27 people, and authorities say they see Iran's influence among the opposition, though there are no apparent direct links.

Unable to immediately contain the unrest, Bahrain's rulers declared a state of emergency and invited in a Saudi-led regional military force to help.

Saudi Arabia has urged Bahrain's rulers not to give ground, fearing that would embolden the Shiite minority clustered in its eastern oil-producing region, which lies just across a causeway from Bahrain.

Ahmadinejad brushed aside the GCC statement.

"We attach no legal value to this statement. It's evident that this statement was made under pressure from the U.S. and its allies," Ahmadinejad said.

Iran insists the Shiite-led opposition protests in Bahrain do not stem from a sectarian dispute but are an uprising against tyranny.

The U.S. has pressed its allies in Bahrain, home to the U.S. Navy's 5th Fleet, to meet some of the protest movement's demands for reforms. The opposition has appealed to the United States for stronger intervention to stop the crackdown.

Ahmadinejad also attacked the U.S. in his remarks to reporters, saying President Barack Obama's time in office has been disgraceful.

"I promise with certainty that the American administration today is more disgraceful than the previous administration. The U.S. and its plans are doomed to fail," he said.