
From: RST15 Hoc
Sent: Monday, April 04, 2011 4:34 PM
To: RST07 Hoc; RST08 Hoc; RST09 Hoc
Subject: Spent Fule Pool Analysis

Chuck,

There are five papers/opinions/editions/marked up copies of the RST Assessemnt of the Spent Fule Pools that have to be consolidated:

04-02 1500 Draft RST Assessment ... Draft.docx
04-02 Japan SFP Structural Team Report.docx
4-4-2011 1400 RST Assessment ... Document Rev 0.docx
4-4-2011 Q277 ... GEH Markup.docx
Kent Wood Support ... Criticality Potential.msg

Peter
(Sometime) RST Coordinator

HHHHH/109

From: [Google Alerts](#)
To: [Hayden, Elizabeth](#)
Subject: Google Alert - Nuclear Regulatory Commission
Date: Tuesday, April 19, 2011 9:41:17 PM

News

2 new results for Nuclear Regulatory Commission

[How a federal court battle in Vermont could recast **nuclear** power](#)

Christian Science Monitor

Some question whether federal oversight is adequate, since the **Nuclear Regulatory Commission (NRC)** granted a new federal license to the plant – over Vermont's protests – even as the Fukushima crisis was unfolding. "**NRC** violated the law by re-licensing ...

[See all stories on this topic »](#)



[Christian Science Monitor](#)

[Beyond Nuclear Petitions US **NRC** for Suspension of 21 Atomic Reactor Licenses](#)

...

eNews Park Forest

TAKOMA PARK, MD--(ENEWSPF)--April 19 - Today the US **Nuclear Regulatory Commission (NRC)** docketed an emergency enforcement petition filed by the environmental watchdog group Beyond Nuclear. Beyond Nuclear's petition calls for the suspension of operating ...

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+++++/110

Quayle, Lisa

From: Stahl, Eric
Sent: Monday, April 04, 2011 6:15 PM
To: 'angelovba@state.gov'; 'basallasi@state.gov'; 'fullermg@state.gov'
Cc: 'thurrr@state.gov'; Emche, Danielle; Casto, Chuck; Collins, Elmo
Subject: Fukushima Status Table Update - 5 April 2011
Attachments: Fukushima Daiichi Status Table - 05 April 2011.docx

Please find the status table for the Fukushima Daiichi NPP attached. The changes are identified in red font.

Thanks,
Eric

Eric Stahl
U.S. Nuclear Regulatory Commission
Office of International Programs
+1-202-285-6128

11/11/11

Status of Fukushima Daiichi Nuclear Power Station – Units 1 – 6

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Reactor Vessel	Intact	Leaking; depressurized	Leaking; depressurized	N/A	Intact	Intact
Shutdown	Yes	Yes	Yes	Defueled	Core in Vessel	Core in Vessel
Primary Containment	Likely leaking	Likely breached	May be breached	Stable	Stable	Stable
Cooling	Freshwater	Freshwater	Freshwater	N/A	Normal	Normal
Spent Fuel Pool						
Water	Unknown; intermittent additions	Reported as full (TEPCO/NISA); intermittent additions	Reported has water (TEPCO/NISA); intermittent additions	Unknown – some water level does exist; intermittent additions	Normal	Normal
Status	Roof Collapse	Secondary Opening	Roof Collapse	Roof Collapse	Secondary Intact	Secondary Intact

(05 APRIL 2011; 0800 JST)

Sustainable Fresh Water Supply	The first barge arrived at Fukushima on Thursday, 31 March. The second barge arrived at Fukushima on Friday, 1 April.
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Rihm, Roger

From: Rihm, Roger
Sent: Monday, April 04, 2011 1:59 PM
To: Meighan, Sean; Nguyen, Quynh
Cc: Wittick, Brian
Subject: FW: Question from Commission office on draft testimony for Marty
Attachments: Testimony_April6_2011_Rev 3 - OGC-OCA edits.docx

Importance: High

Can one of you verify/clarify? It is actually the paragraph on the bottom of page 6 of the attached that starts "as a result of operating experience and ongoing research programs..." See Ostendorf comment below. I believe this text originated in Bill's remarks before the Commission a couple of weeks ago that subsequently got turned into testimony for Bill and now testimony for Marty. Need to clarify this afternoon. Thx.

From: Powell, Amy
Sent: Monday, April 04, 2011 1:51 PM
To: Rihm, Roger
Cc: Shane, Raeann; Schmidt, Rebecca
Subject: Question from Commission office on draft testimony for Marty

Hi Roger –

Per our phone chat, OCA received the following comment/request on the draft testimony from Cmr Ostendorff's office:

"First full paragraph on page 6 [Roger, the version referenced is attached] regarding "requirements for severe accident management guidelines." Please verify that this paragraph is indeed factually correct. As written, the paragraph implies that inspectable requirements exist and are frequently evaluated."

Would you please check with staff to see if the statement is correct and/or if it needs any clarification or additional context to address the concern raised?

Thanks
Amy

Amy Powell
Associate Director
U. S. Nuclear Regulatory Commission
Office of Congressional Affairs
Phone: 301-415-1673

HHHH/112

**TESTIMONY OF MARTIN VIRGILIO
DEPUTY EXECUTIVE DIRECTOR FOR REACTOR AND PREPAREDNESS PROGRAMS
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
UNITED STATES HOUSE OF REPRESENTATIVES**

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**NRC RESPONSE TO RECENT NUCLEAR EVENTS IN JAPAN AND THE CONTINUING
SAFETY OF THE U.S. COMMERCIAL NUCLEAR REACTOR FLEET**

APRIL 6, 2011

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The staff of the U.S. Nuclear Regulatory Commission is deeply saddened by the tragedy in Japan. I and many of my colleagues on the NRC staff have had many years of very close and personal interaction with our regulatory counterparts and we would like to extend our condolences to them.

Introduction

The NRC is mindful that our primary responsibility is to ensure the adequate protection of the public health and safety of the American people. We have been very closely monitoring the activities in Japan and reviewing all ~~currently~~ available information. Review of this information, combined with our ongoing inspection and licensing oversight, allows us to say with confidence that the U.S. plants continue to operate safely. There has been no reduction in the licensing or oversight function of the NRC as it relates to any of the U.S. licensees as a result of the substantial effort we are making to assist Japan.

We have a long history of conservative regulatory decision-making. We have been using risk insights to help inform our regulatory process, and, over more than 35 years of civilian nuclear power in this country, we ~~have never stopped making~~ continually make improvements to our regulatory framework as we learn from operating experience.

Notwithstanding the very high level of support being provided to respond to events in

Japan, we continue to maintain our focus on our domestic responsibilities.

I'd like to begin with a brief overview of our immediate and continuing response, including our recommendation for U.S. Citizens in Japan to evacuate out to 50 miles from the Fukushima-Daiichi site. I then want to spend the bulk of my time discussing will discuss the reasons for our confidence in the safety of the U. S. commercial nuclear reactor fleet, and the path forward that we will take to ensure we learn any lessons we need to from events in Japan. Finally, I will give you an overview of NRC incident response capabilities here in the U.S.

The NRC's immediate and Continuing Response to Events in Japan

On Friday, March 11th an earthquake hit Japan, resulting in the shutdown of more than 10 reactors. From what we know now, it appears possible that the reactors' response to the earthquake went according to design. The ensuing tsunami, however, appears to have caused the loss of normal and emergency AC power to the six units at the Fukushima Daiichi site; it is those six units that have received the majority of our attention since that time. Units One, Two, and Three at the site were in operation at the time of the earthquake. Units Four, Five, and Six were in previously scheduled outages.

Shortly after 4:00 AM EDT on Friday, March 11th, the NRC Emergency Operations Center made the first call, informing NRC management of the earthquake and the potential impact on U.S. plants. We went into the monitoring mode at the Emergency Operations Center and the first concern for the NRC was possible impacts of the tsunami on U.S. plants and radioactive materials on the West Coast, and in Hawaii, Alaska, and U.S. Territories in the Pacific.

On that same day, we began interactions with our Japanese regulatory counterparts and dispatched two experts to help at the U.S. eEmbassy in Japan. By Monday, we had

dispatched a total of 11 staff to Japan. We have subsequently rotated in additional replacement staff to continue our on-the-ground assistance in Japan. The areas of focus for this team are: 1) to assist the Japanese government with technical support as part of the USAID response; and 2) to support the U.S. Ambassador. The NRC's Chairman, Dr. Gregory Jaczko, traveled to Tokyo on March 28th for several days to convey directly to his Japanese counterparts a message of support and cooperation, and to discuss the current situation. While our focus now is on helping Japan in any way that we can, the experience will also help us assess the implications for U.S. citizens and the U.S. reactor fleet in as timely a manner as possible.

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We have an extensive range of stakeholders with whom we have ongoing interaction, including the White House, Congressional staff, our state regulatory counterparts, a number of other federal agencies, and international regulatory bodies around the world. We recently sent an NRC staff member to Hawaii to support the United States Armed Forces Pacific Command (USPACOM).

The NRC response in Japan and our Emergency Operations Center continue with the dedicated efforts of over 250 NRC staff on a rotating basis. [UPDATE IF STAFFING SITUATION CHANGES] The entire agency is coordinating and pulling together in response to this event so that we can provide assistance to Japan while continuing the normal activities necessary to fulfill our domestic responsibilities.

~~_____The decision regarding the 50 mile evacuation recommendation that we made to the U.S. Ambassador in Japan was made in order to provide timely information to the U.S. Ambassador in Japan, and to best protect the health and safety of U.S. citizens in Japan. We based our assessment on the conditions as we understood them at the time. Since communications with knowledgeable Japanese officials were limited~~

and there was a large degree of uncertainty about plant conditions at the time, it was difficult to accurately assess the potential radiological hazard. In order to determine the proper evacuation distance, the NRC staff performed a series of calculations using NRC's RASCAL computer code to assess possible offsite consequences. The computer models used meteorological model data appropriate for the Fukushima Daiichi vicinity. Source terms were based on hypothetical, but not unreasonable estimates of fuel damage, containment, and other release conditions. These calculations demonstrated that the Environmental Protection Agency's Protective Action Guidelines could be exceeded at a distance of up to 50 miles from the Fukushima site, if a large-scale release occurred from the reactors or spent fuel pools. We understood that some of our assumptions were conservative, but believed that it was better to err on the side of protection, especially in the case of a seemingly potentially rapidly deteriorating situation. The U.S. Emergency Preparedness framework provides for the expansion of emergency planning zones as conditions require. Acting in accordance with this framework, and with the best information available at the time, the NRC determined that evacuation out to 50 miles for U.S. citizens was an appropriate course of action, and we made that recommendation to the Ambassador and other U.S. Government agencies.

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Let me also just note here in concluding this section of my remarks that the U.S. government has an extensive network of radiation monitors across this country. Monitoring equipment at nuclear power plants and in the U. S. Environmental Protection Agency's (EPA) system has identified trace amounts of radioactive isotopes consistent with the Japanese

~~nuclear incident, but still far below levels of natural background radiation or of public health concern. has not identified any radiation levels of concern in this country. In fact, natural background radiation from sources such as rocks, the sun, and buildings, is 100,000 times more than doses attributed to any level of the radiation from this event that has been detected in the U.S. to date. Therefore, we feel confident, based on current data, that there is no reason for concern in the United States regarding radioactive releases from Japan.~~

Comment [RSR1]: This sentence came from 3/22 NRC press release. On 3/31 EPA reported "levels slightly higher than those found by EPA monitors last week... but still far below levels of public health concern." In another week at time of testimony, we expect to continue to see safe levels, but I don't know if the 100,000 figure will still be correct.

Continuing Confidence in the Safety of U.S. Nuclear Power Plants

I will now turn to the factors that assure us of ongoing domestic reactor safety. We have, since the beginning of the regulatory program in the United States, used a philosophy of Defense-in-Depth, which recognizes that nuclear reactors require the highest standards of design, construction, oversight, and operation, and does not rely on any single layer for protection of public health and safety. We begin with designs for every individual reactor in this country that take into account site-specific factors and include a detailed evaluation for any natural event, such as earthquakes, tornadoes, hurricanes, floods, and tsunamis, as they relate to that site.

There are multiple physical barriers to radiation in every reactor design. Additionally, there are both diverse and redundant safety systems that are required to be maintained in operable condition and frequently tested to ensure that the plant is in a high condition of readiness to respond to any scenario.

We have taken advantage of the lessons learned from previous operating experience to implement a program of continuous improvement for the U.S. reactor fleet. We have learned from experience across a wide range of situations, including most significantly, the Three Mile Island accident in 1979. As a result of those lessons learned, we have significantly revised emergency planning requirements and emergency operating procedures for licensees, and

made substantive improvements in NRC's incident response capabilities, as well as significantly improved our own response to an incident. We also have addressed many human factors issues regarding how control room indicators and layout employees operate the plant, added new requirements for hydrogen control to help prevent explosions inside of containment, and created requirements for enhanced control room displays of the status of pumps and valves.

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The NRC has a post-accident sampling system that enables the monitoring of radioactive material release and possible fuel degradation. One of the most significant changes after Three Mile Island was the expansion of the Resident Inspector Program, which has at least two full-time NRC inspectors on-site at each nuclear power plant, and the improvements to our own incident response program. Today, there are at least two Resident inspectors at each nuclear power plant. The inspectors have unfettered access to all licensees' activities, and serve as NRC's eyes and ears on-site during any event at a nuclear power plant. The NRC headquarters operations center and regional incident response centers are prepared to respond to all emergencies, including any resulting from operational safety events, security events, or other events such as man-made or natural phenomena. Multidisciplinary teams in these centers have access to detailed information regarding licensee facilities, and access to plant status information through telephonic links with the resident inspectors, an automated emergency response data system, and directly from the licensee over the emergency notification system. NRC's response would include the dispatch of a site team to augment the Resident Inspectors on site and integration with the licensee's emergency response organization of their Emergency Offsite Facility. The program is designed to provide independent assessment of events, to ensure that appropriate actions are taken to mitigate the events, and to ensure that State officials have the information they would need to make decisions regarding protective actions address these events singly or in combination where conditions exist or could lead to a radiological risk to public health or safety from an NRC licensed facility.

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As a result of operating experience and ongoing research programs, we have developed requirements for severe accident management guidelines. These are components and procedures developed to ensure that, in the event all of the above precautions failed and a severe accident occurred, the plant would still protect public health and safety. The requirements for severe accident management have been in effect for many years and are frequently evaluated by the NRC inspection program.

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Comment [J2]: Would it be appropriate to add a short paragraph about how we have an integrated interagency response that we practice with the facility, other federal partners, and state and local (and tribal) stakeholders?

As a result of the events of September 11, 2001, we identified important pieces of

equipment that, regardless of the cause of a significant fire or explosion at a plant, we want licensees to have available and staged in advance, as well as new procedures, training requirements, and policies that would help deal with a severe situation.

Our program of continuous improvement based on operating experience will now include evaluation of the significant events in Japan as well as what we can learn from them. We already have begun enhancing inspection activities through temporary instructions to our inspection staff, including the resident inspectors and the region-based inspectors in our four Regional offices, to look at licensees' readiness to deal with both the design basis accidents and the beyond-design basis accidents. The information that we gather will be used to evaluate the industry's readiness for similar events, and will aid in our understanding of whether additional regulatory actions need to be taken in the immediate term.

We have also issued an information notice to the licensees to make them aware of the events in Japan, and the kinds of activities we believe they should be engaged in to verify their readiness. Specifically, we have requested them to verify that their capabilities to mitigate conditions that result from severe accidents, including the loss of significant operational and safety systems, are in effect and operational. Licensees are verifying the capability to mitigate a total loss of electric power to the nuclear plant. They also are verifying the capability to mitigate problems associated with flooding and the resulting impact on systems both inside and outside of the plant. Also, licensees are confirming the equipment that is needed is in place for the potential loss of equipment due to seismic events appropriate for the site, because each site has its own unique seismic profiles.

During the past 20 years, there have been a number of new ~~rulemakings~~ regulatory requirements imposed by the NRC that have enhanced the domestic fleet's preparedness against some of the problems we are seeing in Japan. The "station blackout" rule requires

every plant in this country to analyze what the plant response would be if it were to lose all alternating current so that it could respond using batteries for a period of time, and then have procedures in place to restore alternating current to the site and provide cooling to the core.

The hydrogen rule requires modifications to reduce the impacts of hydrogen generated for beyond-design basis events and core damage. There are equipment qualification rules that require equipment, including pumps and valves, to remain operable under the kinds of environmental temperature and radiation conditions that you would see under a design basis accident. With regard to the type of containment design used by the most heavily damaged plants in Japan, the NRC has had a Boiling Water Reactor Mark I Containment Improvement Program since the late 1980s, which has required installation of hardened vent systems for containment pressure relief, as well as enhanced reliability of the automatic depressurization system.

The final factor I want to mention with regard to our belief in the ongoing safety of the U.S. fleet is the emergency preparedness and planning requirements in place that provide ongoing training, testing, and evaluations of licensees' emergency preparedness programs. In coordination with our federal partner, the Federal Emergency Management Administration (FEMA), these activities include extensive interaction with state and local governments, as those programs are evaluated and tested on a periodic basis.

The Path Ahead

Beyond the initial steps to address the experience from the events in Japan, the Chairman, with the full support of the Commission, directed the NRC staff to establish a senior level agency task force to conduct a methodical and systematic review of our regulations -processes and regulations- to determine whether the agency should make additional improvements to our regulatory system and make recommendations to the

Commission for its policy direction. This activity will have both near-term and longer-term objectives.

For the near term effort, we are beginning a 90-day review. This review will evaluate all of the ~~currently~~-available information from the Japanese events to identify immediate or near-term operational or regulatory issues potentially affecting the 104 operating reactors in the U.S., including their spent fuel pools. Areas of investigation will include the ability to protect against natural disasters, response to station blackouts, severe accidents and spent fuel accident progression, radiological consequence analysis, and severe accident management issues ~~regarding equipment~~. Over this 90-day period, we will develop recommendations, as appropriate, for changes to inspection procedures and licensing review guidance, and recommend whether generic communications, orders, or ~~other~~-additional regulatory ions ~~requirements~~ are needed.

This 90-day effort will include a 30-day "Quick Look Report" to the Commission to provide a snapshot of the regulatory response and the condition of the U.S. fleet based on information we have available at that time. Preparing a "Quick Look Report" will also ensure that the Commission is both kept informed of ongoing efforts and prepared to resolve any policy recommendations that surface. I believe we will have limited stakeholder involvement in the first 30 days to accomplish this. However over the 90-day and longer-term efforts we will seek additional stakeholder input. At the end of the 90-day period, a report will be provided to the Commission and to the public. The task force's longer-term review will begin as soon as the NRC has sufficient technical information from the events in Japan.

The task force will evaluate all technical and policy issues related to the event to identify additional potential research, generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework that should be pursued by

the NRC. We also expect to evaluate potential interagency issues, such as emergency preparedness, and examine the applicability of any lessons learned to non-operating reactors and materials licensees. We expect to seek input from stakeholders during this process. A report with appropriate recommendations will be provided to the Commission within 6 months of the start of this evaluation. Both the 90-day and final reports will be made publicly available in accordance with normal Commission processes.

Conclusion

In conclusion, I want to reiterate that we continue to make our domestic responsibilities for licensing and oversight of the U.S. licensees our top priority and that the U.S. plants continue to operate safely. In light of the events in Japan, there is a near-term evaluation of their relevance to the U.S. fleet underway, and we are continuing to gather the information necessary for us to take a longer, more thorough look at the events in Japan and their lessons for us. Based on these efforts, we will take all appropriate actions necessary to ensure the continuing safety of the U.S. fleet.

From: Hoc, PMT12
Sent: Tuesday, April 05, 2011 6:45 PM
To: PMT03 Hoc
Subject: FW: April 5 -- HHS/ CDC 1700 EDT Call with States

Nima

Please add action below

Tim

From: LIA04 Hoc
Sent: Tuesday, April 05, 2011 6:44 PM
To: LIA06 Hoc; LIA08 Hoc; Easson, Stuart; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Maupin, Cardelia; Noonan, Amanda; OST05 Hoc; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtill, Richard; Virgilio, Rosetta
Cc: Hoc, PMT12
Subject: April 5 -- HHS/ CDC 1700 EDT Call with States

SL participated in 1700 call with States, moderated by CDC and ASTHO. Scott Flanders provided NRC update while PMT and LT supported the call. There is one outstanding issue for NRC regarding the availability of data. NRC indicated that we would provide follow-up on 04/07 regarding whether or not radioactive releases are decreasing. See notes below for additional information.

2011 Japan Response State Coordination Conference Call
CDC IMS State Coordination Task Force
04/05/2011 1700 EDT

Welcome

Steve Boedigheimer (CDC) – Federal partners will provide overview of what they are doing this week and what is on horizon during Tuesday calls. Strategic thinking and direction from Federal partners can be useful for States to form theirs.

Jim Blumenstotck (ASTHO) – Reframing of calls moving forward.

Tuesday calls will provide an overview of high level executive policy and strategic plan. State Health Officials and Environmental Agencies will participate.

Thursday calls will include tactical, operational and technical discussion. State Emergency Preparedness Officers, Radiation Control Directors, etc. will participate.

Federal Partner Updates

ASPR (Nitin Natarajan)

- ASPR continues to look at domestic response and potential future issues that may arise.
- They continue to engage in inter-agency cooperation and planning.
- Five staff members have been deployed to Japan and will return on 04/08 and 04/10
- Public Affairs Office briefed media opinion leaders to allow them to ask questions of experts brought together for call. This was the first coordinated press call. Seafood safety was big issue with dumping of radioactive water.

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CDC (Vic Capell)

- Emergency Operations Center was activated 03/11/11.
- Two staff members have been deployed to Japan.
- 140 CDC employees are staffing the operations center.
- CDC continues to work with Federal and International partners as well as non-governmental organizations.
- Focus has been on public health guidance for US citizens in Japan, including the following activities:
 - Public health interpretation of radiation data;
 - Public health guidance for travelers
 - Development of public health key messages; and
 - Dissemination of public health information to public, including.
- CDC continues to inform the public that:
 - There is no threat to public health in spite of radiation detection in air, water and milk; and
 - There is no need to take KI.

EPA (Mike Flynn)

- EPA continues to participate in inter-agency technical advisory group.
- EPA is actively working and hosting RadNet monitoring data. They continue to see non-detect levels or very low levels below concern. Data is posted on website as quickly as possible. Anything notable is flagged and follow-up is conducted with Federal and State partners to address.
- Sampling and data in pipeline will be posted on EPA website in days ahead.

CBP – Not present.

FDA (John Verbatin)

- Import alert continues for certain products from specific regions of Japan.
- Increased surveillance of Japanese imports continues. Over 1000 examinations have been conducted, and nothing has been found in violation.
- FDA will continue to monitor activities, and may increase or decrease surveillance, as situation warrants.

NRC (Scott Flanders)

- NRC Operations Center has been activated since 03/11 and the agency continues to monitor the situation
- NRC team, including 15-17 staff, has been deployed to Japan in rotations to assess conditions and collect data.
- The Commission established a task force to examine domestic regulatory program and provide short and long term reports to the Commission. Near-term report will take place 90 days from 04/01.

ACF (Elizabeth Russell and Jonathan White)

- ACF continues to monitor and communicate with Department of State. There is no indication of potential evacuation of US citizens at this point. ACF is actively engaged with partners and will advise if they are informed of evacuation.

SAMHSA (Terry Spear)

- SAMHSA is monitoring behavioral health effect on US Citizens.
- SAMHSA is providing technical assistance, information and training to citizens across the country.
- They are completing review of cultural appropriateness of tip sheet and translation to Japanese.

DHS – Not Present.

Question & Answer Session

1. Status of Clearance for passenger? Jim (ASTHO)
Colleen Martin (CDC) indicated that they are still awaiting clearance and one of the last documents is with HHS.
2. Are there any plans for NRC to allow State partners to review 90 day report to be issued to Commission? Jim (ASTHO)
S. Flanders indicated that the task force charter directs them to assess conditions, determine short-term recommendations, and provide recommendation for Chairman. If it is determined to be appropriate, NRC will engage State, Local and others.
Jim (ASTHO) indicated that if protective action guidance is part of recommendation, then States should be consulted.
3. Jack Herman indicated that they continue to monitor calls and solicit questions from local health departments (Herman appears to represent localities, but organization was not identified clearly).
4. Does NRC assessment include offsite dose assessment or environmental assessment? Bob Free
S. Flanders indicated that Staff in Japan is collecting information regarding dose and assessing.
5. **There have been domestic communications challenges regarding contamination of air, water and milk. Can we get information on whether or not radioactive releases in air are decreasing? Why can't information be shared? Howard Backer (CA Public Health)**
S. Flanders indicated that NRC is getting information from DOE and assessing as it is received. Call with CRCPD discussed availability of data earlier today. NRC will follow-up and can provide additional information on Thursday call.
Jim (ASTHO) indicated that State Cabinet and Subcabinet level should be receiving this information if it has been shared with CRCPD.
6. In NRC confident that there is an end game in site? Lee Cox (NC)
S. Flanders indicated that NRC continues to monitor the situation, gathering and assessing information. Tim Harris indicated that MEXT website has information from utilities. Trending to a more stable condition over the past few weeks.
7. Clarification was provided regarding call with CRCPD. Call was with NEI regarding access to their data. Radiation control program directors will have access to NEI data, but mechanism to access is not in place yet to access daily data dump. Adela Salame-Alfie (NY and CRCPD)
8. Is someone looking at information from Japan regarding dose limits and comparing to US limits? Online video and media reporting were referenced. Pat Dostie (ME)
S. Flanders indicated that NRC is aware of this and assessing information now. M. Flynn of EPA indicated that they have not done a comparison of dose limits at this point. P. Dostie underscored that there is an assumption by the media that the Japanese dose limit is the same as US.

From: [Hayden, Elizabeth](#)
To: [Virgilio, Martin](#)
Subject: RE: NYT Story re RST assmt of new Japan threat
Date: Wednesday, April 06, 2011 9:04:00 AM

We're working on a response along the lines that this was a report reflecting our analysis a week and a half ago based on the information we had at the time. We will continually assess the information and the situation as it evolves to provide the best technical assessment and advice we can.

[Note that all of the documents in question are OOU and could be release under an FOIA request]

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: Virgilio, Martin
Sent: Wednesday, April 06, 2011 8:36 AM
To: Hayden, Elizabeth
Subject: Re: NYT Story re RST assmt of new Japan threat

Thanks Beth

From: Hayden, Elizabeth
To: Virgilio, Martin
Cc: Cool, Donald; Shane, Raeann; Burnell, Scott
Sent: Wed Apr 06 08:17:13 2011
Subject: NYT Story re RST assmt of new Japan threat

Please be aware of this story in case the Congressmen see it and ask whether "new threat" is valid from the 3/26 RST report.

U.S. Sees Array Of New Threats At Japan's Nuclear Plant (NYT)

By James Glanz And William J. Broad

[New York Times](#), April 6, 2011

United States government engineers sent to help with the crisis in Japan are warning that the troubled nuclear plant there is facing a wide array of fresh threats that could persist indefinitely, and that in some cases are expected to increase as a result of the very measures being taken to keep the plant stable, according to a confidential assessment prepared by the Nuclear Regulatory Commission.

Among the new threats that were cited in the assessment, dated March 26, are the mounting stresses placed on the containment structures as they fill with radioactive cooling water, making them more vulnerable to rupture in one of the aftershocks rattling the site after the earthquake and tsunami of March 11. The document also cites the possibility of explosions inside the containment structures due to the release of hydrogen and

HHHH/1A

oxygen from seawater pumped into the reactors, and offers new details on how semimolten fuel rods and salt buildup are impeding the flow of fresh water meant to cool the nuclear cores.

In recent days, workers have grappled with several side effects of the emergency measures taken to keep nuclear fuel at the plant from overheating, including leaks of radioactive water at the site and radiation burns to workers who step into the water. The assessment, as well as interviews with officials familiar with it, points to a new panoply of complex challenges that water creates for the safety of workers and the recovery and long-term stability of the reactors.

While the assessment does not speculate on the likelihood of new explosions or damage from an aftershock, either could lead to a breach of the containment structures in one or more of the crippled reactors, the last barriers that prevent a much more serious release of radiation from the nuclear core. If the fuel continues to heat and melt because of ineffective cooling, some nuclear experts say, that could also leave a radioactive mass that could stay molten for an extended period.

The document, which was obtained by The New York Times, provides a more detailed technical assessment than Japanese officials have provided of the conundrum facing the Japanese as they struggle to prevent more fuel melting at the Fukushima Daiichi plant. But it appears to rely largely on data shared with American experts by the Japanese.

Among other problems, the document raises new questions about whether pouring water on nuclear fuel in the absence of functioning cooling systems can be sustained indefinitely. Experts have said the Japanese need to continue to keep the fuel cool for many months until the plant can be stabilized, but there is growing awareness that the risks of pumping water on the fuel present a whole new category of challenges that the nuclear industry is only beginning to comprehend.

The document also suggests that fragments or particles of nuclear fuel from spent fuel pools above the reactors were blown "up to one mile from the units," and that pieces of highly radioactive material fell between two units and had to be "bulldozed over," presumably to protect workers at the site. The ejection of nuclear material, which may have occurred during one of the earlier hydrogen explosions, may indicate more extensive damage to the extremely radioactive pools than previously disclosed.

David A. Lochbaum, a nuclear engineer who worked on the kinds of General Electric reactors used in Japan and now directs the nuclear safety project at the Union of Concerned Scientists, said that the welter of problems revealed in the document at three separate reactors made a successful outcome even more uncertain.

"I thought they were, not out of the woods, but at least at the edge of the woods," said Mr. Lochbaum, who was not involved in preparing the document. "This paints a very different picture, and suggests that things are a lot worse. They could still have more damage in a big way if some of these things don't work out for them."

The steps recommended by the nuclear commission include injecting nitrogen, an inert gas, into the containment structures in an attempt to purge them of hydrogen and oxygen, which could combine to produce explosions. The document also recommends that engineers continue adding boron to cooling water to help prevent the cores from restarting the nuclear reaction, a process known as criticality.

Even so, the engineers who prepared the document do not believe that a resumption of criticality is an immediate likelihood, Neil Wilmshurst, vice president of the nuclear sector at the Electric Power Research Institute, said when contacted about the document. "I have seen no data to suggest that there is criticality ongoing," said Mr. Wilmshurst, who was involved in the assessment.

The document was prepared for the commission's Reactor Safety Team, which is assisting the Japanese government and the Tokyo Electric Power Company, which owns the plant. It says it is based on the "most recent available data" from numerous Japanese and American organizations, including the electric power company, the Japan Atomic Industrial Forum, the United States Department of Energy, General Electric and the Electric Power Research Institute, an independent, nonprofit group.

The document contains detailed assessments of each of the plant's six reactors along with recommendations for action. Nuclear experts familiar with the assessment said that it was regularly updated but that over all, the March 26 version closely reflected current thinking.

The assessment provides graphic new detail on the conditions of the damaged cores in reactors 1, 2 and 3. Because slumping fuel and salt from seawater that had been used as a coolant is probably blocking circulation pathways, the water flow in No. 1 "is severely restricted and likely blocked." Inside the core itself, "there is likely no water level," the assessment says, adding that as a result, "it is difficult to determine how much cooling is getting to the fuel." Similar problems exist in No. 2 and No. 3, although the blockage is probably less severe, the assessment says.

Some of the salt may have been washed away in the past week with the switch from seawater to fresh water cooling, nuclear experts said.

A rise in the water level of the containment structures has often been depicted as a possible way to immerse and cool the fuel. The assessment, however, warns that "when flooding containment, consider the implications of water weight on seismic capability of containment."

Experts in nuclear plant design say that this warning refers to the enormous stress put on the containment structures by the rising water. The more water in the structures, the more easily a large aftershock could rupture one of them.

Margaret Harding, a former reactor designer for General Electric, warned of aftershocks and said, "If I were in the Japanese's shoes, I'd be very reluctant to have tons and tons of water sitting in a containment whose structural integrity hasn't been checked since the earthquake."

The N.R.C. document also expressed concern about the potential for a "hazardous atmosphere" in the concrete-and-steel containment structures because of the release of hydrogen and oxygen from the seawater in a highly radioactive environment.

Hydrogen explosions in the first few days of the disaster heavily damaged several reactor buildings and in one case may have damaged a containment structure. That hydrogen was produced by a mechanism involving the metal cladding of the nuclear fuel. The document urged that Japanese operators restore the ability to purge the structures of these gases and fill them with stable nitrogen gas, a capability lost after the quake and tsunami.

Nuclear experts say that radiation from the core of a reactor can split water molecules in two, releasing hydrogen. Mr. Wilmschurst said that since the March 26 document, engineers had calculated that the amount of hydrogen produced would be small. But Jay A. LaVerne, a physicist at Notre Dame, said that at least near the fuel rods, some hydrogen would in fact be produced, and could react with oxygen. "If so," Mr. LaVerne said in an interview, "you have an explosive mixture being formed near the fuel rods."

Nuclear engineers have warned in recent days that the pools outside the containment buildings that hold spent fuel rods could pose an even greater danger than the melted reactor cores. The pools, which sit atop the reactor buildings and are meant to keep spent fuel submerged in water, have lost their cooling systems.

The N.R.C. report suggests that the fuel pool of the No. 4 reactor suffered a hydrogen explosion early in the Japanese crisis and could have shed much radioactive material into the environment, what it calls "a major source term release."

Experts worry about the fuel pools because explosions have torn away their roofs and exposed their radioactive contents. By contrast, reactors have strong containment vessels that stand a better chance of bottling up radiation from a meltdown of the fuel in the reactor core.

"Even the best juggler in the world can get too many balls up in the air," Mr. Lochbaum said of the multiplicity of problems at the plant. "They've got a lot of nasty things to negotiate in the future, and one missed step could make the situation much, much worse."

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: [Burnell, Scott](#)
To: [Hayden, Elizabeth](#)
Subject: FW: Quick statement on 3/26 assessment
Date: Wednesday, April 06, 2011 9:19:36 AM
Importance: High

Please provide your input on this "quick response" statement:

The March 26 document represented an interim snapshot of what NRC staff and other experts proposed as possible conditions inside the damaged units at Fukushima. This snapshot changed over the next few days as additional information and analysis became available. The staff's recommendations are considered prudent measures; they are not offered as the only possible solutions. Conditions at the site have improved even further since the assessment was completed, so it is inappropriate to treat the March 26 document as the current understanding of the situation.

HHHH/115

From: [Harrington, Holly](#)
To: [Stahl, Eric](#)
Cc: [Emche, Danielle](#); [Brenner, Eliot](#); [Hayden, Elizabeth](#); [Burnell, Scott](#)
Subject: RE: NYT story on NRC "confidential assessment" of Fukushima
Date: Wednesday, April 06, 2011 9:39:31 AM

Eliot, Beth and Scott are working on this issue. I've cc'd them and they will keep you in the loop.

From: Stahl, Eric
Sent: Wednesday, April 06, 2011 1:10 AM
To: Harrington, Holly
Cc: Emche, Danielle
Subject: FW: NYT story on NRC "confidential assessment" of Fukushima

Holly –

Danielle Emche and I just spoke with the Embassy's Public Affairs staff about the NYT article. They were interested to hear our view of the article and its accuracy.

They made clear that they (Embassy-Tokyo) is not planning to comment on it, but are very interested to see NRC/OPA's response. Can you please try to keep me in-the-loop with any statements made by NRC about the article? They mentioned that (former Commissioner) Assistant Secretary Lyons may do some press here on Friday, and would likely be asked about it.

Thanks,
Eric

From: Morimura, Stephanie (TDY/PAS) [<mailto:TDYMorimuraS@state.gov>]
Sent: Tuesday, April 05, 2011 11:58 PM
To: Stahl, Eric; giulia.bisconti@hq.doe.gov
Cc: Quade, Christopher P; Largent, Dale A; Hoffmann, Phillip P
Subject: FW: NYT story on NRC "confidential assessment" of Fukushima
Importance: High

What's your take?

This email is UNCLASSIFIED.

From: Quade, Christopher P
Sent: Wednesday, April 06, 2011 11:48 AM
To: Zumwalt, James P; Hoffmann, Phillip P; Largent, Dale A; Phillips, Leslie M; Morimura, Stephanie (TDY/PAS); Basalla, Suzanne I; Fuller, Matthew G
Subject: NYT story on NRC "confidential assessment" of Fukushima
Importance: High

Not necessarily what we needed at this point...

HHH #/116

April 5, 2011

U.S. Sees Array of New Threats at Japan's Nuclear Plant

By **JAMES GLANZ** and **WILLIAM J. BROAD**

United States government engineers sent to help with the crisis in Japan are warning that the troubled nuclear plant there is facing a wide array of fresh threats that could persist indefinitely, and that in some cases are expected to increase as a result of the very measures being taken to keep the plant stable, according to a confidential assessment prepared by the Nuclear Regulatory Commission.

Among the new threats that were cited in the assessment, dated March 26, are the mounting stresses placed on the containment structures as they fill with radioactive cooling water, making them more vulnerable to rupture in one of the aftershocks rattling the site after the earthquake and tsunami of March 11. The document also cites the possibility of explosions inside the containment structures due to the release of hydrogen and oxygen from seawater pumped into the reactors, and offers new details on how semimolten fuel rods and salt buildup are impeding the flow of fresh water meant to cool the nuclear cores.

In recent days, workers have grappled with several side effects of the emergency measures taken to keep nuclear fuel at the plant from overheating, including leaks of radioactive water at the site and radiation burns to workers who step into the water. The assessment, as well as interviews with officials familiar with it, points to a new panoply of complex challenges that water creates for the safety of workers and the recovery and long-term stability of the reactors.

While the assessment does not speculate on the likelihood of new explosions or damage from an aftershock, either could lead to a breach of the containment structures in one or more of the crippled reactors, the last barriers that prevent a much more serious release of radiation from the nuclear core. If the fuel continues to heat and melt because of ineffective cooling, some nuclear experts say, that could also leave a radioactive mass that could stay molten for an extended period.

The document, which was obtained by The New York Times, provides a more detailed technical assessment than Japanese officials have provided of the conundrum facing the Japanese as they struggle to prevent more fuel melting at the Fukushima Daiichi plant. But it appears to rely largely on data shared with American experts by the Japanese.

Among other problems, the document raises new questions about whether pouring water on nuclear fuel in the absence of functioning cooling systems can be sustained indefinitely. Experts have said the Japanese need to continue to keep the fuel cool for many months until the plant can be stabilized, but there is growing awareness that the risks of pumping water on the fuel present a whole new category of challenges that the nuclear industry is only beginning to comprehend.

The document also suggests that fragments or particles of nuclear fuel from spent fuel pools above the reactors were blown "up to one mile from the units," and that pieces of highly radioactive material fell between two units and had to be "bulldozed over," presumably to protect workers at the site. The ejection of nuclear material, which may have occurred during one of the earlier hydrogen explosions, may indicate more extensive damage to the extremely radioactive pools than previously disclosed.

David A. Lochbaum, a nuclear engineer who worked on the kinds of General Electric reactors used in Japan and now directs the nuclear safety project at the Union of Concerned Scientists, said that the welter of problems revealed in the document at three separate reactors made a successful outcome

even more uncertain.

"I thought they were, not out of the woods, but at least at the edge of the woods," said Mr. Lochbaum, who was not involved in preparing the document. "This paints a very different picture, and suggests that things are a lot worse. They could still have more damage in a big way if some of these things don't work out for them."

The steps recommended by the nuclear commission include injecting nitrogen, an inert gas, into the containment structures in an attempt to purge them of hydrogen and oxygen, which could combine to produce explosions. The document also recommends that engineers continue adding boron to cooling water to help prevent the cores from restarting the nuclear reaction, a process known as criticality.

Even so, the engineers who prepared the document do not believe that a resumption of criticality is an immediate likelihood, Neil Wilmshurst, vice president of the nuclear sector at the Electric Power Research Institute, said when contacted about the document. "I have seen no data to suggest that there is criticality ongoing," said Mr. Wilmshurst, who was involved in the assessment.

The document was prepared for the commission's Reactor Safety Team, which is assisting the Japanese government and the Tokyo Electric Power Company, which owns the plant. It says it is based on the "most recent available data" from numerous Japanese and American organizations, including the electric power company, the Japan Atomic Industrial Forum, the United States Department of Energy, General Electric and the Electric Power Research Institute, an industry group.

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Henry Fountain contributed reporting from New York, and Matthew L. Wald from Washington.

This email is UNCLASSIFIED.

From: [Hayden, Elizabeth](#)
To: [Burnell, Scott](#); [RST12 Hoc](#); [RST01 Hoc](#); [ET07 Hoc](#)
Cc: [Weber, Michael](#)
Subject: RE: 3/30 RST assessment
Date: Wednesday, April 06, 2011 10:00:00 AM

Although we can give reporters, embassy and others a quick response saying the 3/26 report was based on our understanding at the time, it begs the question about what we are now saying based on more current information.

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: Burnell, Scott
Sent: Wednesday, April 06, 2011 9:54 AM
To: RST12 Hoc; RST01 Hoc; ET07 Hoc
Cc: Hayden, Elizabeth
Subject: 3/30 RST assessment
Importance: High

All;

Please send the "final" version of the 3/30 assessment, for internal use only, so that OPA can understand the differences from 3/26. Thanks.

Scott

HHHHH/117

From: Weber, Michael
To: Burnell, Scott; Johnson, Michael; Hayden, Elizabeth; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Virgilio, Martin; Casto, Chuck; Collins, Elmo
Subject: RESPONSE - Quick statement on RST 3/26 assessment report
Date: Wednesday, April 06, 2011 10:15:29 AM

Looks good to me.

From: Burnell, Scott
Sent: Wednesday, April 06, 2011 10:12 AM
To: Weber, Michael; Johnson, Michael; Hayden, Elizabeth; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Virgilio, Martin; Casto, Chuck; Collins, Elmo
Subject: RE: RESPONSE - Quick statement on RST 3/26 assessment report
Importance: High

Proposed further edits:

The March 26 document represented an interim snapshot of what NRC staff and other experts considered as possible conditions inside the damaged units at Fukushima-Daiichi; the document does not reflect our understanding of the current situation. Based on those possible conditions, the NRC staff's recommendations should be considered prudent measures; they are not offered as the only possible solutions. We shared those recommendations with the Japanese operator and regulator of the plants. We understand they are pursuing an alternative set of strategies to control the plants and ensure the safety of the people working at the plants and living nearby. We are working with our counterparts to consider these strategies and explore additional steps that could enhance safety.

From: Weber, Michael
Sent: Wednesday, April 06, 2011 10:09 AM
To: Johnson, Michael; Burnell, Scott; Hayden, Elizabeth; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Virgilio, Martin; Casto, Chuck; Collins, Elmo
Subject: RESPONSE - Quick statement on RST 3/26 assessment report

I would agree with Mike's point to be more explicit on having shared the assessment with the Japanese operator and regulator.

From: Johnson, Michael
Sent: Wednesday, April 06, 2011 10:05 AM
To: Burnell, Scott; Hayden, Elizabeth; Weber, Michael; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Virgilio, Martin; Casto, Chuck; Collins, Elmo
Subject: RE: RESPONSE - Quick statement on RST 3/26 assessment report

Suggest it be more explicit. Your call.

From: Burnell, Scott
Sent: Wednesday, April 06, 2011 10:04 AM

HHH/118

To: Johnson, Michael; Hayden, Elizabeth; Weber, Michael; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Virgilio, Martin; Casto, Chuck; Collins, Elmo
Subject: RE: RESPONSE - Quick statement on RST 3/26 assessment report

I believe that's reflected in Mike W.'s edit.

From: Johnson, Michael
Sent: Wednesday, April 06, 2011 10:03 AM
To: Hayden, Elizabeth; Weber, Michael; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Burnell, Scott; Virgilio, Martin; Casto, Chuck; Collins, Elmo
Subject: RE: RESPONSE - Quick statement on RST 3/26 assessment report

Is it worth noting that we shared our insights with the Japanese regulator and utility.

From: Hayden, Elizabeth
Sent: Wednesday, April 06, 2011 9:59 AM
To: Weber, Michael; Batkin, Joshua
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Burnell, Scott; Virgilio, Martin; Casto, Chuck; Collins, Elmo; Johnson, Michael
Subject: RE: RESPONSE - Quick statement on RST 3/26 assessment report

Thanks. See suggested blue text in your clean version.

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: Weber, Michael
Sent: Wednesday, April 06, 2011 9:54 AM
To: Batkin, Joshua; Hayden, Elizabeth
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Burnell, Scott; Virgilio, Martin; Casto, Chuck; Collins, Elmo; Johnson, Michael
Subject: RESPONSE - Quick statement on RST 3/26 assessment report

I would suggest we use something like the following, which I modified from OPA's draft below:

The March 26 document represented an interim snapshot of what NRC staff and other experts considered ~~proposed~~ as possible conditions inside the damaged units at Fukushima-Daiichi. ~~This snapshot changed over the next few days as additional information and analysis became available.~~ The the NRC staff's recommendations are considered prudent measures; they are not offered as the only possible solutions. We understand that the Japanese operator and regulator of the plants is pursuing an alternative set of strategies to control the plants and ensure the safety of the people working at the plants and living nearby. We are working with our counterparts to consider these strategies and explore additional steps that could enhance safety. ~~Conditions at the site have improved even further since the assessment was completed, so~~

~~it is inappropriate to treat the March 26 document as the current understanding of the situation.~~

Clean text reads:

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From: Batkin, Joshua
Sent: Wednesday, April 06, 2011 9:29 AM
To: Hayden, Elizabeth; Virgilio, Martin; Weber, Michael
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Burnell, Scott
Subject: Re: Quick statement on RST 3/26 assessment report

Mike/Marty, is that overly optimistic sounding or is it OK?

Joshua C. Batkin
Chief of Staff
Chairman Gregory B. Jaczko
(301) 415-1820

From: Hayden, Elizabeth
To: Batkin, Joshua; Virgilio, Martin; Weber, Michael
Cc: Loyd, Susan; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Burnell, Scott
Sent: Wed Apr 06 09:23:21 2011
Subject: FW: Quick statement on RST 3/26 assessment report

This is what we plan to say with regard to the NYT story this morning. It is OK with the ET in the Ops Center. We have a slew of reporters asking for the report and as far as I know, it is releasable under a FOIA request.

Beth Hayden

From: Burnell, Scott

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since the assessment was completed, so it is inappropriate to treat the March 26 document as the current understanding of the situation.

From: [Google Alerts](#)
To: [Hayden, Elizabeth](#)
Subject: Google Alert - Nuclear Regulatory Commission
Date: Wednesday, April 06, 2011 11:02:09 AM

News

5 new results for **Nuclear Regulatory Commission**

Japan set to integrate two **nuclear** units into one powerful **regulatory** body

Mainichi Daily News

The Japanese government has started considering merging its two nuclear units to form a more powerful body resembling the US **Nuclear Regulatory Commission (NRC)** to regulate the nation's nuclear power plants in the wake of the crisis at the Fukushima No ...

[See all stories on this topic »](#)

US **Nuclear** Output Declines to Lowest Level in Almost 17 Months

Bloomberg

By Colin McClelland - Wed Apr 06 12:22:05 GMT 2011 US nuclear-power output fell to the lowest level in almost 17 months as Entergy Corp. (ETR) shut the Waterford 3 reactor in Louisiana, the **Nuclear Regulatory Commission** said. ...

[See all stories on this topic »](#)

Japan **Nuclear** Plant Is Far From Stable: U.S. Report

ABC News

By NEAL KARLINSKY and MOLLY HUNTER After workers successfully plugged the highly radioactive leak seeping into the Pacific Ocean, a new confidential assessment by the **Nuclear Regulatory Commission** obtained by the New York Times suggests that the ...

[See all stories on this topic »](#)

PSC stalls key money decision on Ga. **nuclear** plant

BusinessWeek

A lengthy delay could push the commission's decision closer to the start of major construction at Plant Vogtle, which could begin after the US **Nuclear Regulatory Commission** decides whether to license the plant, possibly later this year. ...

[See all stories on this topic »](#)

UW professor to testify on **nuclear** crisis

Fox11online.com

Michael Corradini is an engineering physics professor at the University of Wisconsin-Madison and a member of the US **Nuclear Regulatory Commission's** advisory committee on reactor safeguards. He's scheduled to testify before the House Energy and Commerce ...

[See all stories on this topic »](#)

Tip: Use a plus sign (+) to match a term in your query exactly as is. [Learn more.](#)

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HHHH/119

From: Burnell, Scott
To: Sheehan, Neil; Screnci, Diane; Hannah, Roger; Chandrathil, Prema; Mitlyng, Viktoria; Dricks, Victor; Uselding, Lara; McIntyre, David
Cc: Hayden, Elizabeth; Harrington, Holly
Subject: RE: Nyt article
Date: Wednesday, April 06, 2011 11:15:23 AM

No clue, but given all the industry/non-NRC involvement it's a wide field for consideration.

-----Original Message-----

From: Sheehan, Neil
Sent: Wednesday, April 06, 2011 11:13 AM
To: Burnell, Scott; Screnci, Diane; Hannah, Roger; Chandrathil, Prema; Mitlyng, Viktoria; Dricks, Victor; Uselding, Lara; McIntyre, David
Cc: Hayden, Elizabeth; Harrington, Holly
Subject: RE: Nyt article

Do we have any idea yet how the Times got hold of the report?

-----Original Message-----

From: Burnell, Scott
Sent: Wednesday, April 06, 2011 11:12 AM
To: Screnci, Diane; Sheehan, Neil; Hannah, Roger; Chandrathil, Prema; Mitlyng, Viktoria; Dricks, Victor; Uselding, Lara; McIntyre, David
Cc: Hayden, Elizabeth; Harrington, Holly
Subject: RE: Nyt article

Just to be clear:

[NOT FOR PUBLIC DISCUSSION RIGHT NOW]The agency continues to develop a path towards releasing the assessment documents.[END OF NOT PUBLIC STUFF]

In the meantime, here is the current NRC response to the NY Times article:

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HHHHH/120

From: [Google Alerts](#)
To: [Hayden, Elizabeth](#)
Subject: Google Alert - Nuclear Regulatory Commission
Date: Wednesday, April 06, 2011 11:17:44 AM

News

2 new results for Nuclear Regulatory Commission

NRC says not clear that Japan reactor has melted vessel

Reuters Africa

WASHINGTON, April 6 (Reuters) - A top official from the US **Nuclear Regulatory Commission** said on Wednesday it was not clear that Japan's Fukushima No. 2 nuclear reactor has melted through the reactor pressure vessel. Earlier, Democratic lawmaker Edward ...

[See all stories on this topic »](#)

Report: Valve malfunction at Alabama Nuclear plant triggers probe

DigitalJournal.com

The Alabama nuclear plant probe came a few days following a report by the **Nuclear Regulatory Commission (NRC)** saying many companies operating nuclear plants are not reporting some equipment defects that could pose risks to the public. ...

 [DigitalJournal.com](#)

[See all stories on this topic »](#)

Tip: Use quotes ("like this") around a set of words in your query to match them exactly. [Learn more.](#)

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HHHHH/121

From: [Smith, Rebecca](#)
To: [Burnell, Scott](#)
Cc: [Brenner, Eliot](#); [Hayden, Elizabeth](#)
Subject: Today's house oversight and investigations report on peach bottom
Date: Wednesday, April 06, 2011 11:18:04 AM

Hi, Scott, Eliot and Elizabeth,
We are doing a story about station blackout situations, based on the House subcommittee testimony today.
They presented information on an NRC analysis concerning the vulnerability of Peach Bottom, in a station blackout situation.
Could I get additional comment?

Regards,
Rebecca

Rebecca Smith
Staff Reporter
The Wall Street Journal
415-385-7224

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Wednesday, April 06, 2011 8:10 AM
To: Burnell, Scott
Cc: Brenner, Eliot; Hayden, Elizabeth
Subject:

Good Morning;

Here is the NRC response to the NY Times article:

The March 26 document represented an interim snapshot of what NRC staff and other experts considered as possible conditions inside the damaged units at Fukushima-Daiichi; the document does not reflect our understanding of the current situation. Based on those possible conditions, the NRC staff's recommendations should be considered prudent measures; they are not offered as the only possible solutions. We shared those recommendations with the Japanese operator and regulator of the plants. We understand they are pursuing an alternative set of strategies to control the plants and ensure the safety of the people working at the plants and living nearby. We are working with our counterparts to consider these strategies and explore additional steps that could enhance safety.

If the NRC has any further comment, you'll be informed via e-mail. Thank you.

Scott Burnell

HHH/122

From: [Hayden, Caitlin](#)
To: [Shapiro, Nicholas S.](#); [Burnell, Scott](#); [Brenner, Eliot](#); "[Dan.Leistikow@hq.doe.gov](#)"; [Bentz, Julie A.](#)
Cc: [Hayden, Elizabeth](#); [Harrington, Holly](#); [Doane, Margaret](#); [Batkin, Joshua](#); [Weber, Michael](#)
Subject: RE: Nyt article
Date: Wednesday, April 06, 2011 11:18:05 AM

Thanks, Nick. Lots of interest in this here and in Tokyo.

Scott: Has NRC deployed this yet?

Thanks! -CH

-----Original Message-----

From: Shapiro, Nicholas S.
Sent: Wednesday, April 06, 2011 11:06 AM
To: Burnell, Scott; Brenner, Eliot; 'Dan.Leistikow@hq.doe.gov'; Bentz, Julie A.; Hayden, Caitlin
Cc: Hayden, Elizabeth; Harrington, Holly; Doane, Margaret; Batkin, Joshua; Weber, Michael
Subject: RE: Nyt article

Plus hayden

-----Original Message-----

From: Burnell, Scott [<mailto:Scott.Burnell@nrc.gov>]
Sent: Wednesday, April 06, 2011 11:04 AM
To: Shapiro, Nicholas S.; Brenner, Eliot; 'Dan.Leistikow@hq.doe.gov'; Bentz, Julie A.
Cc: Hayden, Elizabeth; Harrington, Holly; Doane, Margaret; Batkin, Joshua; Weber, Michael
Subject: RE: Nyt article

All;

The agency continues to develop a path towards releasing the assessment documents. In the meantime, here is the current NRC response to the NY Times article:

The March 26 document represented an interim snapshot of what NRC staff and other experts considered as possible conditions inside the damaged units at Fukushima-Daiichi; the document does not reflect our understanding of the current situation. Based on those possible conditions, the NRC staff's recommendations should be considered prudent measures; they are not offered as the only possible solutions. We shared those recommendations with the Japanese operator and regulator of the plants. We understand they are pursuing an alternative set of strategies to control the plants and ensure the safety of the people working at the plants and living nearby. We are working with our counterparts to consider these strategies and explore additional steps that could enhance safety.

Thank you.

Scott Burnell

HHHHH/123

From: [Harrington, Holly](#)
To: [Chandraithil, Prema](#); [Dricks, Victor](#); [Hannah, Roger](#); [Ledford, Joey](#); [Mitlyng, Viktoria](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Uselding, Lara](#); [Brenner, Eliot](#); [Burnell, Scott](#); [Couret, Ivonne](#); [Hayden, Elizabeth](#); [McIntyre, David](#)
Cc: [Anderson, Brian](#); [Clark, Theresa](#); [Bonaccorso, Amy](#); [Stuckle, Elizabeth](#)
Subject: One talking point about Japan and license renewal
Date: Wednesday, April 06, 2011 11:18:28 AM
Attachments: [OysterCreekNRCResponse.4-4-2011.pdf](#)

For the question “How will the events in Japan affect license renewal for U.S. plants?” – the answer is

The NRC’s recently initiated review of U.S. plants will examine current practice at operating reactors to ensure proper actions will be taken if a severe event occurs – this covers plants regardless of where they are in their license lifetime. The events in Japan, based on what’s known at this time, appear to be unrelated to issues examined in license renewal. The NRC’s long-term review of its regulations will determine whether any revisions to license renewal reviews are called for.

Also attached is the brief OGC developed in response to an Oyster Creek license renewal lawsuit. If you get questions specific to Oyster Creek, please sent to Region 1

Holly

HHHHHH/124

**IN THE UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT**

NEW JERSEY ENVIRONMENTAL FEDERATION,)	
<i>et al.,</i>)	
)	
Petitioners,)	
)	
v.)	No. 09-2567
)	
NUCLEAR REGULATORY COMMISSION, et al.,)	
)	
Respondents,)	
)	
and)	
)	
EXELON CORPORATION,)	
)	
Intervenor.)	

**FEDERAL RESPONDENTS' MEMORANDUM ON THE EVENTS
AT THE FUKUSHIMA DAIICHI NUCLEAR POWER STATION**

By letter dated March 21, 2011, this Court directed counsel "to advise the Court what impact, if any, the damages from the earthquake and tsunami at the Fukushima Daiichi Nuclear Power Station have on the propriety of granting the license renewal application for the Oyster Creek Generating Station." The Nuclear Regulatory Commission (NRC) is carefully monitoring those events, and assisting the Japanese government in

understanding, controlling and limiting plant damage. NRC is also evaluating the information from these events for planning both short-term and longer-term responses to ensure the safety of United States reactors. In support of these tasks, NRC is gathering and absorbing data from the Fukushima Daiichi site that will enable NRC, with appropriate public participation, to put in place any new safety measures necessary to protect public health and safety in the United States.

NRC issued a renewed license for Oyster Creek Nuclear Generating Station almost two years ago, on April 8, 2009 (*see* Fed. Resp. Br. 48 & n.23). The renewed license is before this Court on a series of process-driven challenges brought by petitioners. As our brief shows, none of petitioners' claims finds support in the extensive administrative record underlying NRC's license-renewal decision. Oyster Creek now is operating under its 20-year renewed NRC license, but its owner, Exelon Generating Company, has announced publicly that it will cease operations in 2019.¹

In response to the disaster at Fukushima Daiichi, NRC has authority to order Exelon, like other licensees of operating nuclear plants, to adopt whatever measures NRC determines are needed in the short term for continued assurance of the public health and safety while NRC considers

¹ *See* <http://www.nytimes.com/2010/12/09/nyregion/09nuke.html>.

longer-term measures, including changes in its safety regulations. Such measures may be subject to site-specific considerations. At this point, however, NRC has stated that licensed nuclear power reactors in the United States are currently safe, and may continue to operate under NRC's comprehensive scheme of safety regulations and inspections, pending development of any new safety measures that emerge as NRC's "lessons-learned" project moves forward.

I. NRC will carefully gather and analyze data from the damage to the Fukushima Daiichi plant to ensure safety at U.S. reactors as necessary to protect public health and safety in the United States.

A. NRC's immediate response to Japan events.

On March 21, 2011, the NRC Commissioners and the head of the NRC Staff – the Executive Director of Operations (EDO) -- conducted a public briefing on NRC's response to the events at the Fukushima Daiichi facility.² Each Commissioner extended personal condolences to the Japanese people for their hardships and losses in this great tragedy. Chairman Jaczko stated that the purpose of the meeting was "to discuss the tragic events in Japan and to begin to consider possible actions we may take to verify the safety of the nuclear facilities" in the United States. (Tr. 3).

² The transcript of this public hearing may be found at the NRC website in the "ADAMS" database as Accession No. ML110810254.

The Chairman noted that, since the earthquake and tsunami had struck, the NRC's headquarters operations center has, in addition to ordinary 24-hour operations, been continuously staffed just to "monitor and analyze events at nuclear power plants in Japan." (Tr. 4). The Chairman also pointed out that, at the request of the Japanese government, NRC had sent a team of agency technical experts in Japan to provide on-the-ground support. (*Id.*).

Chairman Jaczko outlined how these tragic events would shape NRC policy and regulatory changes:

Here in the United States we have an obligation to the American people to undertake a systematic and methodical review of the safety of our own domestic nuclear facilities in light of the natural disaster and resulting nuclear situation in Japan. Beginning to examine all available information is an essential part of our effort to analyze the event and understand its impacts on Japan and implications for the United States. Our focus will always be on keeping plants and radioactive materials in this country safe and secure.

As the immediate crisis in Japan comes to an end we will look at any information we can to gain experience from the event and see if there are any changes we need to make to further protect public health and safety. Together with my colleagues on the Commission, we will review the current status and identify the steps we will take to conduct that review. In the meantime we will continue to oversee and monitor plants to ensure that U.S. reactors remain safe.³ (Tr. 5)

³ Each Commissioner supported the Chairman's approach, noting the need for NRC to confirm, by thoughtful and rational examination, that its approach to the regulation of nuclear power is comprehensive and correct, while applying any lessons learned from these events. (Tr.7-8).

EDO William Borchardt then commented on how NRC had utilized this “lessons learned” process following significant events in the United States. Concluding that the “current fleet of reactors and materials licensees continue to protect the public health and safety,” the EDO pointed to the principle of redundant defenses against unanticipated events called “Defense in Depth:”

The fact that every reactor in this country is designed for natural events based upon the specific site that that reactor is located, that there are multiple fission product barriers, and that there are a wide range of diverse and redundant safety features in order to provide that public health and safety assurance. We have a long regulatory history of conservative decision-making. We’ve been intelligently using risk insights to help inform our regulatory process, and we have never stopped [making] improvements to the plant design as we learn from operating experience over the more than 35 years of civilian nuclear power in this country. Some have been derived from lessons learned from previous significant events, such as Three Mile Island. We have severe accident management guidelines, revisions to the emergency operating procedures, procedures and processes for dealing with large fires and explosions, regardless of the cause.⁴ (Tr. 9-10).

As the EDO stated, NRC’s “philosophy of Defense-in-Depth . . . recognizes that the nuclear industry requires the highest standards of design, construction, oversight, and operation,” but even so, NRC regulation does

⁴ In support of this “lessons learned” philosophy, the EDO observed that NRC continues “to gather information [from Japan] and assess that information for implications on the U.S. facilities.” (Tr. 10)

“not rely on any one level of protection” to protect public health and safety. (Tr. 13-14) Further, the EDO said, “the designs for every single reactor in this country take into account *the specific site* that that reactor is located and does a detailed evaluation for any natural event such as *earthquakes, tornadoes, hurricanes, floods, tsunami, and many others.*”⁵ (Tr. 14) (emphasis added).

Later, Chairman Jaczko reiterated in testimony before Congress that NRC has “taken advantage of the lessons learned from previous operating experience,”⁶ including most significantly, the Three Mile Island accident in 1979, “to implement a program of continuous improvement for the U.S.

⁵ The EDO stressed that NRC planning for severe accidents includes the assumption of system failures:

Also as a result of operating experience and ongoing research programs, we have developed requirements for severe accident management guidelines. These are programs that perform the “what if” scenario. What if all of this careful design work, all of these important procedures and practices and instrumentation, what if that all failed? What procedures and policies and equipment should be in place to deal with the extremely unlikely scenario of a severe accident? Those have been in effect for many years and are frequently evaluated by the NRC inspection program. (Tr. 15)

⁶ Written Statement by Gregory B. Jaczko, Chairman, U.S. Nuclear Regulatory Commission to the Subcomm. on Energy and Water of the Senate Appropriations Comm. at 6 (March 30, 2011) (“Jaczko Statement”). (ADAMS Accession No. ML110890505)

reactor fleet.”⁷ The Chairman added that operating experience and research programs have produced severe accident management guidelines for U.S. reactors to ensure that, in the event all precautions failed and a severe accident occurred, “the plant would still protect public health and safety.”⁸

In short, the public statements of NRC’s leaders show that the agency remains confident that U.S. reactors, as designed, constructed, and operated, are safe, but acknowledge the need to monitor and learn from the events at the Fukushima Daiichi Nuclear Power Station to ensure safety at U.S. reactors, as NRC assists the Japanese government in that disaster.⁹

⁷ *Id.*

⁸ *Id.* at 6-7.

⁹ President Barack Obama, in addressing the American people on March 17, 2011, echoed the statements by NRC leaders:

Our nuclear power plants have undergone exhaustive study, and have been declared safe for any number of extreme contingencies. But when we see a crisis like the one in Japan, we have a responsibility to learn from this event, and to draw from those lessons to ensure the safety and security of our people. That’s why I’ve asked the Nuclear Regulatory Commission to do a comprehensive review of the safety of our domestic nuclear plants in light of the natural disaster that unfolded in Japan.

See <http://www.whitehouse.gov/blog/2011/03/17/president-obama-we-will-stand-people-japan>.

B. NRC's "lessons-learned" approach.

As the EDO mentioned, past significant events in the United States have prompted NRC toward insights leading to enhanced reactor design and operational safety. Two events stand out as models of NRC actions to respond to significant occurrences with "lessons learned" applied to licensed reactors. The first was the accident at the Three Mile Island, Unit 2 reactor on March 28, 1979. The other was the terrorist attacks on the United States on September 11, 2001.

In April 1979, just after the Three Mile Island-2 (TMI-2) accident, NRC created a Bulletin and Orders Task Force as the focal point for TMI 2-related Staff activities necessary to assure the immediate safety of all other operating power reactors. In May 1979, the NRC established the TMI-2 Lessons Learned Task Force to identify and evaluate safety concerns requiring prompt licensing actions for operating reactors, beyond the immediate actions announced by the Bulletins and Orders Task Force effort.¹⁰

¹⁰ Licensing Requirements for Pending Operating License Applications: Proposed Rule, 46 Fed. Reg. 26491 (May 13, 1981). A set of short-term recommendations offered by this task force was published as NUREG-0578 in July 1979. *Id.*

A steering group then assessed the many recommendations, from within and beyond NRC, “which would provide a comprehensive and integrated plan for all actions necessary to correct or improve the regulation and operation of nuclear facilities.”¹¹ After issuance of TMI-2 Action Plan requirements in guidance, NRC determined that the new reactor requirements should be codified by regulation.¹² For a variety of reasons, this specific TMI rule was not adopted, but NRC did adopt a number of rules to update licensing requirements on the basis of TMI “lessons learned.” Thus, a decade after the TMI-2 accident NRC Staff ultimately was able to advise the Commission that “all regulatory changes needed to implement [the TMI-2 Action Plan] have been completed and that compliance with existing regulations and orders is a sufficient response to all applicable TMI-2 accident ‘lessons learned.’”¹³

¹¹ *Id.* This “TMI-2 Action Plan” was published as NUREG-0660 in May 1980. These action items led NRC to issue a list of “Requirements for New Operating Licenses,” published in NUREG-0694, which was later clarified and superseded by NUREG-0737. *Id.*

¹² *Id.* at 26492.

¹³ *See* Statement of Policy on Litigation of TMI-Related Issues in Power Reactor Operating License Proceedings; Revocation of Superseded Policy Statement Concerning TMI-Related Procedures, 54 Fed. Reg. 7897 (Feb. 23, 1989). As noted above, the Chairman cited the lessons learned from the TMI-2 accident as major source of improvement in NRC safety. Jaczko Statement at 6.

The second example of NRC's lessons-learned approach is the agency effort to improve reactor site security following the terrorist attacks on September 11, 2001. NRC quickly issued interim advisories and directives upgrading security at all nuclear power plants.¹⁴ By 2003, NRC had issued formal orders to its reactor licensees to improve security against terrorist attacks, including changes in physical barriers, security guard posts and patrols, more restrictive site access and a host of other security enhancements.¹⁵ These included measures, such as additional makeup water and equipment to mitigate fires, that would have beneficial effects regardless of the triggering event.¹⁶

Eventually, NRC enacted many of its post-9/11 security improvements as formal regulations. In 2007, NRC upgraded the terrorist

¹⁴ See *Private Fuel Storage, L.L.C.* CLI-02-25, 56 NRC 340, 343-44, 356 (2002).

¹⁵ These post-9/11 actions are described in the NRC's later "Design Basis Threat" rulemaking. See *Design Basis Threat; Proposed Rule*, 70 Fed. Reg. 67380 (Nov. 7, 2005); *Design Basis Threat; Final Rule*, 72 Fed. Reg. 12705 (Mar. 19, 2007).

¹⁶ See *New York v. NRC*, 589 F.3d 551, 555 (2nd Cir. 2009). In his Congressional testimony, Chairman Jaczko reiterated that, as a result of the September 11 attacks, NRC has ordered reactor licensees to upgrade equipment available to deal with "a significant fire or explosion," regardless of its cause. Jaczko Statement at 7.

threat that licensees must defend against by issuing an enhanced “Design Basis Threat” rule.¹⁷ And, in 2009, after “a thorough review of the existing physical protection program requirements,” NRC enacted a new “Power Reactor Security Requirements” rule that “codif[ied] generically-applicable security requirements.”¹⁸ On judicial review, the courts have declined to second-guess the various measures NRC took in response to the September 11 attacks.¹⁹

These upgrades – and the methodology by which NRC developed and implemented them – illustrate how NRC undertakes “lessons learned” improvements to reactor safety from events that may bear on the safety and security of U.S. reactor operations.²⁰ As the Chairman and EDO explained at the agency’s March 21st public meeting on still-unfolding events in Japan,

¹⁷ See 10 C.F.R. § 73.1; 72 Fed. Reg. 12705 (Mar. 19, 2007).

¹⁸ Power Reactor Security Requirements; Final Rule, 74 Fed. Reg. 13926, 13927 (Mar. 27, 2009)

¹⁹ See, e.g., *Public Citizen v. NRC*, 573 F.3d 916 (9th Cir. 2009); *Riverkeeper, Inc. v. Collins*, 359 F.3d 156 (2nd Cir. 2004).

²⁰ We note that “lessons learned” from the Chernobyl accident also “added to our understanding of some of the phenomena that may be involved in a severe nuclear accident” and “provided some additional insights that are useful in guiding our severe-accident programs.” See *Potential Implications of Chernobyl Accident for all NRC-Licensed Facilities*, 26 NRC 520, 523 (1987).

NRC will use the same “lessons learned” approach in applying information from the Fukushima Daiichi experience to ensure safety here.

Toward that end, the Chairman, with the agreement of the Commission, has already instructed NRC Staff to create a Task Force to perform both short-term and longer-term tasks relating to Fukushima Daiichi to assure and enhance safety. In the short term, the NRC Task Force has been directed to:

... evaluate currently available technical and operational information from the events [that have occurred at the Fukushima Daiichi nuclear complex] in Japan to identify potential or preliminary near term/immediate operational or regulatory issues affecting domestic operating reactors of all designs[, including their spent fuel pools,] in areas such as protection against earthquake, tsunami, flooding, hurricanes; station blackout and a degraded ability to restore power; severe accident mitigation; emergency preparedness; and combustible gas control.”²¹

The Task Force will begin a longer-term review “as soon as NRC has sufficient technical information from the events in Japan,” and will develop “lessons learned” as it has in the past – that is, NRC will “evaluate all technical and policy issues related to the event to identify potential research,

²¹ SRM-COMGBJ11-0002 (March 21, 2011)(available via NRC web site for ADAMS (Accession No. ML110800456). Further, this Task Force will “develop recommendations, as appropriate, for potential changes to inspection procedures and licensing review guidance, and recommend whether generic communications, orders, or other regulatory requirements are needed.”

generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework that should be conducted by NRC.”²²

The Commission, however, has not suspended reactor operations or licensing activity. As with the post-TMI and post-9/11 regulatory enhancements, any “lessons learned” from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation. No safety, technical, or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review.

For instance, NRC issued a renewed license for the Vermont Yankee Nuclear Power Plant quite recently – on March 21, 2011 – despite the events at Fukushima Daiichi.²³ This decision reflects NRC’s confidence in the robust and redundant safety design and construction of currently operating U.S. nuclear reactors, as restated by the Commissioners and the EDO in their

²² *Id.*

²³ See Entergy Nuclear Operations, Inc.; Vermont Yankee Nuclear Power Station; Notice of Issuance of Renewed Facility Operating License No. DPR-28 for an Additional 20-Year Period, 76 Fed. Reg. 17162 (March 28, 2011).

public briefing on March 21, 2011, and by the Chairman in his Congressional testimony.

II. NRC's statutory and regulatory scheme for operating reactors involves ongoing oversight to enhance safety and ample opportunities for public participation.

The petition for review pending before this Court in this case arises out of an NRC adjudicatory proceeding, initiated by petitioner, on alleged defects in the Oyster Creek application for license renewal. License renewal, of course, is an important matter and receives NRC's full attention. But, as we explain in detail below, NRC's license-renewal process was designed as a particularized and limited inquiry into aging management during the renewal period. It is NRC's continuous and ongoing oversight of licensed reactors, which includes a comprehensive scheme of safety regulation and the presence of resident inspectors at every reactor in the country, that assures public health and safety every day.

Indeed, Chairman Jaczko recently reassured Congress that review of information from Japan thus far, "combined with our ongoing inspection and licensing oversight, gives us confidence that the U.S. plants continue to operate safely."²⁴ As the basis for this confidence, the Chairman pointed to the "diverse and redundant safety systems that are required to be maintained

²⁴ Jaczko Statement at 3.

in operable condition and frequently tested to ensure that the plant is in a high condition of readiness to respond to any situation.”²⁵

NRC’s ongoing oversight assures that a licensed facility remains in compliance with what is known as the plant’s “current licensing basis” or CLB.²⁶ The CLB “represents the evolving set of requirements and commitments for a specific plant that are modified as necessary over the life of a plant to ensure continuation of an adequate level of safety.”²⁷ NRC has emphasized that its ongoing oversight “continuously analyzes conditions, acts, and practices that could affect safe operation of plants”²⁸ through the ongoing regulatory process, which “includes research, inspections, audits, investigations, evaluations of operating experience, and regulatory actions to resolve identified issues.”²⁹

²⁵ *Id.* at 6.

²⁶ Oyster Creek’s CLB with respect to earthquake and flood analysis is not part of the record on review. Oyster Creek’s CLB, however, does implement plant design and construction criteria applicable to earthquakes and floods. This analysis is captured in Chapters 2.4 and 3.7 of the licensee’s Final Safety Analysis Report (“FSAR”) for that facility.

²⁷ Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22461, 22473 (May 8, 1995).

²⁸ *Id.* at 22485.

²⁹ Nuclear Power Plant License Renewal: Final Rule, 56 Fed. Reg. 64943, 64947 (Dec. 13, 1991); *see also* 60 Fed. Reg. at 22485 (NRC’s “program

NRC utilizes information gathered through routine oversight – or from external events – to improve safety through various regulatory mechanisms, any one or all of which NRC might use to implement “lessons learned” from the Fukushima Daiichi disaster. For example, NRC often promulgates new regulations, issues orders modifying or suspending licenses, requires amendments to existing licenses, or takes other licensing actions to improve safety. Such agency actions are accompanied by an opportunity for public comment or a hearing under Section 189a of the Atomic Energy Act, 42 U.S.C. § 2239(a).

Concerned citizens also have two important avenues of redress to seek further action by NRC. The first is a petition for rulemaking under 10 C.F.R. §2.802, by which anyone may request NRC to initiate a rulemaking to issue, amend, or rescind a regulation. Second, concerned citizens may submit enforcement petitions under 10 C.F.R. § 2.206 to request the NRC to institute a proceeding to modify, suspend or revoke a license, or for other appropriate action, where a citizen believes that NRC or

for the review of operating events at nuclear power plants . . . offers a high degree of assurance that events that are potentially risk significant or precursors to significant events are being reviewed and resolved expeditiously”).

one of its licensees has not adequately addressed a safety or environmental issue.³⁰

In sum, the license renewal proceeding before this Court is narrowly focused on aging management. NRC has in place many broader regulatory tools that are appropriate vehicles to implement “lessons learned” from the events at Fukushima Daiichi, including mechanisms for members of the public to bring to NRC’s attention safety concerns that they believe the agency might have overlooked or underappreciated.

III. The petition for review before this Court concerns discrete issues arising out of a now-closed adjudicatory record.

As discussed above, NRC’s comprehensive and ongoing oversight of licensed facilities will assure that useful data and “lessons learned” from Fukushima Daiichi disaster will be absorbed by changes in NRC rules, orders, and license amendments as needed, accompanied by the public participation required by statute and regulation. This process is distinct, however, from the disposition of specific contentions admitted for hearing

³⁰ See, e.g., *Florida Power & Light Co. v. Lorion*, 470 U.S. 729 (1985); *Riverkeeper, Inc. v. Collins*, 359 F.3d 156, 158 (2nd Cir. 2004); *Union of Concerned Scientists v. NRC*, 920 F.2d 50, 56 n.4 (D.C. Cir. 1990); *Massachusetts v. NRC*, 878 F.2d 1516, 1520 (1st Cir. 1989). See also *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Station, Unit 1; H.B. Robinson Plant, Unit 2), DD-06-1, 63 NRC 133, 140 (2006) (granting a § 2.206 petition on fire protection).

(or proposed for admission) in a license renewal adjudication such as the current case before this Court.

As explained in our brief, the license renewal hearing process that is the focus of petitioners' lawsuit in this Court focused strictly on contentions relating to the "potential detrimental effects of aging that are not routinely addressed by ongoing regulatory programs" (Fed. Resp. Br. 3); the license renewal process was "not intended to duplicate the Commission's ongoing review of operating reactors." *Id.*

Years ago, when NRC considered what should be reviewed when the agency is considering a license-renewal application, the agency developed a process by which "adequate safety will be assured during the extended period of operation," but which avoided duplicative, inefficient assessments covered by routine regulatory oversight.³¹ Accordingly, NRC decided that it would not be necessary or desirable to open up the full range of criteria in a plant's current licensing basis to re-analysis during the one-time-only license renewal review. Instead, NRC concluded that "issues concerning operation

³¹ 60 Fed. Reg. at 22464.

during the currently authorized term of operation should be addressed as part of the current license rather than deferred until a renewal review.”³²

The NRC therefore determined that, for license renewal, the agency’s everyday regulatory process should be supplemented only by a very particularized inquiry, appropriate at the license-renewal stage, into “the detrimental effects of aging on the functionality of certain systems, structures, and components in the period of extended operation.”³³ In contrast to aging-management issues, NRC’s ongoing “regulatory process provides reasonable assurance that there is compliance with the [current licensing basis].”³⁴

Accordingly, the NRC hearing below – now before this Court on judicial review – was limited exclusively to aging-management issues. The

³² *Id.* at 22481. NRC concluded that its ongoing regulatory process is “sufficiently broad and rigorous” (56 Fed. Reg. at 64950) to “provide reasonable assurance that, as new issues and concerns arise, measures needed to ensure that operation is not inimical to the public health and safety and common defense and security are ‘backfitted’ onto the plants.” 56 Fed. Reg. at 64945.

³³ 60 Fed. Reg. at 22464.

³⁴ *Id.* at 22473. Indeed, “NRC conducts its inspection and enforcement activities under the presumption that non-compliances will occur.” *Id.* at 22473-74.

hearing, like all NRC contested hearings on license renewal, was limited to contentions material to license renewal and admitted for hearing. The only admitted contention in the present Oyster Creek case required NRC's adjudicatory tribunal, the Atomic Safety and Licensing Board, to determine whether Exelon's program for ultrasonic testing "is adequate to manage the aging effects of corrosion in the sand bed region of Oyster Creek's drywell shell so the intended functions of the shell (*i.e.*, structural integrity and pressure containment) will be maintained during the renewal period consistent with the current licensing basis." (Fed. Resp. Br. 4). That question was answered in the affirmative by the Licensing Board and (on administrative appeal) by the Commission. As our brief explains (*id.* at 43-49), the NRC Staff made all other necessary findings and issued the renewed license on April 8, 2009.

The record before this Court has been closed since the proceeding before the Licensing Board concluded two years ago (Appendix 831-32). As in all Hobbs Act lawsuits seeking direct review in the courts of appeals, this case must be decided "on the basis of the agency record compiled" in

the course of the proceedings below, not on a new record made for the first time in the court of appeals.³⁵

In any event, as discussed above, petitioners have other avenues open to them to raise Fukushima Daiichi-related issues on their own or in public-participation opportunities likely to arise after NRC, the industry, and the public have absorbed the technical, scientific and engineering knowledge that might evolve from the “lessons learned” process.

NRC has shown in implementing upgraded site security requirements after 9/11 to thwart terrorist attacks at nuclear facilities, and in adding safety enhancements after considering the lessons learned from the TMI-2 accident, that the agency is not dependent upon contested hearings to upgrade plant safety. NRC has already announced its plan to draw upon “lessons learned” from the Japan events, as the agency has done previously after natural or man-made disasters. As in the past, NRC will conduct

³⁵ *Florida Power & Light Co. v. Lorion*, 470 U.S. 729, 744 (1985). This Court has Hobbs Act jurisdiction only to review the “final agency action” from which petitioners have sought review. If petitioners were to seek relief before NRC regarding the events at Fukushima Daiichi, which they have not, any resulting final NRC action would not be reviewable under the rubric of the current petition. Rather, as in reopening cases in which a fresh agency order is entered, “the challenging party must file a new . . . petition for review from the now-final agency order.” *TeleSTAR, Inc. v. FCC*, 888 F.2d 132, 134 (D.C. Cir. 1989). *Accord, Council Tree Communications, Inc. v. FCC*, 503 F.3d 284, 287 (3rd Cir. 2007).

rulemaking, or issue orders and other directives, to make upgrades required to implement whatever short-term or longer-term safety improvements emerge from the Task Force directed by the Commission to analyze the Fukushima Daiichi disaster.

Conclusion

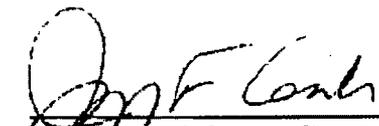
For the reasons given in our brief and at oral argument, the petition for review should be denied, based on the record before this Court. The disaster at the Fukushima Daiichi reactors in Japan is, of course, tragic and serious, and has triggered a full lessons-learned inquiry at NRC that may well lead to new safety measures at American operating reactors. But the disaster is not a basis for judicial relief in this case.

Respectfully submitted,

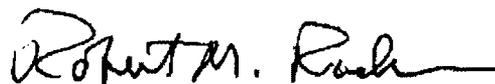


JOHN E. ARBAB
Attorney

U.S. Department of Justice
P.O. Box 23795
Resources Division
Washington, D.C. 20026-3795



JOHN F. CORDES, JR.
Solicitor



ROBERT M. RADER
Senior Attorney
Office of the General Counsel
U.S. Nuclear Regulatory
Commission
11555 Rockville Pike
Mailstop 15D21
Rockville, MD 20852

April 4, 2011

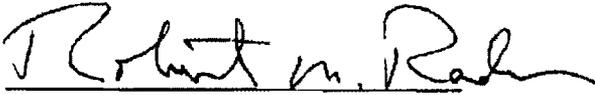
CERTIFICATE OF SERVICE

I hereby certify that I have on this 4th day of April 2011 served, by e-mail and by electronic transmission through the Electronic Filing System, and by U.S. Mail, First-Class, postage prepaid, a copy of "Federal Respondents' Memorandum on the Events at the Fukushima Daiichi Nuclear Power Station" upon the following:

Richard Webster, Esq.
Julia LeMense, Esq.
Eastern Environmental Law Center
744 Broad St., Suite 1525
Newark, NJ 07102
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jlemense@easternenvironmental.org

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Attorney, Appellate Section
United States Department of Justice
Environment & Natural Resources Division
P.O. Box 23795 (L'Enfant Station)
Washington, DC 20026
(202) 514-4046
john.arbab@usdoj.gov


Robert M. Rader

From: [Wiggins, Jim](#)
To: [Howell, Linda](#); [Leeds, Eric](#); [Sheron, Brian](#); [Johnson, Michael](#); [Moore, Scott](#); [Haney, Catherine](#); [Dean, Bill](#); [McCree, Victor](#); [Satorius, Mark](#); [Collins, Elmo](#)
Cc: [Weber, Michael](#); [Virgilio, Martin](#); [Burnell, Scott](#); [Powell, Amy](#); [Doane, Margaret](#); [Hayden, Elizabeth](#)
Subject: FW: FYI - Nyt article RESPONSE
Date: Wednesday, April 06, 2011 11:40:31 AM

Here is a good statement that can be used by staff in response to questions from stakeholders on the NYT article on the Japan event.

-----Original Message-----

From: Burnell, Scott [<mailto:Scott.Burnell@nrc.gov>]
Sent: Wednesday, April 06, 2011 11:04 AM
To: Shapiro, Nicholas S.; Brenner, Eliot; 'Dan.Leistikow@hq.doe.gov'; Bentz, Julie A.
Cc: Hayden, Elizabeth; Harrington, Holly; Doane, Margaret; Batkin, Joshua; Weber, Michael
Subject: RE: Nyt article

All;

The agency continues to develop a path towards releasing the assessment documents. In the meantime, here is the current NRC response to the NY Times article:

The March 26 document represented an interim snapshot of what NRC staff and other experts considered as possible conditions inside the damaged units at Fukushima-Daiichi; the document does not reflect our understanding of the current situation. Based on those possible conditions, the NRC staff's recommendations should be considered prudent measures; they are not offered as the only possible solutions. We shared those recommendations with the Japanese operator and regulator of the plants. We understand they are pursuing an alternative set of strategies to control the plants and ensure the safety of the people working at the plants and living nearby. We are working with our counterparts to consider these strategies and explore additional steps that could enhance safety.

Thank you.

Scott Burnell

HHHHH/125

From: [Harrington, Holly](#)
To: [Hayden, Elizabeth](#)
Subject: RE: Suggestions for Additional Proactive Activities
Date: Wednesday, April 06, 2011 12:02:03 PM

Good. Wasn't clear from her attachment

From: Hayden, Elizabeth
Sent: Wednesday, April 06, 2011 12:01 PM
To: Harrington, Holly
Subject: RE: Suggestions for Additional Proactive Activities

That's what she's doing

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: Harrington, Holly
Sent: Wednesday, April 06, 2011 11:35 AM
To: Hayden, Elizabeth; Brenner, Eliot
Subject: FW: Suggestions for Additional Proactive Activities

Maybe this was what you asked for, but for my needs, it's not nearly specific enough. I thought she was going to go through the clips and other sources to identify the issues/topics that we need to address because they're recurring themes in media coverage/social media, etc.

From that research, we can determine if the topics should be addressed through background briefings for the media, fact sheets, blog posts, etc.

It's the reviewing of the clips that none of us have had time for.

From: Stuckle, Elizabeth
Sent: Wednesday, April 06, 2011 10:27 AM
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; McIntyre, David
Subject: Suggestions for Additional Proactive Activities

HHH/126

Enhancing NRC Credibility, Correcting Misinformation, and Educating the Public Post Japanese Nuclear Incident

What Proactive Measures Should We Take to Provide Correct Information and Educational Material to the Public As a Result of the Japan Nuclear Incident?

A. Public and Media:

- On the public website, post much more prominently proactive educational information related to questions stemming from the Japan incident. Make it very easy for the public to find the information. Currently, because the info is categorized organizationally, it is hard to find for John Q. Public. There should be an “in-your-face”, prominent title (e.g. Japanese Incident Nuclear Information) that would immediately link to the fact sheets and Q&As.
- Monitor key nuclear social media sites and look for opportunities to respond with correct information and educational information. List of nuclear social media sites available. These sites are widely read.
- Make better use of the NRC blog to disseminate educational information.
- Continue to create fact sheets that can be shared with public and media when appropriate.

B. Media:

- Consider the possibility of doing a media advisory, notifying the media that briefings will be made available (on different days and times) on select topics, such as radiation, spent fuel storage, reactor safety, basis for EPZs, etc. These briefings could be set up in a number of ways, including a large dial-in teleconference, perhaps with a web-based component to show visuals. Time for questions would be allowed at the end.

C. Licensees and Public:

- Issue a second Information Notice (IN) to licensees simply telling them (or reminding them) that we have fact sheets and Q&As available on our public web site that might be useful to them or useful to refer people to.

D. Anti-nuclears and Other Spreaders of Misinformation

- Make a list of those furthering misinformation either purposefully or through ignorance and prioritize the list with the worst offenders at the top. Consider ways to reach out to these groups or individuals to provide correct information.

From: [WebContractor Resource](#)
To: [Hayden, Elizabeth](#)
Cc: [Hardy, Sally](#); [WebWork Resource](#)
Subject: RE: Just fyi
Date: Wednesday, April 06, 2011 12:11:36 PM

Good Afternoon Beth,

Please review and approve for live posting.

<http://webwork.nrc.gov:300/japan/japan-info.html>

Thank you.

Maureen Lawrie
Web Team

From: Hardy, Sally
Sent: Wednesday, April 06, 2011 11:00 AM
To: WebContractor Resource
Subject: FW: Just fyi

Please process

From: Hayden, Elizabeth
Sent: Tuesday, April 05, 2011 5:58 PM
To: Hardy, Sally
Subject: FW: Just fyi

Can you please update our Japan website with these links since they are more specific than the other agencies' homepage that we identify?

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: Harrington, Holly
Sent: Tuesday, April 05, 2011 3:28 PM
To: Bonaccorso, Amy; Anderson, Brian; Clark, Theresa; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject: Just fyi

Nuclear Government and Sector Coordinating Council partners,

#####/127

Provided for your situational awareness, please see below websites for your consideration:

USA.gov: [Japan 2011 Earthquake/Tsunami – U.S. Government Information](#).

Additional information may be obtained from the following resources:

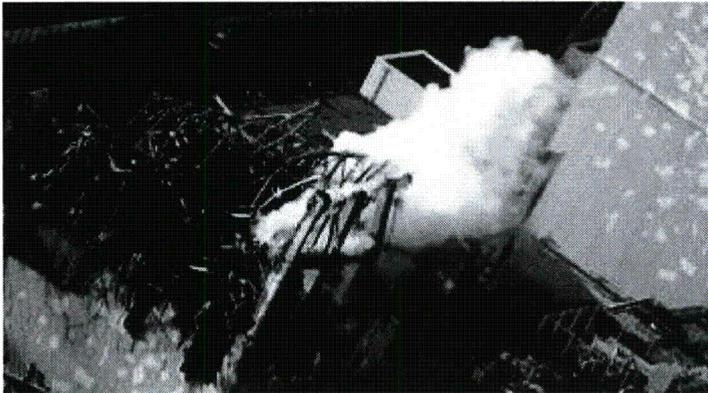
- U.S. Environmental Protection Agency - [Japanese Nuclear Emergency: EPA's Radiation Air Monitoring](#).
- U.S. Department of Energy – [Energy Blog: The Situation in Japan](#)
- U.S. Nuclear Regulatory Commission [website](#) and its [NRC Blog](#)
- U.S. Customs and Border Protection - [CBP Statement Concerning Radiation Monitoring of Travelers, Goods from Japan](#)
- U.S. Food and Drug Administration - [Radiation Safety](#)
- U.S. Centers for Disease Control and Prevention – [Radiation Dispersal from Japan](#)
- U.S. Department of State - [Japan's Earthquake and Tsunami](#)
- U.S. Agency for International Development - [USAID Responds to the Earthquake and Tsunami in Japan](#)
- International Atomic Energy Agency - [Fukushima Nuclear Accident Update Log](#)

From: [Weber, Michael](#)
To: [Boger, Bruce](#); [McGinty, Tim](#)
Cc: [Brenner, Eliot](#); [Hayden, Elizabeth](#); [Borchardt, Bill](#); [Virgilio, Martin](#); [Burnell, Scott](#); [Leeds, Eric](#); [ET05 Hoc](#); [ET01 Hoc](#); [OST02 HOC](#); [LIA06 Hoc](#); [LIA08 Hoc](#); [Miller, Charles](#); [Sanfilippo, Nathan](#); [Doane, Margaret](#); [Mamish, Nader](#); [Zimmerman, Roy](#); [Campbell, Andy](#); [Sewell, Margaret](#)
Subject: FYI - HOMELAND SECURITY NEWSWIRE ARTICLE ON THE DG's REMARKS AT THE CNS MEETING
Date: Tuesday, April 05, 2011 9:51:09 AM

IAEA: after Japan, no more nuclear "business as usual"

Published 5 April 2011

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; "Thinking retrospectively, the measures taken by the operators as a safety measure (were) not sufficient to prevent this accident," Amano said; he added that the crisis in Japan caused by the 11 March earthquake and tsunami "has enormous implications for nuclear power and confronts all of us with a major challenge"



The stricken Fukushima Daiichi nuclear plant // Source: vie-et-mode.be

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 seventy-two 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 11 March 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.

HHHHH/128

AFP reports that the ageing Fukushima Daiichi nuclear power plant, 155 miles northeast of Tokyo, was hit by a 46-foot tsunami on 11 March, 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 20 to 24 June 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 stabilize 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 programs in the wake of the Fukushima disaster.

Amano insisted, though, 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."

Mike

Michael Weber
Deputy Executive Director for Materials, Waste, Research,
State, Tribal, and Compliance Programs
U.S. Nuclear Regulatory Commission

301-415-1705
Mail Stop O16E15

From: [NRC Announcement](#)
To: [NRC Announcement](#)
Subject: General Interest: Agency Task Force to Conduct Near-Term Evaluation of the Need for Agency Actions Following the Events in Japan
Date: Tuesday, April 05, 2011 9:54:34 AM

NRC Daily Announcements



Highlighted Information and Messages



Tuesday April 5, 2011 -- Headquarters Edition

General Interest: Agency Task Force to Conduct Near-Term Evaluation of the Need for Agency Actions Following the Events in Japan

General Interest: Agency Task Force to Conduct Near-Term Evaluation of the Need for Agency Actions Following the Events in Japan

Yellow Announcement No. 042, "Agency Task Force to Conduct Near-Term Evaluation of the Need for Agency Actions Following the Events in Japan," is now available on the [internal Web site](#) under Yellow Announcements.

This announcement can also be found in the ADAMS 2011 Yellow Announcements folder in the Main Library of the ADAMS Document Manager. In the folder, Yellow Announcements are arranged in report number order.

If you have difficulty accessing a Web link in this announcement, contact the [NRC Announcement Coordinator](#), Beverly Martin, ADM/DAS, 301-492-3674.



(2011-04-05 00:00:00.0)

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HHHHH/129

From: [CSIS Proliferation Prevention Program](#)
To: [Hayden, Elizabeth](#)
Subject: CSIS INVITATION: Nuclear Safety After Fukushima
Date: Tuesday, April 05, 2011 11:32:19 AM

To ensure receipt of our email, please add us to your address book.



The CSIS Proliferation Prevention Program invites you to a timely discussion on:

Nuclear Safety After Fukushima

The March 11, 2011 earthquake and tsunami have had a devastating effect on Japan. The impact has been magnified by the crisis at the Fukushima Daiichi nuclear power plant, where efforts continue to contain radiation from damaged reactors and spent fuel pools. Beyond the inevitable questions posed by the media in the midst of the crisis, national and international authorities will be reviewing safety regulations and their implementation. The U.S. Congress has already held several hearings and the International Atomic Energy Agency Director Yukiya Amano has called for a nuclear safety summit in June.

The CSIS Proliferation Prevention Program is pleased to bring two expert panels together to analyze the current situation and its impact on U.S. and international nuclear safety.

**Thursday, April 7, 2011
from 2:00pm to 5:00pm
B1 Conference Center**

CSIS, 1800 K Street NW, Washington, DC 20006

Speakers:

Opening Remarks: Dr. John Hamre, President, Center for Strategic and International Studies
Moderator: Ms. Sharon Squassoni, Director, CSIS Proliferation Prevention Program

2:15-3:45: National Responses

Mr. Alex Flint, Senior Vice President for Governmental Affairs, Nuclear Energy Institute
Ms. Ellen Vancko, Nuclear Energy and Climate Change Project Manager, Union of Concerned Scientists
Mr. Mark Holt, Specialist in Energy Policy, Congressional Research Service

3:45-5:00: International Responses

Dr. Olli Heinonen, Senior Fellow, Belfer Center for Science and International Affairs, Harvard Kennedy School
Mr. Carlton Stoiber, Chair of the Nuclear Security Working Group, International Nuclear Law Association
Ms. Carol Kessler, Chair of the Nonproliferation and National Security Department, Brookhaven National Laboratory

HHHHH/130

Please **RSVP** to Ms. Tamara Spitzer-Hobeika at tspitzer-hobeika@csis.org or
202.775.3239.



To unsubscribe from all CSIS emails, please [click here](#).



Lee, Richard

From: Lee, Richard
Sent: Monday, April 04, 2011 10:51 AM
To: Salay, Michael
Cc: Esmaili, Hossein
Subject: RE: Fukushima - help needed

Mikey-san:

I do not believe Dana has setup a chemistry model to do a first order approximation of the oxygen content in the drywell. DOE analysis has not taken into account many phenomena such as oxygen re-absorbed into water, oxygen reaction with metallic surfaces, CO2 evolving from water that also inert the drywell atmosphere.

Dana is on his way to DC for ACRS meetings. He will arrived late today. I can ask him again. This point may be mood by tomorrow.

My understanding is that N2 inerting system has been delivered to the Fukushima site. On Tuesday, TEPCO plans to start the inerting the drywell.

Richard
P.S. Are you sleeping too much?

From: Salay, Michael
Sent: Monday, April 04, 2011 10:29 AM
To: Lee, Richard
Subject: RE: Fukushima - help needed

Richard,

I tried calling you a little while ago.

I can't recall: will Dana providing a calculation on this? The oxygen concentration has been a source of disagreement. TEPCOs analysis shows much less oxygen.

It is clear that Dana doesn't think much of the oxygen concern. I can't really provide an alternative viewpoint without being able to provide an analysis to back it up. In absence of an alternate viewpoint the default US position is that a combustible mixture exists in the DW.

I think an in-depth analysis of the oxygen balance and inerting from Dana would help to clear up the issue.

I'm going to sleep now.

-Mike

From: Lee, Richard
Sent: Friday, April 01, 2011 3:22 PM
To: Esmaili, Hossein; Gauntt, Randy; Gauntt, Randy (home); Salay, Michael; Michael Corradini; Farmer, Mitchell T.
Subject: FW: Fukushima - help needed

FYI only

HHHH/B1

From: Basu, Sudhamay
Sent: Friday, April 01, 2011 2:28 PM
To: Lee, Richard
Subject: FW: Fukushima - help needed

From: Powers, Dana A [mailto:dapower@sandia.gov]
Sent: Friday, April 01, 2011 2:13 PM
To: Basu, Sudhamay
Subject: RE: Fukushima - help needed

Sud, I think I can explain this, but I am by no means a believer. The concern as I understand this is that seawater pumped into the vessel is saturated in oxygen. The seawater gets hot if not boiled and oxygen is expelled. To be sure some seawater is leaked into the drywell through the recirculation pump seals where it also gets hot. Up to some temperature near the boiling point of water, the solubility of oxygen decreases with temperature so there is an accumulation of oxygen, hydrogen and steam in the drywell head space. It is thought now that this mixture is "steam inerted" so it cannot deflagrate or detonate. If cold water is injected, the steam will condense and this will leave a combustible mixture of hydrogen and oxygen in the head space. They fear a deflagration that would overpressure the drywell. (I think this is nonsense. The combination of radiolysis and corrosion probably means the net flux of oxygen is into the water and not out of it, plus the seawater also carries a heavy load of dissolved carbon dioxide that is fully capable of inerting a hydrogen-oxygen mixture. Whether there is enough CO2 to inert, I don't know, yet.) At any rate, they have been hesitant to inject cold water. They have been content up until now to allow flooding of the drywell by leakage through the recirculation pump seals. My understanding is that they are getting more concerned about melting, so they are revising positions to advocate cold flooding of the drywell. I'm much less concerned about melting within the reactor pressure vessel for reasons outlined in my previous missive. Dana

From: Basu, Sudhamay [mailto:Sudhamay.Basu@nrc.gov]
Sent: Friday, April 01, 2011 11:32 AM
To: Powers, Dana A
Cc: Lee, Richard
Subject: RE: Fukushima - help needed

Thanks Dana for your thoughts and trust me, every bit helps now. I would like to pursue couple of things further. When we did Mark I liner failure study, we used a bounding estimate of 30 w/o unoxidized Zr (exceeding that is physically unreasonable a la Theo). According to APRIL calculation, you could get 100 w/o metal (Zr and SS) initially out of RPV and according to MAAP, the other extreme of fully oxidized core. Say we get 30 w/o unoxidized metal, what sort of radionuclide release can we expect in case there is a breach creating a release path. The other thing is attenuation by an overlying water pool. Scrubbing is real and my understanding is BWR SAMG recommends flooding for, if nothing else, that reason. Yet, I read in some communication that the NRC team is debating whether drywell flooding should be recommended at this stage of the accident because of the prospect of noncondensable generation and fear of potential explosion. Given the decay heat, if we keep the core debris just submerged, it is not clear to me that the noncondensable inventory would be so large as to the potential for an explosion. Can you shed any light on this? Ref

From: Powers, Dana A [mailto:dapower@sandia.gov]
Sent: Friday, April 01, 2011 12:44 PM
To: Basu, Sudhamay
Cc: Lee, Richard
Subject: RE: Fukushima - help needed

Sud, If indeed there is a large bed of precipitated salt in the lower head of the pressure vessel, this bed coupled with the dense forest of steel control rod drives will greatly slow any progression of the melting of the lower head of the pressure vessel. Should the accident progress so that molten core debris can penetrate the reactor vessel and molten core debris cascade into the drywell, I would expect flow to the vessel wall and attack on the wall unless there is sufficient cooling to

prevent this ala Theophanous. Attack on the concrete will depend critically on the amount of unoxidized zirconium in the core debris. Ordinarily, in accident that we calculate, there is quite a lot of unreacted zirconium. The accident at Fukushima is of course quite different than a typical station blackout accident and I do not now have a good feeling for the amount of unreacted zirconium present. The unreacted zirconium in the core debris will react with gaseous product of concrete decomposition to produce an energetic transient in the debris. (Any prediction of quenching of the core debris by water is predicated on the complete oxidation of zirconium in the core debris.) Erosion of concrete will eventually collapse the pedestal typically between 1 and 5 days. This will cause the vessel to drop and will tear open penetration and create a pathway to reactor building. The pathway will be high in the building so there will be very little natural attenuation of aerosol releases that escape into the reactor building.

I suspect that events of the accident as well as further events that lead to the penetration of the vessel will largely rid the core debris of volatile radionuclides (Cs, I, noble gases) prior to interactions with the concrete. There may be some Te available for slow release. Any high temperature transient during the core debris interactions with the concrete will lead to the release of barium and strontium. There will be a mechanical release of droplets of core debris (1-5 micrometers in size) that will contain the radionuclides at the bulk core debris concentration. A bounding estimate of this release is 0.0001 times the mass of gas sparged through the core debris during the attack on the concrete. It is not a large source of release, but it is persistent. Water overlying the core debris while it attacks the concrete will greatly attenuate the radionuclide release. Our past experiments with as little as a foot of water depth largely snuffed the production of aerosols through a combination of crust formation and gas bubble scrubbing by the water. As the water gets contaminated there will be a slow release of radionuclides suspended in the water by the bubble bursting mechanism. Hope this helps. Dana

From: Basu, Sudhamay [mailto:Sudhamay.Basu@nrc.gov]
Sent: Friday, April 01, 2011 9:34 AM
To: Powers, Dana A; Powers, Dana
Subject: Fukushima - help needed

Hi Dana,

Richard asked me to forward the attachment to you and ask you for some help. The attachment is CORQUENCH calculations for ex-vessel coolability performed by Kevin Robb at UW and Mitch farmer at ANL. I believe Richard sent the information to John Kelly already. The question is given the melt mass in the cavity and assuming the containment is breached, how much fission product inventory will likely get out in the environment – also keeping in mind the 21-day (from the start of accident) decay of some isotopes. Richard is asking you to do some calculations in that respect and advise us of the outcome. I believe Kevin did some parametric on the core inventory that will be relocated to the cavity. If you wish, you can build on that for your calculations. I am trying to get in touch with Mitch in case we need some clarification. His number is 630 252 4539 in case you need to get in touch him. Thanks for your help.

Sud

To: [Harrington, Holly](#); [Burnell, Scott](#); [McIntyre, David](#); [Bonaccorso, Amy](#)
Cc: [Stuckle, Elizabeth](#)
Subject: Work Assignments for Elizabeth
Date: Tuesday, April 05, 2011 11:43:56 AM

I have asked Elizabeth Stuckle to help you out on the following items after getting details from each of you on how to proceed, contacts, etc. some items are date-driven, others are not.

--Review the newsclips for the past 1-2 weeks and new ones as they come up to look for misstatements/misconceptions that we need to follow up on.

--Getting out in front--Review news to identify major questions/concerns frequently coming up—such as the safety of spent fuel pools, dry-casks vs pools, adequacy of backup power for plants, EPZs/evacuation. Develop recommendations how to address getting information out on these items (fact sheets, briefings, media bridge, Blog, etc....).

--Talk with fuel cycle folks to find out what they may need help on from OPA (Dave)

--Prepare to take over for responding to public inquiries

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

HHHHH/132

From: [Hayden, Elizabeth](#)
To: [Harrington, Holly](#); [Burnell, Scott](#); [McIntyre, David](#); [Bonaccorso, Amy](#)
Cc: [Stuckle, Elizabeth](#); [Brenner, Eliot](#)
Subject: Work Assignments for Elizabeth
Date: Tuesday, April 05, 2011 11:48:00 AM

I have asked Elizabeth Stuckle to help you out on the following items after she gets details from each of you on how to proceed, contacts, etc.; some items are date-driven, others are not.

- Review the newsclips for the past 1-2 weeks and new ones as they come up to look for misstatements/misconceptions that we need to follow up on.
- Getting out in front--Review news to identify major questions/concerns frequently coming up—such as the safety of spent fuel pools, dry-casks vs pools, adequacy of backup power for plants, EPZs/evacuation. Develop recommendations how to address getting information out on these items (fact sheets, briefings, media bridge, Blog, etc....).
- Talk with fuel cycle folks to find out what they may need help on from OPA (Dave)
- Prepare to take over 4/11 for responding to public inquiries on Japan-related questions (Amy)
- Help with media/public at Thursday's (4/7) ACRS meeting for the portion on Japan (Holly)
- Attend the OIG Tritium entrance meeting 4/13 (Scott)
- Repond to long-standing requests from the public (Scott)

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

HAH/133

From: [Hayden, Elizabeth](#)
To: [Medina, Veronika](#)
Subject: FW: Graphic wanted by member
Date: Tuesday, April 05, 2011 12:43:00 PM

Can you help this lady from Xcel?

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: MALONEY, Jennifer [mailto:jxm@nei.org]
Sent: Tuesday, April 05, 2011 12:13 PM
To: Hayden, Elizabeth; LEVY, Rafael; FERGUSON, Lynn
Subject: Graphic wanted by member

All:

Pamela Johnson from Xcel Energy would like to use the figure on page 3 of the fact sheet that went out yesterday on nuclear plant enhancements (http://resources.nei.org/documents/japan/FactSheet_US_Nuclear_Plant_Enhancements_4-4-11.pdf). It is titled "Major Modifications and Upgrades to U.S. Boiling Water Reactors with Mark I Containment Systems." Her CNO would like to use it in a presentation he is doing.

You can send the .tif file (or however you have it) directly to Pamela at Pamela.johnson@xenuclear.com. Please CC me, so I know it is done.

Let me know if there is a problem.

Thank you,

Jennifer Maloney
Media Relations and Member Communications Specialist

Nuclear Energy Institute
1776 I Street NW, Suite 400
Washington, DC 20006
www.nei.org

P: 202-739-8023
F: 202-533-0121
E: jxm@nei.org

11111/134



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Sent through mail.messaging.microsoft.com

From: OECD Nuclear Energy Agency
To: OECD Nuclear Energy Agency
Subject: OECD Nuclear Energy Agency: Monthly News Bulletin - April 2011
Date: Tuesday, April 05, 2011 1:07:34 PM
Attachments: [image001.png](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)



NEA MONTHLY NEWS BULLETIN

Nuclear Energy Agency



April 2011 | www.oecd-nea.org

New at the NEA

Nuclear safety and regulation

Radiological protection

Nuclear law

Nuclear science

New publications

Data Bank

New at the NEA

Responding to the nuclear accident at Fukushima

On 11 March 2011, Japan experienced a major earthquake followed by a tsunami of cataclysmic magnitude. The OECD Nuclear Energy Agency (NEA) wishes to express its condolences to all those who have been affected by this disaster. It has offered its assistance to the Japanese authorities as they address the very challenging situation at the Fukushima nuclear power plant. The NEA will be playing a key role in the evaluation of the accident and the dissemination of lessons learnt based on its various areas of expertise and its competence in addressing emergency and accident management issues. The following updates provide initial insights into some of the steps being taken by the NEA.

Nuclear safety and regulation

Flashnews activated to share accurate emergency information among nuclear regulators

On 11 March the NEA [Working Group on Public Communication of Nuclear Regulatory Organisations \(WGPC\)](#) activated the Flashnews system in response to the Fukushima accident. Flashnews allows for the fast exchange of information among national nuclear regulators and is used to help inform the public about nuclear events occurring around the world.

New and existing nuclear safety groups consider Fukushima implications

The NEA [Committee on Nuclear Regulatory Activities \(CNRA\)](#) will establish a senior-level task group to exchange information, co-ordinate activities and examine implications in relation to the Fukushima accident. Once established, members of the group will immediately begin exchanging information prior to the first meeting to be held in Paris in early May. The NEA [Committee on the Safety of Nuclear Installations \(CSNI\)](#) will focus on the technical aspects of safety questions raised by the accident. It will identify issues that could require in-depth evaluation by existing or new nuclear safety task groups. The Fukushima accident will be a special topic for discussion during the June CNRA and CSNI meetings and subsequent working group sessions. Please visit the [NEA website](#) for more information on nuclear safety.

Radiological protection

INEX-4 and CRPPH meetings present opportunities to discuss Fukushima

The Fukushima accident will have a significant impact on NEA work in radiological protection. A meeting of the Working party on Nuclear Emergency Matters (WPNEM) on May 3-4 that inter alia will discuss the [4th International Nuclear Emergency Exercise \(INEX-4\)](#) and the annual meeting of the [Committee on Radiation Protection and Public Health \(CRPPH\)](#) on 17-19 May will present the first international opportunities for experts in this field to discuss the preliminary feedback from emergency measures taken in Japan. A further INEX workshop is planned for 6-7 December 2011. During the May meeting, the CRPPH will submit for approval a report summarising the resources needed to implement the [International Commission on Radiological Protection \(ICRP\) Publication 60](#) recommendations into national law and an assessment of the resources that will be needed to implement the new [ICRP 103 recommendations](#). This will provide member countries with information important for implementing these new recommendations as detailed in the [International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources](#). More on NEA work in radiological protection can be found [here](#).

Nuclear law

HHHHH/135

The legal aspects of the Fukushima accident

NEA Legal Affairs will dedicate a special session of the [Nuclear Law Committee](#) (NLC) on 15-16 June to discuss the accident at Fukushima and how the Japanese government intends to deal with liability and compensation for the resulting nuclear damage. In its capacity as secretariat, the NEA is prepared to accommodate discussions on member country initiatives in the field of third party liability for nuclear damage, especially where signatories to the [2004 protocols](#) enhance their efforts for the entry into force of those protocols to provide better protection to potential victims of a nuclear accident. Legal questions related to the accident will be addressed in the June issue of the [Nuclear Law Bulletin](#). Furthermore, the 2011 session of the [International School of Nuclear Law](#) will provide an opportunity for the most renowned international nuclear lawyers to exchange on the impacts, lessons learnt and consequences of this accident as it relates to international nuclear law. More information on nuclear law can be found [here](#).

Nuclear science

Nuclear science groups prepared to reassess predictive capabilities

NEA nuclear science working parties and expert groups carry out technical studies in the areas of fuel cycle physics and chemistry, reactor physics, criticality safety, materials performance and radiation shielding. A key focus in each area is on the development, application and validation of modelling tools and their associated nuclear data. These tools are used by the nuclear industry in the design, operation and safety assessment of nuclear facilities including commercial nuclear power plants (NPPs). As details of the Fukushima accident emerge, and as the safety cases and emergency procedures for NPPs are reappraised, NEA nuclear science working parties and expert groups may be required to analyse new scenarios which characterise the evolution of the reactor core and the spent fuel ponds during such an event. Some of these scenarios might challenge the predictive capability of current modelling methods. In that case, new activities could be proposed and discussed by various nuclear science technical groups with the aim of targeting any shortfall in predictive capability, identifying possible methods developments to address the shortfall and providing the means to assess the accuracy of new methods developed. For more information on nuclear science, please visit the [NEA website](#).

New publications

Free publications are available [at this link](#). Paper copies may be requested by [sending an e-mail](#).

[The Nuclear Regulator's Role in Assessing Licensee Oversight of Vendor and Other Contracted Services](#)
ISBN: 978-92-64-99157-6, 38 pages.

Publications on sale can be ordered at the [OECD bookshop](#).

Data Bank

[NEA Data Bank newsletter](#)

Computer program services

[New computer programs available](#)

31-MAR-11	CSNI201Z	MCCI-2 PROJECT, Melt Coolability and Concrete Interaction Phase 2 Project (Arrived)
29-MAR-11	NEA-185Z	PHITS-2.24, Particle and Heavy Ion Transport code System (Tested)
28-MAR-11	CCC-0295	ELGATL, Calculation of Energy Spectra from Coupled Electron-Photon Slowing Down (Arrived)
22-MAR-11	USCD1240	VIM_NC, VIM color syntax for Nuclear Codes: NJOY, DRAGON, PARTISN, TORT, MONK, and MCNP (Tested)
16-MAR-11	IAEA128Z	SHIELD, Monte-Carlo Code for Simulating Interaction of High Energy Hadrons with Complex Macroscopic Targets (Tested)
16-MAR-11	IAEA0970	STOPOW, Stopping Power of Fast Ions in Matter (Tested)
15-MAR-11	USCD1238	ALICE2011, Particle Spectra from HMS precompound Nucleus Decay (Tested)
07-MAR-11	CCC-076Z	SWORD 3.2, SoftWare for Optimization of Radiation Detectors (Arrived)
03-MAR-11	NEA-1856	VESTA 2.0.3, Monte Carlo depletion interface code (Arrived)
03-MAR-11	NEA-1210	ZZ HATCHES-19, Database for radiochemical modelling (Tested)

About the NEA

NEA membership consists of 29 OECD countries. The mission of the NEA is to assist its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes. It provides authoritative assessments and forges common understandings on key issues, as input to government decisions on nuclear energy policy and to broader OECD policy analyses in areas such as energy and sustainable development. The information, data and analyses it provides draw on one of the best international networks of technical experts.

To unsubscribe from this bulletin, [please use this link](#).



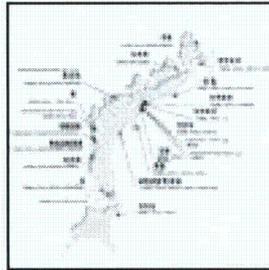
NEA MONTHLY NEWS BULLETIN

Nuclear Energy Agency

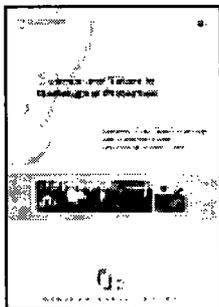


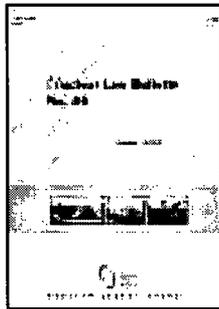












From: MALONEY, Jennifer
To: Medina, Veronika; Pamela.johnson@xenuclear.com
Cc: Hayden, Elizabeth
Subject: RE: Graphic wanted
Date: Tuesday, April 05, 2011 1:30:55 PM

Sorry Veronika and Elizabeth. I accidently included you in the email I sent to our create services department.

My apologies.

Regards,

Jennifer Maloney
Media Relations and Member Communications Specialist

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1776 I Street NW, Suite 400
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P: 202-739-8023
F: 202-533-0121
E: jxm@nei.org

From: Medina, Veronika [mailto:Veronika.Medina@nrc.gov]
Sent: Tuesday, April 05, 2011 1:25 PM
To: Pamela.johnson@xenuclear.com
Cc: MALONEY, Jennifer; Hayden, Elizabeth
Subject: Graphic wanted

Hi Pamela,

The graphic you requested on page 3 of the fact sheet on nuclear plant enhancements (http://resources.nei.org/documents/japan/FactSheet_US_Nuclear_Plant_Enhancements_4-4-11.pdf) is not an NRC graphic; therefore we don't have the original graphic. I would suggest you to contact someone in NEI. They might be able to direct you someone in their graphic department and help you with your request.

Regards,
Veronika Medina
Office of Public Affairs
US Nuclear Regulatory Commission
301-415-8200

11111/136



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Sent through mail.messaging.microsoft.com

From: [WebContractor Resource](#)
To: [Hayden, Elizabeth](#)
Subject: RE: Photo for Web
Date: Tuesday, April 05, 2011 3:19:06 PM

Hi Beth,

The updated home page has been posted:

<http://148.184.174.31/>

Thank You,

David

Web Team

From: Hayden, Elizabeth
Sent: Tuesday, April 05, 2011 2:48 PM
To: WebContractor Resource
Subject: RE: Photo for Web

Yes, Please use image 5 with the following caption and post by 3:30 pm today.

NRC Chairman Gregory Jaczko (standing) addressed the IAEA's 5th Meeting of the Convention on Nuclear Safety, in Vienna, Austria, on the U.S. nuclear regulatory program. He also provided an update on NRC's response to the events at the Fukushima Daiichi nuclear power plants in a separate session. Other U.S. participants (seated on right) were Bill Borchardt (NRC), James Ellis (Institute for Nuclear Power Operations), and Jack Grobe (NRC).

[please link "Convention on Nuclear Safety" to <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1650/r3/> and "IAEA" to <http://www.nrc.gov/reading-rm/basic-ref/glossary/international-atomic-energy-agency-iaea.html> . Also link "update" to <http://pbadupws.nrc.gov/docs/ML1109/ML110940373.pdf>

Thanks,

Beth

From: WebContractor Resource
Sent: Tuesday, April 05, 2011 2:31 PM
To: Hayden, Elizabeth
Subject: RE: Photo for Web

Hi Beth,

Here is image 5 and image 4.....I'm guessing you'll like image5 better.....I can still remove more of the screen above if you like.....

Thank You,

David

Web Team

HHHH/137

From: Hayden, Elizabeth
Sent: Tuesday, April 05, 2011 2:15 PM
To: WebContractor Resource
Subject: RE: Photo for Web

Please just move the 2nd shot down a wee bit to capture a slight bit more of the blue counter in front and a tiny bit less of the screen overhead and that should be perfect.

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: WebContractor Resource
Sent: Tuesday, April 05, 2011 2:13 PM
To: Hayden, Elizabeth
Subject: RE: Photo for Web

Hi Beth,

Here are a couple more.....

Thank You,
David
Web Team

From: Hayden, Elizabeth
Sent: Tuesday, April 05, 2011 1:55 PM
To: WebContractor Resource
Subject: RE: Photo for Web
Importance: High

I like the second one. Please restore a bit more of the left side of the photo so it looks more balanced.

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: WebContractor Resource
Sent: Tuesday, April 05, 2011 1:40 PM

To: Hayden, Elizabeth
Subject: RE: Photo for Web

Sorry about that.....when you said crop all sides, I took that to mean you wanted to concentrate on the Chairman.

Here are two more.....

Thank You,
David
Web Team

From: Hayden, Elizabeth
Sent: Tuesday, April 05, 2011 1:10 PM
To: WebContractor Resource
Subject: RE: Photo for Web

Too much. I need to see all the people sitting in the front row.

Beth Hayden
Senior Advisor
Office of Public Affairs
U.S. Nuclear Regulatory Commission
--- Protecting People and the Environment
301-415-8202
elizabeth.hayden@nrc.gov

From: WebContractor Resource
Sent: Tuesday, April 05, 2011 12:51 PM
To: Hayden, Elizabeth
Subject: RE: Photo for Web

Hi Beth,

Attached is the cropped photo.

Thank You,
David
Web Team

From: Hayden, Elizabeth
Sent: Tuesday, April 05, 2011 12:21 PM
To: WebWork Resource; WebContractor Resource; Hardy, Sally
Subject: Photo for Web

Please use the center photo (005) to crop off all sides and send to me so that I can see what it looks like before we post. I'd like to see the cropped version by 1:30 pm, today if possible. Thanks.

Beth





From: [Cordes, John](#)
To: [Farrar, Karl](#)
Cc: [Schmidt, Rebecca](#); [Brenner, Eliot](#); [Hayden, Elizabeth](#); [Sheehan, Neil](#); [Rader, Robert](#)
Subject: Response to court of appeals inquiry about Japan events
Date: Tuesday, April 05, 2011 3:51:50 PM
Attachments: [Response to Third Circuit Japan inquiry.pdf](#)

Sorry, Karl. We should have sent a copy of this response to you right away. It was filed yesterday afternoon. It responds to the Third Circuit's request that we discuss the relationship between the Japan events and the pending Oyster Creek judicial review action. Bob Rader is our chief lawyer on the court case.

I'm also sending it to Congressional Affairs and to Public Affairs, in case they receive inquiries.

John Cordes

HHHH / 138

**IN THE UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT**

NEW JERSEY ENVIRONMENTAL FEDERATION,)	
<i>et al.,</i>)	
)	
Petitioners,)	
)	
v.)	No. 09-2567
)	
NUCLEAR REGULATORY COMMISSION, et al.,)	
)	
Respondents,)	
)	
and)	
)	
EXELON CORPORATION,)	
)	
Intervenor.)	

**FEDERAL RESPONDENTS' MEMORANDUM ON THE EVENTS
AT THE FUKUSHIMA DAIICHI NUCLEAR POWER STATION**

By letter dated March 21, 2011, this Court directed counsel "to advise the Court what impact, if any, the damages from the earthquake and tsunami at the Fukushima Daiichi Nuclear Power Station have on the propriety of granting the license renewal application for the Oyster Creek Generating Station." The Nuclear Regulatory Commission (NRC) is carefully monitoring those events, and assisting the Japanese government in

understanding, controlling and limiting plant damage. NRC is also evaluating the information from these events for planning both short-term and longer-term responses to ensure the safety of United States reactors. In support of these tasks, NRC is gathering and absorbing data from the Fukushima Daiichi site that will enable NRC, with appropriate public participation, to put in place any new safety measures necessary to protect public health and safety in the United States.

NRC issued a renewed license for Oyster Creek Nuclear Generating Station almost two years ago, on April 8, 2009 (*see* Fed. Resp. Br. 48 & n.23). The renewed license is before this Court on a series of process-driven challenges brought by petitioners. As our brief shows, none of petitioners' claims finds support in the extensive administrative record underlying NRC's license-renewal decision. Oyster Creek now is operating under its 20-year renewed NRC license, but its owner, Exelon Generating Company, has announced publicly that it will cease operations in 2019.¹

In response to the disaster at Fukushima Daiichi, NRC has authority to order Exelon, like other licensees of operating nuclear plants, to adopt whatever measures NRC determines are needed in the short term for continued assurance of the public health and safety while NRC considers

¹ *See* <http://www.nytimes.com/2010/12/09/nyregion/09nuke.html>.

longer-term measures, including changes in its safety regulations. Such measures may be subject to site-specific considerations. At this point, however, NRC has stated that licensed nuclear power reactors in the United States are currently safe, and may continue to operate under NRC's comprehensive scheme of safety regulations and inspections, pending development of any new safety measures that emerge as NRC's "lessons-learned" project moves forward.

I. NRC will carefully gather and analyze data from the damage to the Fukushima Daiichi plant to ensure safety at U.S. reactors as necessary to protect public health and safety in the United States.

A. NRC's immediate response to Japan events.

On March 21, 2011, the NRC Commissioners and the head of the NRC Staff – the Executive Director of Operations (EDO) -- conducted a public briefing on NRC's response to the events at the Fukushima Daiichi facility.² Each Commissioner extended personal condolences to the Japanese people for their hardships and losses in this great tragedy. Chairman Jaczko stated that the purpose of the meeting was "to discuss the tragic events in Japan and to begin to consider possible actions we may take to verify the safety of the nuclear facilities" in the United States. (Tr. 3).

² The transcript of this public hearing may be found at the NRC website in the "ADAMS" database as Accession No. ML110810254.

The Chairman noted that, since the earthquake and tsunami had struck, the NRC's headquarters operations center has, in addition to ordinary 24-hour operations, been continuously staffed just to "monitor and analyze events at nuclear power plants in Japan." (Tr. 4). The Chairman also pointed out that, at the request of the Japanese government, NRC had sent a team of agency technical experts in Japan to provide on-the-ground support. (*Id.*).

Chairman Jaczko outlined how these tragic events would shape NRC policy and regulatory changes:

Here in the United States we have an obligation to the American people to undertake a systematic and methodical review of the safety of our own domestic nuclear facilities in light of the natural disaster and resulting nuclear situation in Japan. Beginning to examine all available information is an essential part of our effort to analyze the event and understand its impacts on Japan and implications for the United States. Our focus will always be on keeping plants and radioactive materials in this country safe and secure.

As the immediate crisis in Japan comes to an end we will look at any information we can to gain experience from the event and see if there are any changes we need to make to further protect public health and safety. Together with my colleagues on the Commission, we will review the current status and identify the steps we will take to conduct that review. In the meantime we will continue to oversee and monitor plants to ensure that U.S. reactors remain safe.³ (Tr. 5)

³ Each Commissioner supported the Chairman's approach, noting the need for NRC to confirm, by thoughtful and rational examination, that its approach to the regulation of nuclear power is comprehensive and correct, while applying any lessons learned from these events. (Tr.7-8).

EDO William Borchardt then commented on how NRC had utilized this “lessons learned” process following significant events in the United States. Concluding that the “current fleet of reactors and materials licensees continue to protect the public health and safety,” the EDO pointed to the principle of redundant defenses against unanticipated events called “Defense in Depth:”

The fact that every reactor in this country is designed for natural events based upon the specific site that that reactor is located, that there are multiple fission product barriers, and that there are a wide range of diverse and redundant safety features in order to provide that public health and safety assurance. We have a long regulatory history of conservative decision-making. We’ve been intelligently using risk insights to help inform our regulatory process, and we have never stopped [making] improvements to the plant design as we learn from operating experience over the more than 35 years of civilian nuclear power in this country. Some have been derived from lessons learned from previous significant events, such as Three Mile Island. We have severe accident management guidelines, revisions to the emergency operating procedures, procedures and processes for dealing with large fires and explosions, regardless of the cause.⁴ (Tr. 9-10).

As the EDO stated, NRC’s “philosophy of Defense-in-Depth . . . recognizes that the nuclear industry requires the highest standards of design, construction, oversight, and operation,” but even so, NRC regulation does

⁴ In support of this “lessons learned” philosophy, the EDO observed that NRC continues “to gather information [from Japan] and assess that information for implications on the U.S. facilities.” (Tr. 10)

“not rely on any one level of protection” to protect public health and safety. (Tr. 13-14) Further, the EDO said, “the designs for every single reactor in this country take into account *the specific site* that that reactor is located and does a detailed evaluation for any natural event such as *earthquakes, tornadoes, hurricanes, floods, tsunami, and many others.*”⁵ (Tr. 14) (emphasis added).

Later, Chairman Jaczko reiterated in testimony before Congress that NRC has “taken advantage of the lessons learned from previous operating experience,”⁶ including most significantly, the Three Mile Island accident in 1979, “to implement a program of continuous improvement for the U.S.

⁵ The EDO stressed that NRC planning for severe accidents includes the assumption of system failures:

Also as a result of operating experience and ongoing research programs, we have developed requirements for severe accident management guidelines. These are programs that perform the “what if” scenario. What if all of this careful design work, all of these important procedures and practices and instrumentation, what if that all failed? What procedures and policies and equipment should be in place to deal with the extremely unlikely scenario of a severe accident? Those have been in effect for many years and are frequently evaluated by the NRC inspection program. (Tr. 15)

⁶ Written Statement by Gregory B. Jaczko, Chairman, U.S. Nuclear Regulatory Commission to the Subcomm. on Energy and Water of the Senate Appropriations Comm. at 6 (March 30, 2011) (“Jaczko Statement”). (ADAMS Accession No. ML110890505)

reactor fleet.”⁷ The Chairman added that operating experience and research programs have produced severe accident management guidelines for U.S. reactors to ensure that, in the event all precautions failed and a severe accident occurred, “the plant would still protect public health and safety.”⁸

In short, the public statements of NRC’s leaders show that the agency remains confident that U.S. reactors, as designed, constructed, and operated, are safe, but acknowledge the need to monitor and learn from the events at the Fukushima Daiichi Nuclear Power Station to ensure safety at U.S. reactors, as NRC assists the Japanese government in that disaster.⁹

⁷ *Id.*

⁸ *Id.* at 6-7.

⁹ President Barack Obama, in addressing the American people on March 17, 2011, echoed the statements by NRC leaders:

Our nuclear power plants have undergone exhaustive study, and have been declared safe for any number of extreme contingencies. But when we see a crisis like the one in Japan, we have a responsibility to learn from this event, and to draw from those lessons to ensure the safety and security of our people. That’s why I’ve asked the Nuclear Regulatory Commission to do a comprehensive review of the safety of our domestic nuclear plants in light of the natural disaster that unfolded in Japan.

See <http://www.whitehouse.gov/blog/2011/03/17/president-obama-we-will-stand-people-japan>.

B. NRC's "lessons-learned" approach.

As the EDO mentioned, past significant events in the United States have prompted NRC toward insights leading to enhanced reactor design and operational safety. Two events stand out as models of NRC actions to respond to significant occurrences with "lessons learned" applied to licensed reactors. The first was the accident at the Three Mile Island, Unit 2 reactor on March 28, 1979. The other was the terrorist attacks on the United States on September 11, 2001.

In April 1979, just after the Three Mile Island-2 (TMI-2) accident, NRC created a Bulletin and Orders Task Force as the focal point for TMI 2-related Staff activities necessary to assure the immediate safety of all other operating power reactors. In May 1979, the NRC established the TMI-2 Lessons Learned Task Force to identify and evaluate safety concerns requiring prompt licensing actions for operating reactors, beyond the immediate actions announced by the Bulletins and Orders Task Force effort.¹⁰

¹⁰ Licensing Requirements for Pending Operating License Applications: Proposed Rule, 46 Fed. Reg. 26491 (May 13, 1981). A set of short-term recommendations offered by this task force was published as NUREG-0578 in July 1979. *Id.*

A steering group then assessed the many recommendations, from within and beyond NRC, “which would provide a comprehensive and integrated plan for all actions necessary to correct or improve the regulation and operation of nuclear facilities.”¹¹ After issuance of TMI-2 Action Plan requirements in guidance, NRC determined that the new reactor requirements should be codified by regulation.¹² For a variety of reasons, this specific TMI rule was not adopted, but NRC did adopt a number of rules to update licensing requirements on the basis of TMI “lessons learned.” Thus, a decade after the TMI-2 accident NRC Staff ultimately was able to advise the Commission that “all regulatory changes needed to implement [the TMI-2 Action Plan] have been completed and that compliance with existing regulations and orders is a sufficient response to all applicable TMI-2 accident ‘lessons learned.’”¹³

¹¹ *Id.* This “TMI-2 Action Plan” was published as NUREG-0660 in May 1980. These action items led NRC to issue a list of “Requirements for New Operating Licenses,” published in NUREG-0694, which was later clarified and superseded by NUREG-0737. *Id.*

¹² *Id.* at 26492.

¹³ *See* Statement of Policy on Litigation of TMI-Related Issues in Power Reactor Operating License Proceedings; Revocation of Superseded Policy Statement Concerning TMI-Related Procedures, 54 Fed. Reg. 7897 (Feb. 23, 1989). As noted above, the Chairman cited the lessons learned from the TMI-2 accident as major source of improvement in NRC safety. Jaczko Statement at 6.

The second example of NRC's lessons-learned approach is the agency effort to improve reactor site security following the terrorist attacks on September 11, 2001. NRC quickly issued interim advisories and directives upgrading security at all nuclear power plants.¹⁴ By 2003, NRC had issued formal orders to its reactor licensees to improve security against terrorist attacks, including changes in physical barriers, security guard posts and patrols, more restrictive site access and a host of other security enhancements.¹⁵ These included measures, such as additional makeup water and equipment to mitigate fires, that would have beneficial effects regardless of the triggering event.¹⁶

Eventually, NRC enacted many of its post-9/11 security improvements as formal regulations. In 2007, NRC upgraded the terrorist

¹⁴ See *Private Fuel Storage, L.L.C.* CLI-02-25, 56 NRC 340, 343-44, 356 (2002).

¹⁵ These post-9/11 actions are described in the NRC's later "Design Basis Threat" rulemaking. See *Design Basis Threat; Proposed Rule*, 70 Fed. Reg. 67380 (Nov. 7, 2005); *Design Basis Threat; Final Rule*, 72 Fed. Reg. 12705 (Mar. 19, 2007).

¹⁶ See *New York v. NRC*, 589 F.3d 551, 555 (2nd Cir. 2009). In his Congressional testimony, Chairman Jaczko reiterated that, as a result of the September 11 attacks, NRC has ordered reactor licensees to upgrade equipment available to deal with "a significant fire or explosion," regardless of its cause. Jaczko Statement at 7.

threat that licensees must defend against by issuing an enhanced “Design Basis Threat” rule.¹⁷ And, in 2009, after “a thorough review of the existing physical protection program requirements,” NRC enacted a new “Power Reactor Security Requirements” rule that “codif[ied] generically-applicable security requirements.”¹⁸ On judicial review, the courts have declined to second-guess the various measures NRC took in response to the September 11 attacks.¹⁹

These upgrades – and the methodology by which NRC developed and implemented them – illustrate how NRC undertakes “lessons learned” improvements to reactor safety from events that may bear on the safety and security of U.S. reactor operations.²⁰ As the Chairman and EDO explained at the agency’s March 21st public meeting on still-unfolding events in Japan,

¹⁷ See 10 C.F.R. § 73.1; 72 Fed. Reg. 12705 (Mar. 19, 2007).

¹⁸ Power Reactor Security Requirements; Final Rule, 74 Fed. Reg. 13926, 13927 (Mar. 27, 2009)

¹⁹ See, e.g., *Public Citizen v. NRC*, 573 F.3d 916 (9th Cir. 2009); *Riverkeeper, Inc. v. Collins*, 359 F.3d 156 (2nd Cir. 2004).

²⁰ We note that “lessons learned” from the Chernobyl accident also “added to our understanding of some of the phenomena that may be involved in a severe nuclear accident” and “provided some additional insights that are useful in guiding our severe-accident programs.” See *Potential Implications of Chernobyl Accident for all NRC-Licensed Facilities*, 26 NRC 520, 523 (1987).

NRC will use the same “lessons learned” approach in applying information from the Fukushima Daiichi experience to ensure safety here.

Toward that end, the Chairman, with the agreement of the Commission, has already instructed NRC Staff to create a Task Force to perform both short-term and longer-term tasks relating to Fukushima Daiichi to assure and enhance safety. In the short term, the NRC Task Force has been directed to:

. . . evaluate currently available technical and operational information from the events [that have occurred at the Fukushima Daiichi nuclear complex] in Japan to identify potential or preliminary near term/immediate operational or regulatory issues affecting domestic operating reactors of all designs[, including their spent fuel pools,] in areas such as protection against earthquake, tsunami, flooding, hurricanes; station blackout and a degraded ability to restore power; severe accident mitigation; emergency preparedness; and combustible gas control.”²¹

The Task Force will begin a longer-term review “as soon as NRC has sufficient technical information from the events in Japan,” and will develop “lessons learned” as it has in the past – that is, NRC will “evaluate all technical and policy issues related to the event to identify potential research,

²¹ SRM-COMGBJ11-0002 (March 21, 2011)(available via NRC web site for ADAMS (Accession No. ML110800456). Further, this Task Force will “develop recommendations, as appropriate, for potential changes to inspection procedures and licensing review guidance, and recommend whether generic communications, orders, or other regulatory requirements are needed.”

generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework that should be conducted by NRC.”²²

The Commission, however, has not suspended reactor operations or licensing activity. As with the post-TMI and post-9/11 regulatory enhancements, any “lessons learned” from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation. No safety, technical, or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review.

For instance, NRC issued a renewed license for the Vermont Yankee Nuclear Power Plant quite recently – on March 21, 2011 – despite the events at Fukushima Daiichi.²³ This decision reflects NRC’s confidence in the robust and redundant safety design and construction of currently operating U.S. nuclear reactors, as restated by the Commissioners and the EDO in their

²² *Id.*

²³ See Entergy Nuclear Operations, Inc.; Vermont Yankee Nuclear Power Station; Notice of Issuance of Renewed Facility Operating License No. DPR-28 for an Additional 20-Year Period, 76 Fed. Reg. 17162 (March 28, 2011).

public briefing on March 21, 2011, and by the Chairman in his Congressional testimony.

II. NRC's statutory and regulatory scheme for operating reactors involves ongoing oversight to enhance safety and ample opportunities for public participation.

The petition for review pending before this Court in this case arises out of an NRC adjudicatory proceeding, initiated by petitioner, on alleged defects in the Oyster Creek application for license renewal. License renewal, of course, is an important matter and receives NRC's full attention. But, as we explain in detail below, NRC's license-renewal process was designed as a particularized and limited inquiry into aging management during the renewal period. It is NRC's continuous and ongoing oversight of licensed reactors, which includes a comprehensive scheme of safety regulation and the presence of resident inspectors at every reactor in the country, that assures public health and safety every day.

Indeed, Chairman Jaczko recently reassured Congress that review of information from Japan thus far, "combined with our ongoing inspection and licensing oversight, gives us confidence that the U.S. plants continue to operate safely."²⁴ As the basis for this confidence, the Chairman pointed to the "diverse and redundant safety systems that are required to be maintained

²⁴ Jaczko Statement at 3.

in operable condition and frequently tested to ensure that the plant is in a high condition of readiness to respond to any situation.”²⁵

NRC’s ongoing oversight assures that a licensed facility remains in compliance with what is known as the plant’s “current licensing basis” or CLB.²⁶ The CLB “represents the evolving set of requirements and commitments for a specific plant that are modified as necessary over the life of a plant to ensure continuation of an adequate level of safety.”²⁷ NRC has emphasized that its ongoing oversight “continuously analyzes conditions, acts, and practices that could affect safe operation of plants”²⁸ through the ongoing regulatory process, which “includes research, inspections, audits, investigations, evaluations of operating experience, and regulatory actions to resolve identified issues.”²⁹

²⁵ *Id.* at 6.

²⁶ Oyster Creek’s CLB with respect to earthquake and flood analysis is not part of the record on review. Oyster Creek’s CLB, however, does implement plant design and construction criteria applicable to earthquakes and floods. This analysis is captured in Chapters 2.4 and 3.7 of the licensee’s Final Safety Analysis Report (“FSAR”) for that facility.

²⁷ Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22461, 22473 (May 8, 1995).

²⁸ *Id.* at 22485.

²⁹ Nuclear Power Plant License Renewal: Final Rule, 56 Fed. Reg. 64943, 64947 (Dec. 13, 1991); *see also* 60 Fed. Reg. at 22485 (NRC’s “program

NRC utilizes information gathered through routine oversight – or from external events – to improve safety through various regulatory mechanisms, any one or all of which NRC might use to implement “lessons learned” from the Fukushima Daiichi disaster. For example, NRC often promulgates new regulations, issues orders modifying or suspending licenses, requires amendments to existing licenses, or takes other licensing actions to improve safety. Such agency actions are accompanied by an opportunity for public comment or a hearing under Section 189a of the Atomic Energy Act, 42 U.S.C. § 2239(a).

Concerned citizens also have two important avenues of redress to seek further action by NRC. The first is a petition for rulemaking under 10 C.F.R. §2.802, by which anyone may request NRC to initiate a rulemaking to issue, amend, or rescind a regulation. Second, concerned citizens may submit enforcement petitions under 10 C.F.R. § 2.206 to request the NRC to institute a proceeding to modify, suspend or revoke a license, or for other appropriate action, where a citizen believes that NRC or

for the review of operating events at nuclear power plants . . . offers a high degree of assurance that events that are potentially risk significant or precursors to significant events are being reviewed and resolved expeditiously”).

one of its licensees has not adequately addressed a safety or environmental issue.³⁰

In sum, the license renewal proceeding before this Court is narrowly focused on aging management. NRC has in place many broader regulatory tools that are appropriate vehicles to implement “lessons learned” from the events at Fukushima Daiichi, including mechanisms for members of the public to bring to NRC’s attention safety concerns that they believe the agency might have overlooked or underappreciated.

III. The petition for review before this Court concerns discrete issues arising out of a now-closed adjudicatory record.

As discussed above, NRC’s comprehensive and ongoing oversight of licensed facilities will assure that useful data and “lessons learned” from Fukushima Daiichi disaster will be absorbed by changes in NRC rules, orders, and license amendments as needed, accompanied by the public participation required by statute and regulation. This process is distinct, however, from the disposition of specific contentions admitted for hearing

³⁰ See, e.g., *Florida Power & Light Co. v. Lorion*, 470 U.S. 729 (1985); *Riverkeeper, Inc. v. Collins*, 359 F.3d 156, 158 (2nd Cir. 2004); *Union of Concerned Scientists v. NRC*, 920 F.2d 50, 56 n.4 (D.C. Cir. 1990); *Massachusetts v. NRC*, 878 F.2d 1516, 1520 (1st Cir. 1989). See also *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Station, Unit 1; H.B. Robinson Plant, Unit 2), DD-06-1, 63 NRC 133, 140 (2006) (granting a § 2.206 petition on fire protection).

(or proposed for admission) in a license renewal adjudication such as the current case before this Court.

As explained in our brief, the license renewal hearing process that is the focus of petitioners' lawsuit in this Court focused strictly on contentions relating to the "potential detrimental effects of aging that are not routinely addressed by ongoing regulatory programs" (Fed. Resp. Br. 3); the license renewal process was "not intended to duplicate the Commission's ongoing review of operating reactors." *Id.*

Years ago, when NRC considered what should be reviewed when the agency is considering a license-renewal application, the agency developed a process by which "adequate safety will be assured during the extended period of operation," but which avoided duplicative, inefficient assessments covered by routine regulatory oversight.³¹ Accordingly, NRC decided that it would not be necessary or desirable to open up the full range of criteria in a plant's current licensing basis to re-analysis during the one-time-only license renewal review. Instead, NRC concluded that "issues concerning operation

³¹ 60 Fed. Reg. at 22464.

during the currently authorized term of operation should be addressed as part of the current license rather than deferred until a renewal review.”³²

The NRC therefore determined that, for license renewal, the agency’s everyday regulatory process should be supplemented only by a very particularized inquiry, appropriate at the license-renewal stage, into “the detrimental effects of aging on the functionality of certain systems, structures, and components in the period of extended operation.”³³ In contrast to aging-management issues, NRC’s ongoing “regulatory process provides reasonable assurance that there is compliance with the [current licensing basis].”³⁴

Accordingly, the NRC hearing below – now before this Court on judicial review – was limited exclusively to aging-management issues. The

³² *Id.* at 22481. NRC concluded that its ongoing regulatory process is “sufficiently broad and rigorous” (56 Fed. Reg. at 64950) to “provide reasonable assurance that, as new issues and concerns arise, measures needed to ensure that operation is not inimical to the public health and safety and common defense and security are ‘backfitted’ onto the plants.” 56 Fed. Reg. at 64945.

³³ 60 Fed. Reg. at 22464.

³⁴ *Id.* at 22473. Indeed, “NRC conducts its inspection and enforcement activities under the presumption that non-compliances will occur.” *Id.* at 22473-74.

hearing, like all NRC contested hearings on license renewal, was limited to contentions material to license renewal and admitted for hearing. The only admitted contention in the present Oyster Creek case required NRC's adjudicatory tribunal, the Atomic Safety and Licensing Board, to determine whether Exelon's program for ultrasonic testing "is adequate to manage the aging effects of corrosion in the sand bed region of Oyster Creek's drywell shell so the intended functions of the shell (*i.e.*, structural integrity and pressure containment) will be maintained during the renewal period consistent with the current licensing basis." (Fed. Resp. Br. 4). That question was answered in the affirmative by the Licensing Board and (on administrative appeal) by the Commission. As our brief explains (*id.* at 43-49), the NRC Staff made all other necessary findings and issued the renewed license on April 8, 2009.

The record before this Court has been closed since the proceeding before the Licensing Board concluded two years ago (Appendix 831-32). As in all Hobbs Act lawsuits seeking direct review in the courts of appeals, this case must be decided "on the basis of the agency record compiled" in

the course of the proceedings below, not on a new record made for the first time in the court of appeals.³⁵

In any event, as discussed above, petitioners have other avenues open to them to raise Fukushima Daiichi-related issues on their own or in public-participation opportunities likely to arise after NRC, the industry, and the public have absorbed the technical, scientific and engineering knowledge that might evolve from the “lessons learned” process.

NRC has shown in implementing upgraded site security requirements after 9/11 to thwart terrorist attacks at nuclear facilities, and in adding safety enhancements after considering the lessons learned from the TMI-2 accident, that the agency is not dependent upon contested hearings to upgrade plant safety. NRC has already announced its plan to draw upon “lessons learned” from the Japan events, as the agency has done previously after natural or man-made disasters. As in the past, NRC will conduct

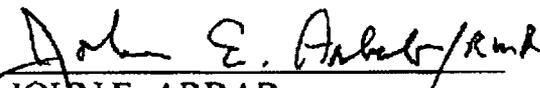
³⁵ *Florida Power & Light Co. v. Lorion*, 470 U.S. 729, 744 (1985). This Court has Hobbs Act jurisdiction only to review the “final agency action” from which petitioners have sought review. If petitioners were to seek relief before NRC regarding the events at Fukushima Daiichi, which they have not, any resulting final NRC action would not be reviewable under the rubric of the current petition. Rather, as in reopening cases in which a fresh agency order is entered, “the challenging party must file a new . . . petition for review from the now-final agency order.” *TeleSTAR, Inc. v. FCC*, 888 F.2d 132, 134 (D.C. Cir. 1989). *Accord, Council Tree Communications, Inc. v. FCC*, 503 F.3d 284, 287 (3rd Cir. 2007).

rulemaking, or issue orders and other directives, to make upgrades required to implement whatever short-term or longer-term safety improvements emerge from the Task Force directed by the Commission to analyze the Fukushima Daiichi disaster.

Conclusion

For the reasons given in our brief and at oral argument, the petition for review should be denied, based on the record before this Court. The disaster at the Fukushima Daiichi reactors in Japan is, of course, tragic and serious, and has triggered a full lessons-learned inquiry at NRC that may well lead to new safety measures at American operating reactors. But the disaster is not a basis for judicial relief in this case.

Respectfully submitted,



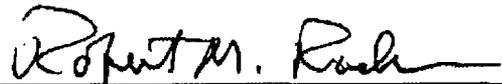
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April 4, 2011



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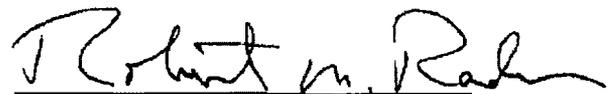
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I hereby certify that I have on this 4th day of April 2011 served, by e-mail and by electronic transmission through the Electronic Filing System, and by U.S. Mail, First-Class, postage prepaid, a copy of "Federal Respondents' Memorandum on the Events at the Fukushima Daiichi Nuclear Power Station" upon the following:

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April 6, 2011 Headlines

Duke, Progress Make Hold Harmless Offer On 'Excess' Merger Costs

While saying their merger raised no market power issues despite the extensive overlap of their large power plant fleets in the Carolinas, Duke Energy and Progress Energy this week offered a "hold-harmless" agreement ensuring their transmission and "wholesale requirements" customers are not charged for five years for any transaction-related costs in excess of merger-related savings. In filings with the Federal Energy Regulatory Commission and at the North Carolina and Kentucky utility commissions, the companies said their combination would benefit ratepayers by allowing for more efficient dispatch of their combined generating capacity—thus saving hundreds of millions of dollars in fuel costs—and by reducing multiple "pancaked" transmission charges in their adjacent grid operations. But while touting overall benefits to ratepayers from their combination, Duke and Progress at the same time offered in their filing at FERC to protect their wholesale requirements customers—such as...

NRC Kills Staff Security Plan For Reactor Construction

Overruling the commission's staff and chairman, four Nuclear Regulatory Commission members last month rejected a proposal to beef up security at new reactor construction sites, with some describing the staff's view of the threat as overly "speculative" and the proposed security steps as duplicating protective measures already in place. Instead, the NRC majority decision adopted a voluntary—and presumably less costly—industry approach to increasing security at sites where reactors are being built, saying it would go into effect more quickly and produce similar protections. And in a feature particularly galling to some nuclear watchdog groups, the vote halts the proposed rule—which had been under development for five years—before it was released for public comment. The March 30 vote has gotten limited attention amidst the ongoing nuclear crisis in Japan and expanding controversy in the United States about the NRC's role in the Obama administration's cancellation the Yucca...

Bird Death Concerns Prompt Xcel To Scrap Midwest Wind Farm

In a decision dramatizing a growing debate over the impact of proliferating wind farms on birds, Xcel Energy last week scrapped plans to build a 150-megawatt wind farm in southeastern North Dakota, saying the project could take an unacceptable toll on dwindling populations of federally protected whooping cranes and piping plovers. The announcement by Minneapolis-based Xcel, the

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nation's largest wind energy supplier, drew a surprisingly tough objection from its partner on the \$400 million Merricourt wind project, enXco Development Corp., a subsidiary of EDF, the state-owned French electricity company. Xcel said Northern States Power Co.-Minnesota (NSP-Minnesota), the Xcel-owned company overseeing development of Merricourt, terminated its development deal with enXco because of "the adverse impact the project could have on endangered or threatened species protected by federal law and uncertainty in the cost and timing in mitigating this impact." However, enXco said it believed concerns over...

DOE Putting WIPP Contact Up For Bid

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TEP Building 11 MW Of Rooftop Solar

Tucson Electric Power announced last month it plans to lease space atop schools and other public facilities for the development of 11 megawatts of new solar generating capacity over the next three years...

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NRC Kills Staff Security Plan For Reactor Construction

BY JEFF BEATTIE

Overruling the commission's staff and chairman, four Nuclear Regulatory Commission members last month rejected a proposal to beef up security at new reactor construction sites, with some describing the staff's view of the threat as overly "speculative" and the proposed security steps as duplicating protective measures already in place.

Instead, the NRC majority decision adopted a voluntary—and presumably less costly—industry approach to increasing security at sites where reactors are being built, saying it would go into effect more quickly and produce similar protections.

And in a feature particularly galling to some nuclear watchdog groups, the vote halts the proposed rule—which had been under development for five years—before it was released for public comment.

The March 30 vote has gotten limited atten-

(Continued on p. 4)

Duke, Progress Make Hold Harmless Offer On 'Excess' Merger Costs

BY GEORGE LOBSENZ

While saying their merger raised no market power issues despite the extensive overlap of their large power plant fleets in the Carolinas, Duke Energy and Progress Energy this week offered a "hold-harmless" agreement ensuring their transmission and "wholesale requirements" customers are not charged for five years for any transaction-related costs in excess of merger-related savings.

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But while touting overall benefits to ratepayers from their combination, Duke and Progress at the same time offered in their filing at FERC to protect their wholesale requirements customers—such as load-serving municipal utilities in their service territories—and transmission custom-

(Continued on p. 3)

Bird Death Concerns Prompt Xcel To Scrap Midwest Wind Farm

In a decision dramatizing a growing debate

BY JOHNATHAN RICKMAN

over the impact of proliferating wind farms on birds, Xcel Energy last week scrapped plans to build a 150-megawatt wind farm in southeastern North Dakota, saying the project could take an unacceptable toll on dwindling populations of federally protected whooping cranes and piping plovers.

The announcement by Minneapolis-based Xcel, the nation's largest wind energy supplier, drew a surprisingly tough objection from its partner on the \$400 million Merricourt wind project, enXco

Development Corp., a subsidiary of EDF, the state-owned French electricity company.

Xcel said Northern States Power Co.-Minnesota (NSP-Minnesota), the Xcel-owned company overseeing development of Merricourt, terminated its development deal with enXco because of "the adverse impact the project could have on endangered or threatened species protected by federal law and uncertainty in the cost and timing in mitigating this impact."

However, enXco said it believed concerns over the project's potential

impacts on birds could be still be resolved and vowed to challenge Xcel's decision before the Minnesota Public Utilities

Commission (PSC).

"enXco continues to be actively working on these issues and considers the required answers have been provided to NSP-Minnesota. For these reasons, enXco disputes the relevance and materiality of these concerns to NSP-Minnesota's obligations under the parties' agreements," the company said in a statement Tuesday.

Sandi Briner, director of communications for enXco, said the company "remains committed to the project, to the landowners and the community"

(Continued on p. 2)

DOE Putting WIPP Contact Up For Bid

For only the second time since the site began operations 12 years ago, the Energy Department announced Monday it would seek competitive bids for the contract to manage the Waste Isolation Pilot Plant, its underground disposal facility for transuranic waste in New Mexico.

The department issued a draft request for proposals (RFP) for comment by the public and companies interested in competing for the five-year contract, which also will have an option for DOE to extend the contract for another five

years. DOE said it planned to finalize the RFP later this year and pick a new contractor next year.

The winning contractor will be responsible for handling transuranic waste shipments from all DOE sites nationwide to the Waste Isolation Pilot Plant (WIPP) and operating the disposal site near Carlsbad. The department said the scope of work covered by the contract was between \$130 and \$160 million per year.

The WIPP contract has been held since 2000 by Washington TRU Solu-

tions LLC, a consortium of Washington Government Environmental Services Co., a subsidiary of URS Corp., and Weston Solutions. DOE initially selected the consortium in 2000 and noncompetitively extended its contract by another five years in 2005.

The department last May extended the consortium's contract for another two years to maintain continuity while WIPP was securing a new hazardous waste permit from New Mexico authorities and recertification by the federal Environmental Protection Agency.

Bird Death Concerns Scrap Midwest Wind Farm... (Continued from p. 1)

and intends to get the project back on track.

Merricourt is one of two wind farms that Xcel and enXco planned to partner on in the United States, including the 201-MW Nobles wind farm in Minnesota, which went into service late last year. In June 2009, the PSC ruled that Xcel could include both wind projects in the utility's plan to meet the state's Renewable Energy Standard, which requires 25 percent of electricity to be generated from renewable resources by 2020.

At the end of 2009, Xcel had more than 3,000 MW of in-service wind energy capacity. A statement on the firm's website says it plans to double that capacity by the end of 2020.

Xcel's decision to scrap Merricourt represents a rare bow by a power company to concerns about bird mortality caused by whirling turbine blades.

The utility's action comes amid growing protests from bird conservancy groups, and reflects controversy over recent voluntary guidelines put out by the Interior Department designed to reduce the winged carnage caused by wind turbines.

According to the American Bird Conservancy (ABC), one bird is currently killed every minute by wind power projects in the United States. However, wind energy officials say conservationists' statistics on wind turbine-related bird kills are overblown.

ABC says it supports wind power and has urged developers to make their projects "bird-smart." The group also says the wind industry should be held to mandatory standards that protect birds.

However, to date only draft voluntary wildlife guidelines for wind turbines have been developed, and both ABC and wind energy officials say they are unworkable.

The Interior Department's Fish and Wildlife Service (FWS) February 8 released the proposed guidelines along with separately issued draft eagle conservation plan guidance.

The guidance documents are the result of a two-year, collaborative "federal advisory committee" process involving rep-

resentatives from the wind energy industry, state and federal government, native tribes and various wildlife conservation groups. The guidance covers the entire phase of wind energy development, including siting decisions and post-construction operations and would be voluntarily administered by FWS and developers.

In issuing the guidance, FWS said it will regard voluntary adherence to its bird safety recommendations "as evidence of due care with respect to avoiding, minimizing, and mitigating adverse impacts" to federally protected species and "will take such adherence... fully into account when exercising its discretion with respect to any potential referral for prosecution related to death of or injury to any such species."

However, the American Wind Energy Association (AWEA) said the guidance would unduly delay wind projects and deviated significantly from the consensus recommendations issued by the 22-member Wind Turbine Guidelines Federal Advisory Committee last April.

More broadly, AWEA said recent studies have shown that the fossil energy industry is far more of a threat to federally protected avian species than developers of renewable energy.

That prompted a terse response from ABC Vice President Michael Parr, who charged AWEA with actively seeking to "conceal the inconvenient truth that wind energy has significant bird impacts that need to be addressed.

"Instead of asserting that they are the good guys merely because they are not as bad as coal, they should be looking at how they can get their own environmental house in better order," said Parr in a March 3 statement. "This does not look like a green industry right now."

In a related development, the Federal Energy Regulatory Commission announced March 30 a memorandum of understanding with FWS to "strengthen and promote" conservation of migratory birds and their habitat in regard to FERC's licensing of electric transmission and natural gas pipeline projects.

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Ex-Gore Aide Lobbying For Brazilian Ethanol Producers

Unica, the Sao Paulo-based group that represents Brazil's sugarcane ethanol industry, announced Tuesday it has appointed David Thomas, a former deputy director of legislative affairs for Vice President Al Gore and director of congressional relations at the U.S. Federal Trade

Commission, as its new chief lobbyist in the group's Washington, D.C., office.

Unica also named Leticia Phillips, the group's head of institutional and government affairs for North America since 2008, as its chief representative for North America.

Unica said Thomas, most recently

chief of staff for Rep. Zoe Lofgren (D-Calif.), was directly involved in its 2010 campaign to end the 54-cent-per-gallon tariff on imported ethanol currently protecting U.S. ethanol industry interests—and discouraging sales of Brazilian sugarcane ethanol.

Duke, Progress Make Hold Harmless Offer... (Continued from p. 1)

ers from any "excess" costs from their merger.

"Notwithstanding the clear benefits to wholesale customers [from the merger], the applicants are willing to make commitments to ensure that the transaction will not have an adverse effect on wholesale rates," Duke and Progress said in their merger application to FERC.

"Specifically, the applicants commit for a period of five years to hold harmless wholesale requirements and transmission customers from the costs of the transaction. For that five-year period, the applicants will not seek to include merger-related costs in their transmission revenue requirements or in their wholesale requirements rates, except to the extent they can demonstrate that merger-related savings are equal to or in excess of the transaction-related costs included in the rate filing.

"The commission has approved this type of commitment in its merger policy statement and in a number of subsequent cases," Duke and Progress added.

The companies also said FERC would have authority to monitor their compliance with such a hold-harmless agreement, and that if they sought to include merger-related costs in transmission rates, they would make compliance filings showing that they were meeting their hold-harmless commitment.

The hold-harmless offer by Duke and Progress appears to be an effort to head off any challenges from municipal utilities or large industrial customers who might contend that the merger will significantly and unnecessarily raise their power costs or otherwise harm the public interest.

However, Duke and Progress said in a market power analysis submitted to FERC that their combination clearly raised no competition issues.

The companies acknowledged that the close proximity of their giant utility operations in the Carolinas might, "at first blush, raise concerns about the competitive effects of the transaction.

"Upon closer scrutiny, however, the transaction will not adversely affect competition in retail or wholesale markets, and instead will benefit both retail and wholesale customers," they said.

While the two companies have big overlapping power plant fleets in the Carolinas, Duke and Progress said residential customers would not be hurt by their merger because their rates are set by state regulators and there is no prospect of retail market competition in North Carolina or South Carolina. The companies also said both companies used virtually all of their generation in the two states to meet the needs of their regulated customers.

Further, the companies noted that Progress does not have any merchant generation operations, meaning it could not af-

fect competition in several Midwest and Mid-Atlantic wholesale power markets where Duke is a significant player.

They also pointed out that Duke had no merchant generation in the Carolinas and no power plants serving Progress' customers in Florida.

The companies said the relative lack of competition between the two companies in Carolina markets was illustrated by the fact that only 0.007 percent of Duke's total sales in the Carolinas were made to third-party wholesale customers—such as municipal utilities—in Progress' service territory in the Carolinas. Similarly, Progress' sales to third-party wholesale customers in Duke's Carolina service territories represented only 0.003 percent of Progress' total sales in the Carolinas, the companies said.

In their analysis of horizontal market power, the companies said the only market concentration problems identified were caused by the de-pancaking of transmission rates made possible by the merger.

Specifically, the analysis said that during periods of low, off-peak power usage in the summer, lower transmission rates could cut the delivered cost of power from Progress into Duke's service territory, increasing the amount of Progress' power that is competitive in Duke's market. The same problem was raised by lower transmission costs in relation to Duke-generated power going into Progress' territory.

While those circumstances resulted in the violation of FERC market power "screens," the companies said that left a false impression because wholesale customers would clearly benefit from lower transmission rates.

In their filing with the North Carolina Utilities Commission (NCUC), Duke and Progress said their merger met general state requirements that customers would benefit from their combination.

In particular, they estimated that joint dispatch of their power plants would save customers in the state an estimated \$694.7 million in fuel costs from 2012-2016 because more efficient plants would be used first to meet demand.

Public staff officials at the NCUC initially objected to the joint dispatch agreement submitted by Duke and Progress, saying it could be interpreted to allow FERC to pre-empt state regulators' authority over the utilities. However, the public staff backed a re-worded joint dispatch agreement that the staff said met their concerns by ensuring any agreements were approved by the state commission before they were submitted to FERC.

The public staff, which represents ratepayers in the state, said its actions did not reflect any comment or views on any substantive issues raised by the merger or the joint dispatch agreement or whether they were in the public interest.

TEP Building 11 MW Of Rooftop Solar

Tucson Electric Power announced last month it plans to lease space atop schools and other public facilities for the development of 11 megawatts of new solar generating capacity over the next three years.

The utility-owned generation, be-

ing built under a program called TEP Bright Roofs, will feed directly into the utility's local distribution grid.

"Our new TEP Bright Roofs program offers schools and other public agencies an opportunity to put their unused rooftop space to good use, gen-

erating both clean energy for our community and lease payments that can help support education," said Paul Bonavia, chairman, president and chief executive officer of TEP and its parent company, UniSource Energy, in a March 18 statement.

NRC Kills Staff Security Plan For Reactor... (Continued from p. 1)

tion amidst the ongoing nuclear crisis in Japan and expanding controversy in the United States about the NRC's role in the Obama administration's cancellation the Yucca Mountain nuclear waste repository.

Nevertheless, the decision ties together two issue—new nuclear construction costs and security—very much on the minds of industry and lawmakers. It comes only months after construction began at the first new U.S. reactors in years, at a Southern Co. nuclear plant in Georgia.

The decision also exposes again a frequent rift between NRC Chairman Gregory Jaczko—who voted alone to back the proposed rule—and NRC's other commissioners, including two fellow Democrats, who have opposed the chairman on Yucca Mountain and other issues.

The 4-1 vote ends a rulemaking that would have required plant developers to conduct new "security sweeps" of plant sites while reactors are under construction; tighten searches of vehicles, material and personnel entering the site; and to erect physical barriers protecting areas of sites where safety- and security-significant systems are being built, among other steps.

The goal, according to the NRC staff proposal, was to block adversaries who might seek to "introduce undetected defects into [key plant safety systems] or to pre-position...firearms, explosives, or incendiary devices that could be used for malicious purposes after the plant is operational."

When it proposed the rule in 2006, staff said "the lack of required security measures before receipt of fuel is inconsistent with the potential security risk stemming from malicious activities that could occur during the construction of new nuclear power plants."

NRC's decision to reject its staff's proposal was unusual—although certainly not unprecedented—in that NRC approved further staff development of approximately the same initiative in draft form in 2008.

The March 30 vote directed staff "to terminate this rule-making effort" before it went out for public comment, which some nuclear watchdog groups criticized harshly.

"For an agency that pretends that transparency is a priority, this practice is more reminiscent of the old Soviet non-transparent ballot system," said Dave Lochbaum, director of the Union of Concerned Scientists' Nuclear Safety Project.

"The American public should not trust that nuclear plant security is adequate when the NRC makes secret deals with industry on what industry feels is right," said Lochbaum, referring to NRC's decision to accept a voluntary construction site security approach proposed by the Nuclear Energy Institute (NEI), the industry's trade association.

Some antinuclear groups say the industry likely opposed the new NRC rules in a desire to keep down new plant construc-

tion costs, the primary barrier to nuclear power expansion.

But NEI officials say their program calls for many of the same security steps in NRC staff's proposed rule, including vehicle searches, use of barriers to fence off certain areas, new communication systems with local emergency officials and site monitoring systems.

NEI Vice President of Regulatory Affairs Doug Walters says the industry mostly opposed as duplicative a staff proposal for protections against so-called "latent threats," meaning material or objects left at the construction sites for possible malicious use later.

Walters said plant developers have broad protections in place already against that possibility.

In the sole vote to back the proposed rule, Jaczko said NRC staff had crafted "a clear and well-developed proposed rulemaking package" that would help NRC achieve its statutory goals of protecting public health and the environment.

In opposing the rule, however, Republican NRC Commissioner Kristine Svinicki said NEI's initiative contained the same "essential elements" as the staff's proposal.

In comments attached to her vote, Svinicki described the staff's "threat basis"—or dangers that the rule was intended to prevent—as "remote and speculative," echoing comments from fellow Republican NRC Commissioner William Ostendorff.

Svinicki also said current NRC rules already "address quality assurance during construction of plant structures, the installation of hardware, the testing of systems, the qualification of personnel..." and many other key safety areas for construction sites.

NRC Commissioner Bill Magwood, a Democrat, also said existing NRC rules provide comprehensive protection at reactor construction sites, and that the staff plan "does not need to be as prescriptive as has been proposed."

Magwood said the voluntary NEI program would likely go into effect before the proposed rule, providing quicker deterrence.

Ostendorff's comments provided the fullest rationale for halting a staff effort encouraged by the commission only three years ago.

"In short, the basis for this rulemaking is different than that on which the commission based its decision in 2008," he said.

Ostendorff said NRC approved continued work on the rule in 2008 "based on the assumption that that these requirements would be founded on an adequate protection of public health and safety basis.

"However, the proposed rule that the staff has now presented to the commission is no longer based on adequate protection, but rather on the basis of being a cost-justified substantial security enhancement...."

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Nuclear News Flashes
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*** Extract says Husab uranium project cost is \$1.6 billion

HHHH/KO

Australian-based Extract Resources has announced plans for a \$1.6 billion uranium mine project in Namibia, producing 15 million pounds of uranium oxide a year starting as early as 2014.

A definitive feasibility study on the Husab uranium project, including the site formerly known as Rossing South, was released April 5. The study demonstrates the technical and economic viability of developing Husab, the world's fifth-largest uranium-only deposit, Extract said.

The uranium deposit has captured the interest of numerous potential suitors, including Rio Tinto, which owns about 14% of Extract and operates the nearby Rossing mine in Namibia, and Itochu Corp., which last year bought 10.3% of Extract.

The CGNPC Uranium Resources Co. Ltd., a subsidiary of China Guangdong Nuclear Power Holding Co., is currently involved in an attempted takeover bid for Extract's largest shareholder Kalahari Minerals. Kalahari Minerals owns 43% of Extract. Russia's Atomredmetzoloto has also expressed interest in the Husab project.

According to the definitive feasibility study, project capital costs, including pre-strip and other pre-production operating costs, total \$1.6 billion.

Production costs are estimated at \$28.50/lb U3O8 excluding royalties, marketing and transport and cost escalation and at \$32/lb U3O8 including royalties, marketing and transport.

"Extract has engaged with potential customers to assess demand for production from the Husab Uranium Project and has identified several possible strategic contracting opportunities," the company said in a press statement.

*** Three-month delay in UK design assessments

Nuclear safety reviews in the wake of the ongoing accident at Tokyo Electric Power Co.'s Fukushima 1 nuclear power plant will cause at least a three-month delay in new reactor construction in the UK, according to an April 5 statement from the Health and Safety Executive.

The HSE said it will not publish its conclusions on the safety of Areva's EPR and Westinghouse's AP1000 reactor designs until a nuclear safety review has been completed.

That review, being done by Chief Nuclear Inspector Mike Weightman, is not expected to be complete until September. The HSE had been planning to publish its conclusions under the generic design assessment, or GDA, program at the end of June. The GDA program is reviewing the safety of the reactor designs for construction in the UK.

HSE said it would publish all GDA safety issues identified as of June 30 and the reactor vendors' plans for addressing those issues. It said it would not issue its conclusions in the form of design acceptance confirmations until after the completion of the Weightman report.

Among the GDA issues to be published at the end of June will be a requirement that reactor vendors address any issues raised by the Weightman report.

All GDA issues must be resolved before construction can begin on any safety-related areas of a nuclear unit, the HSE has said.

*** Tepco works to staunch radioactive water leak

Tokyo Electric Power Co. said April 5 it has begun to inject a polymer material into the wall of a concrete trench next to the water intake channel of unit 2 of the Fukushima I nuclear power plant, in an effort to seal a crack that the utility believes is permitting radioactive water to flow into the ocean.

Tepco said it decided to inject the polymer after it failed to seal the crack with injections of concrete on April 3 and 4, based on radioactive assays of the leaking water. Water was detected in the trench April 2 with a measured radioactivity of more than 1,000 millisieverts an hour at the surface.

Tepco April 5 continued to release "low-level radioactive water" from the plant's radioactive waste disposal facility into the Pacific Ocean. As of 9 am Japan time, Tepco reported it had discharged 2,800 tons of an estimated 10,000 tons of contaminated water. Three hours earlier, Tepco said it had discharged 30 tons of an estimated 1,500 tons of contaminated water from sub-drain pits at units 5 and 6.

The water is being discharged in order to make room in the plant's processing system for higher-radioactivity water that has leaked into buildings, drain pits and trenches, Tepco said.

Tepco said the water released into the ocean would provide a maximum dose of 0.6 millisievert to an adult who ate fish and seaweed from the nearby waters every day for one year. It said this compared with the 1 millisievert permissible annual dosage for the general public established by the Japanese government.

Yukio Edano, Japan's chief Cabinet secretary, told reporters April 5 that the government will monitor the radioactive water discharge and deploy measures to prevent it from spreading into the "open ocean," the Japan Atomic Industrial Forum reported April 5.

*** Spot price appears to have settled around \$58 to \$59 a pound U308

The spot price of uranium appears to have settled within a narrow range of \$58-\$59 a pound U308, analysts said.

TradeTech April 1 lowered its weekly spot price to \$58.50/lb, down \$1.50/lb from its March 25 price. TradeTech said about 900,000 lb were sold over that seven-day period, with the bulk of the material being sold by traders. Buyers included traders, producers and utilities. While there is some continuing buying interest, TradeTech said, most of that interest is discretionary and price sensitive. TradeTech's daily price April 4 remained at \$58.50/lb.

Ux Consulting April 4 lowered its weekly price to \$59/lb, \$3.50/lb below the price UxC published March 28. UxC said there appeared to be fewer sources of supply and that the

supply being offered was in smaller quantities, 50,000 lb or less.

UxC's broker average price, or BAP, was \$58.75/lb April 4, down from \$60.75 March 28. The BAP is a daily calculated midpoint of the bids and offers reported by two brokers Evolution Markets and MF Global, according to UxC.

The Platts' NuclearFuel range for the week was \$54/lb-\$61/lb U308.

In the long-term market, TradeTech dropped its price to \$68/lb March 31, down from \$70/lb February 28. UxC dropped its end-of March long-term price to \$72/lb, from \$73/lb at the end of February.

*** STUK coordinating emergency preparedness project for European Arctic

STUK is coordinating a three-year project to improve emergency preparedness in the event of a nuclear accident in the European Arctic, managers at the Finnish Radiation & Nuclear Safety Authority, or STUK, said in an April 4 statement.

Portions of European countries Finland, Norway and Sweden, as well as Russia are in the European Arctic.

The project, known as the Collaboration Network on EuroArctic Environmental Radiation Protection and Research, is aimed at improving communication among regulators in Finland, Norway and Russia and at working with research institutes in those countries to determine the long-term effects of an accident on people and the environment.

The Kola nuclear plant in Russia is the only nuclear facility in the European Arctic. The Murmansk Marine Biological Institute is among those participating in the project.

*** Entergy to draw down value of Vermont Yankee decommissioning fund

Entergy Nuclear Operations said it intends to cancel a \$40 million financial assurance guarantee for decommissioning the Vermont Yankee nuclear power plant, saying the NRC's March 21 decision to renew the unit's license for 20 years makes the guarantee "no longer necessary."

Entergy, in a March 31 letter to NRC, said it "has calculated that Vermont Yankee now has an approximately \$211 million surplus over the NRC's minimum amount for financial assurance for decommissioning."

The NRC in 2009 required Entergy to increase its Vermont Yankee decommissioning account by \$40 million to cover anticipated costs, assuming the plant shut when its license expired in March 2012. Entergy made the required \$40 million payment guarantee to the account in December 2009, NRC said.

Vermont Governor Peter Shumlin said in March after NRC announced it had issued a license renewal for Vermont Yankee that he wants the plant to shut when its 40-year license expires in March 2012. Shumlin last year, as president pro-tem of the Vermont Senate, led Senate efforts that barred the state Public Service Board from considering Entergy's application for a certificate of public good needed for Vermont

Yankee to continue operation beyond March 2012.

NRC spokeswoman Diane Screnci said April 5 that NRC will review the adequacy of the plant's decommissioning fund, along with those for all other nuclear power plants, later this year, as part of a routine annual review of such funds.

*** NRC finds apparent security violation at Susquehanna

NRC has cited PPL's Susquehanna station for an apparent violation of security regulations, according to a letter made public April 5.

NRC concluded a security finding had a preliminary "greater than very low security significance" but did not describe the problem, in keeping with its rules for such incidents. The deficiency was promptly corrected, NRC said in the letter dated March 28.

NRC will determine the final significance of the finding following further review. PPL has 30 days to submit a written response to the findings or request a regulatory conference, which would be closed to the public, the letter said.

*** Reactor report

PPL's Susquehanna-2 shut early April 5 for refueling and maintenance, plant spokesman Joe Scopelliti said that day. There is no estimate of how long the outage will last, but typical refueling outages last about a month, he said. During the outage, more than 1,000 additional workers at the Pennsylvania facility will replace about 40% of the unit's fuel and perform maintenance, including completion of the capacity increase that was begun in 2008, Timothy Rausch, senior vice president and chief nuclear officer at PPL, said in a statement. The utility has said the work planned for this stage will add 50 MW to the 1,207-MW unit. The upgrades include installing digital controls for some systems and replacing turbines that power pumps in the reactor feedwater system, Scopelliti said.

Duke Energy's McGuire-2 has synchronized with the power grid and is operating at 32% capacity following a refueling outage, plant spokeswoman Valerie Patterson said April 5. McGuire-2, located in North Carolina, had been out of service since February 26 for refueling and maintenance. It was at 10% power early April 5, NRC said in its daily reactor status report. There is no estimate of when the unit will reach full power.

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News

2 new results for Nuclear Regulatory Commission

[Oyster Creek license safe despite Japan disaster, **Nuclear Regulatory ...**](#)

The Star-Ledger - NJ.com

By Eliot Caroom/The Star-Ledger Yian Huang/The Star-LedgerFile photo of Exelon's Oyster Creek Nuclear Power Plant in Lacey Township. The **Nuclear Regulatory Commission** told a federal court today that the meltdown of reactors in Japan of a similar design ...

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[US Sees New Threats at Japan's **Nuclear** Plant](#)

New York Times

... threats that could persist indefinitely, and that in some cases are expected to increase as a result of the very measures being taken to keep the plant stable, according to a confidential assessment prepared by the **Nuclear Regulatory Commission**. ...

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11/11/141

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Date: Tuesday, April 05, 2011 7:48:24 AM

Good Morning Beth,

The Chairman's remarks have been added:
<http://148.184.174.31/japan/japan-info.html>

Thank You,
David
Web Team

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As first item under Commission Activity

Chairman's Remarks on the Fukushima Nuclear Plant Accident, April 4, Vienna, Austria

<http://www.nrc.gov/reading-rm/doc-collections/commission/speeches/2011/s-11-011.pdf>

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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.

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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 are 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 Mittyng, 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 SUMMARY

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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 are 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 Gadowski, 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." Gadowski 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 Rafferty 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 Mitylmg, 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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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 spumed 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 Wolf 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 coverts 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. Double 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. Double 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. Double 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-131 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." Comments Add Comments Click here to read the rules for posting comments

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.

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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 1/2 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 thick 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 Mityng 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.

Viktoria'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," Viktoria 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. Viktoria 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, Viktoria 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).

Tepeco 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.

Tepeco, 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.

Tepeco 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 Muled (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

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

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.

To contact the reporter on this story: Nariman Gizitdinov in Almaty at ngizitdinov@bloomberg.net.

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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.



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 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 application 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. Double 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. Double 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-133 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.”

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.

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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 1/2 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 Mitlyng 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.

Viktoria'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," Viktoria 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 Pripjat, others from the town of Chernobyl, and from Kiev, about 60 miles distant from the reactors. Viktoria 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, Viktoria 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.

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

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

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.

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

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NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

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NRC NEWS

NRC Assessment Sees New Problems At Fukushima. In a front-page article, the New York Times

(4/6, A1, Glanz, Broad, Subscription Publication, 950K) reports that an assessment produced by the NRC from data provided by "numerous" organizations, including the United States Department of Energy and General Electric, says that the Fukushima nuclear station faces "a wide array of fresh

threats that could persist indefinitely." Seawater used to cool the reactors may have produced explosive hydrogen; "semimolten fuel rods and salt buildup are impeding the flow of fresh water meant to cool the nuclear cores"; cooling water filling the containment structures stresses them and makes them vulnerable to aftershocks. "The document raises new questions about whether pouring water on nuclear fuel in the absence of functioning cooling systems can be sustained indefinitely," and the cooling water creates a "panoply of complex challenges." Additionally, the document "suggests that fragments or particles of nuclear fuel" were thrown up to one mile away, possibly indicating "more extensive damage to the extremely radioactive pools than previously disclosed."

KOFY-TV San Francisco (4/5, 9:15 a.m. PDT) reports that "according to the New York Times and a report by the Nuclear Regulatory Commission, there are mounting stresses on the containment structure as they fill with radioactive cooling water making them more vulnerable to rupture in one of the aftershocks rattling the site." The NRC report also says that there is a "possibility of explosion in the structure from the release of hydrogen and oxygen from the water used to cool the cores." Finally the report says that "the fuel rod and salt buildup are impeding the flow of water meant to cool the nuclear core."

Nuclear Technology Predicted To Become Safer. In an op-ed in the Wall Street Journal (4/6, Subscription Publication, 2.02M), Richard Lester, head of MIT's department of nuclear science and engineering, writes that while the Fukushima Daiichi has scared people. While there needs to be a review of US plants' safety and spent fuel storage, Lester predicts the accident will have little impact in the country, as few new plants would be built, anyway. However, Lester predicts that nuclear engineering will advance to create safer, more advanced nuclear generators, likening today's plants to Model Ts. Lester calls for the brightest nuclear scientists and engineers to continue in their professions so that the technology can quickly become safer and cheaper.

Scientist Seeking New Way Of Communicating Radiation Risks. Reuters (4/6, Doyle) reports that scientists say a new way to discuss radiation risks with the public, without provoking overblown fears, is needed. One issue is that often scientists are conveying both good and bad news. Different sources can quote very different risks, and often sources are seen as having their own agendas.

Feds Reassure Public Americans Not At Risk From Radiation. The Washington Post (4/6, Brown, 572K) reports, "In a display of solidarity, eight representatives of the Centers for Disease Control and Prevention, the Food and Drug Administration and the Environmental Protection Agency delivered the slightly complicated message that while

no amount of radiation is absolutely safe, the amount released by the damaged" Japanese reactors "is so small that the chance it will cause disease is nil," so Americans "should take no protective measures and should avoid no foods." CDC director Thomas Frieden said that the very low levels of radioactive isotopes found and expected to arrive "s say more about the sensitivity of the machinery than about the levels found." He added, "There is no reason for anyone in the United States to take potassium iodide at the present time."

Trace Amounts Of Radiation From Japan Found In US. The Beaver County (PA) Times (4/6, O'Shea, 35K) reports that radioactive rain was collected at the Beaver Valley Nuclear Power Station, "but the readings were not as high as those reported in eastern Pennsylvania and Ohio, and were well below levels considered hazardous by the federal government." Tests found 14.8 picocuries per liter of radioiodine-131, which "has been reported in the atmosphere throughout the United States since Japan's Fukushima nuclear plant began releasing radiation after a March 11 earthquake and tsunami."

The Minnesota Daily (4/6, Potter, 20K) reports, "Ongoing radiation monitoring performed by the Minnesota Department of Health" found in St. Paul "trace amounts of radiation that likely came from Japan." However, the MDH report says that it is "thousands of times less than normal background radiation and well below levels that would be of health concern," at .011 millirem per year.

NRC Responds To Group's Concerns About Vermont Yankee. The Brattleboro (VT) Reformer (4/6, Stilts) reports, "Last week the Nuclear Regulatory Commission addressed the concerns of the Safe and Green Campaign regarding the Vermont Yankee nuclear power plant." Eric Leeds, director of the office of nuclear reactor regulation, wrote to Robert Bady, Vermont coordinator of the campaign, saying "that the NRC is not researching the plant's decommissioning," but when it occurs, "the radiological health and safety of workers and members of the public will be subject to NRC requirements, and the NRC will exercise ongoing oversight of decommissioning activities to monitor compliance with its requirement." Bady argues that the NRC has a financial conflict of interest and "that through activism, he hopes to effect a change in the NRC that safety be on equal footing of profits."

WCAX-TV Burlington, Vermont (4/5, 11:11 p.m. EDT) reports that opponents of the Vermont Yankee Nuclear Plant want operators to "set aside enough money to close the plant." Those advocates in favor of shutting down the plant say that the Fukushima crisis "woke Vermonters up to the dangers of nuclear power." However, according to WCAX-TV, the plant "may not shut down in 2012 despite Vermont

lawmakers voting against a new license." Plant officials say that "one option is to stay open without state approval."

Vermont Yankee Preparing For Emergency Exercise. WPTZ-TV Burlington, Vermont (4/6, Bender) reports that Vermont Yankee is preparing "for an evaluation by the federal government...that happens every 6 years." Workers practiced measuring the spread of radiation in the air and coordinating evacuations. VT Emergency Management official Peter Coffey said, "This is a lead up exercise to what will be a FEMA evaluated Vermont Yankee exercise May 3rd and 4th."

Anti-Nuclear Groups To Discuss Vermont Yankee Shutdown. WCAX-TV Burlington, Vermont (4/5) reports, "With Vermont Yankee set to close in 2012," three officials from anti-nuclear groups will be in Rutland to "discuss transition, clean up, long-term waste storage and what role residents can play."

Vermont Legislature Argues Over Fee To Replace Vermont Yankee Fund Contribution. The AP (4/6, Gram) reports, "Bitter debate erupted" in the Vermont House over a 55-cent charge on monthly electric bills "intended to replace a portion of the roughly \$6 million the Vermont Yankee nuclear plant contributes each year to the Clean Energy Development Fund." The plant's agreement to make the payments "expires in March 2012, along with its state operating permit." However, the "House gave preliminary approval" to the bill. WCAX-TV Burlington, Vermont (4/5) also covers this story.

NRC: Japanese Crisis Doesn't Support Pulling Oyster Creek's License. The AP (4/6, Parry) reports that in a response the NRC filed, "to a federal appeals court that had asked if the Japanese crisis should lead to a re-thinking of the Oyster Creek Nuclear Generating Station's current 20-year license," the agency said "nothing it has learned from the Japanese nuclear disaster warrants revoking" the plant's license. "The New Jersey Sierra Club says the NRC has not learned anything from the Japanese disaster," and the group's director, Jeff Tittel, called the NRC "a cheerleader for industry" that "looks the other way it comes to relicensing."

The Asbury Park (NJ) Press (4/6, Moore) reports, "Judges with the Third Circuit Court of Appeals in Philadelphia asked the NRC for its opinion on whether events at the Fukushima Daiichi nuclear complex — with General Electric Mark I boiling water reactors similar in basic design to Oyster Creek — should have any bearing on the NRC's design to issue a 20-year operating license extension in 2009." The NRC told the court it "is paying close attention to findings coming out of Japan and will apply any short-term safety upgrades immediately — and use longer-term analysis to develop safety upgrades."

The Newark (NJ) Star-Ledger (4/6, Caroom, 235K) reports, "The NRC's response today pointed to a 'lessons learned' model for studying disasters that could affect nuclear security," such as Three Mile Island and 9/11. NRC spokeswoman Diane Screnci said that the "lessons learned" process' first phase "would conclude within three months, and a longer one would take stock of the Japanese nuclear saga as it unfolds over years." She added, "If we determine that changes are appropriate, those will be applied across the industry, not just one plant or plants in license renewals."

Additional Commentary. In an op-ed in the Bergen (NJ) Record (4/6, 161K), Jeff Tittel, director the New Jersey Sierra Club, writes, "The design of Oyster Creek is the same as the Fukushima Daiichi Unit 1, a GE Mark I boiling water reactor." He argues that, at the least, the plant needs to be better prepared for disasters, have more safety precautions, and change its cooling system. Tittel questions the ability to evacuate the surrounding area, as well. He concludes that New Jersey doesn't need the danger nuclear power represents "and instead promote energy security and good jobs, and stimulate our economy through renewable energy."

In an op-ed in the Brick (NJ) Patch (4/5), journalist Patricia Miller writes, "I've covered [Oyster Creek] for way too long not to have some concerns," focusing on evacuation plants. "If there was an emergency at Oyster Creek that mandated evacuation in the 10-mile radius around the plant, there would be no way out" because "Route 9 would be packed with frantic residents." Furthermore, during the summer "the populations in the affected areas skyrocket."

County Legislators In New York Want Larger Evacuation Zone For Indian Point. The AP (4/6) reports that six Westchester County, New York legislators "are suggesting that everyone within 50 miles of the Indian Point nuclear plants be evacuated in case of a serious nuclear accident," including "most of New York City's 8 million residents." The group notes that the NRC "recommended that US citizens stay at least 50 miles away from the plant in Japan that was damaged by an earthquake and tsunami. However, the NRC said Tuesday that the 50-mile advisory was issued based on limited data and conservative assumptions," while "the 10-mile zone around US reactors is based on extensive planning studies."

The Kingston (NY) Daily Freeman (4/6, 16K) reports that the NRC "sees 'no basis at this point' for expanding the size of the evacuation zone around the Indian Point nuclear power plant in Westchester County or any other nuclear site in the country." Still, "commission spokesman Neil Sheehan said the radius could be studied further" and "a wider evacuation area could be mandated if a situation warrants it."

The Middletown (NY) Times Herald-Record (4/6, Bosch, 61K) reports that while the NRC said that people outside a 10

mile radius "were not expected to confront dangerous levels of radiation 'under most accident scenarios,'" supporters of a wider emergency zone "want a zone that covers all accident scenarios at Indian Point, not just most of them."

The Westchester (NY) Journal News (4/6, Clary) reports that Westchester County Legislator Michael Kaplowitz wants "Congress to force the Nuclear Regulatory Commission and the Federal Emergency Management Agency to expand the zone" or "create a 'New York exemption' for Indian Point." This story is also covered by WABC-TV New York (4/5, Solis) and WCBS-TV New York (4/5).

Local Television. Local cable news channel News 12 Woodbury, NY (4/6, 12:03 a.m. EDT) reports that Westchester County legislators "want a larger evacuation zone around the Indian Point Nuclear Power Plant" from the current ten mile evacuation zone to a 50 mile zone. If it is expanded to 50 miles, "nearly 25 million people from" Long Island "all the way to New Jersey could be affected." Michael Kaplowitz, Westchester County legislator, said that "if something bad happens, that artificial line on the map of ten miles will not shield anybody from any of the potential negative impacts." However, "The Nuclear Regulatory Commission says it sees no reason to expand the emergency zone at Indian Point or any other nuclear power plant."

WPIX-TV New York (4/5, 10:06 p.m. EDT) and WNYW-TV New York (4/5, 6:10 p.m. EDT) provides similar coverage.

More Protests On Indian Point Plant. News 12 Westchester, NY (4/3, 6:35 a.m. EDT) reports "more calls today for the shutdown of Indian Point," showing activists in New York City's Union Square "pledging to keep raising their voices until the Nuclear Regulatory Commission agrees to reconsider the re-licensing of the Buchanan-based plant. Protestors said they're concerned the plant is unsafe and doesn't have an adequate evacuation plan in place in the event of a tragedy like the one in Japan. But Entergy, who owns Indian Point, says the plant was designed to survive the strongest earthquake ever anticipated for the Hudson Valley."

Citing Japanese Disaster, Activists Call For US To Broaden 10-Mile Evacuation Zone. WPLG-TV Miami, FL (4/3, 7:38 a.m. EDT) noted briefly that the disaster in Japan "has also sparked some calls to reassess nuclear disaster plants here in the US. Activists want regulators to expand the current ten-mile evacuation zone, but the nuclear regulatory committee says the area provides enough assurance of protecting residents."

Concerns Expressed Over NRC Allowing Plants To Increase Output. KVNO-FM Omaha (4/4, Bohall) reported, "The aftermath of Japan's recent nuclear crisis has left many in the United States questioning the overall safety of nuclear power plants across the country." Some groups "voiced concerns at the ease in which the NRC

grants permission" for nuclear plants to increase their output. "Questions have also been raised about financial motives possibly outweighing safety factors." However, Viktoria Mitlyng, the Senior Public Affairs Officer for the Duane Arnold Energy Center, "said the increase approval process through the NRC is actually a lengthy one" and requires "a rigorous review process."

NRC Told Crystal River Shut Down Extended After New Gap Found. Zacks Equity Research (4/5)

reports that Progress Energy's Crystal River Nuclear Plant told the NRC and regulators that it "remain shut for repairs as they have discovered a new gap in the wall of the containment building last month." After competing repairs and reviewing it, Progress Energy will restart Crystal River. "Progress Energy said it is now conducting a thorough engineering analysis and review of the new separation, while also analyzing the options to bring the plant back to service. However, the company said that the exact time for reopening the plant cannot be ascertained at this time." The repair's cost the utility \$150 million, while buying replacement power for 1.6 million customers has cost Progress \$290 million. The Orlando Sentinel (4/6, 187K) and Greenwire (4/6, Northey) also cover this.

However, the Charlotte (NC) Business Journal (4/6, Downey, Subscription Publication, 14K) adds, "Progress Energy Florida has announced it is conducting a thorough engineering analysis and review at its Crystal River nuclear plant that could result in closing down the 860-megawatt facility." Jessica Lambert, a Progress spokeswoman, said, "We are looking at all options."

Dozens Attend NRC Open House In Cordova.

On its website, KWQC-TV Davenport, Iowa (4/5) reports, "Organizers of a meeting Tuesday to discuss the safety at the Cordova nuclear plant expected more interest" due to Japan's nuclear crisis, and dozens attended the open house. "Representatives with the Nuclear Regulatory Commission were there to answer questions on the plants in both Japan and Cordova," including information on the Exelon plant's yearly review. The NRC "determined that overall, the Quad Cities station operated safely in 2010." NRC spokesperson Viktoria Mitlyng said, "The plant has been performing safely."

The Quad-City (IA/IL) Times (4/6, Geyer) reports that Mitlyng "said inspectors at the Cordova facility always learn something from the experiences of other nuclear plants around the globe." WQAD-TV Davenport, Iowa (4/5, Smith) reports, "The purpose of the town hall was to give people an idea of what happens at nuclear power facilities and what kind of oversight is involved."

Local Television. WHBF-TV Davenport, Iowa (4/5, 10:08 CT) reports that operators of a QCA power plant

appeared at an annual Nuclear Regulatory Commission open house in Cordova, IA today in order to assure the public that their plant is "running smoothly and safely." Bill Stoerner, communications manager for Exelon, the company that operates the QCA plant, said "our plant in Cordova has had many upgrades and modifications done since it began operations in 1972. it is one of the most state of the art nuclear plants in America." WHBF-TV adds that "Exelon workers say the Cordova plant got an 'a plus' rankings in this year's inspections." KWQC-TV Davenport, Iowa (4/5, 10:00 p.m. ET) provides similar coverage

PSC Postpones Georgia Power Nuclear Plant Financial-Risk-Sharing Decision.

The AP (4/6, Henry) reports, "The state's top utility regulators indefinitely postponed a big financial decision Tuesday that could have trimmed Georgia Power's earnings if costs escalate on what may become the country's first brand-new nuclear plant in a generation." AP says that "instead of deciding the long-delayed issue," the PSC members "voted unanimously to allow another delay so the Atlanta-based Southern Co. can file its own risk-sharing plan and offer more testimony on accounting rules. The issue has dragged on for more than two years without resolution." The article said a long delay "could push the commission's decision closer to the start of major construction at Plant Vogtle, which could begin after the" NRC "decides whether to license the plant, possibly later this year."

The Atlanta Journal Constitution (4/6, Newkirk) reports, "Commissioner Stan Wise, who proposed the latest delay, said Georgia Power raised new accounting issues last week that will require the PSC to reopen hearings and examine new evidence on the cost-containment plan." According to Georgia Power spokesman Jeff Wilson, "the company didn't raise the accounting issue earlier because it assumed the PSC staff would be aware of them."

The Augusta Chronicle (4/5, Jones, 64K) reported, "Georgia Power customers will have to wait to see if they'll be sharing the risk of construction costs overruns with the company's investors for two nuclear reactors at Plant Vogtle near Augusta after the Public Service Commission today postponed its decision." The Chronicle said the "issue is a proposal by the PSC staff that the company not be allowed to make the same profit on construction costs that exceed by more than \$300 million the \$6.4 billion budget for the reactors." Notably, the agency "already has authority to completely disallow charging customers for any unnecessary expenses." The Power-Gen Worldwide (4/5) also covered the news, citing the Atlanta Business Chronicle article.

Georgia Power Attorney Says Risk-Sharing Plan Illegal. The Atlanta Business Chronicle (4/6, Williams) reports the state utility regulator "ordered Georgia Power Co.

to show why its profit margin should not be reduced if the expansion of nuclear Plant Vogtle goes over budget." In response to the agency's staff for linking profits to cost overruns, "attorney Kevin Greene of Troutman Sanders LLP, representing Georgia Power, argued that the risk-sharing plan is illegal under state law because it would penalize the utility for results that are beyond its control and disallow substantial costs already approved by the commission as 'prudently incurred.'"

"PSC Staff will make a recommendation regarding dates for the filing of testimony and a hearing date at the PSC's regularly scheduled Energy Committee meeting next Thursday, April 14th," reported the Peachtree Corners (GA) Weekly (4/5). The paper provided more details, saying "Plant Vogtle's first two units, which came online in the late 1980s, were originally budgeted at about \$1 billion. But regulatory hold-ups caused project costs to soar." The final amount on the bill has reached \$9 billion. Notably, "Georgia Power is now 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." Right now Georgia Power is allowed profit margin of 11.15 percent, the article added.

The Georgia Public Broadcasting (4/5, Stiers) also covered the news of the PSC postponing the announcement on the risk-sharing plan.

Local Television. WAGA-TV Atlanta (4/6, 1:34 a.m. EDT) reports that the Georgia Public Service Commission is still hasn't made a decision on whether "Georgia Power should bear more financial risk as it seeks to build a new nuclear plant." The current "proposal would trim the company's earnings if project construction costs run over budget, but give them more money if these new reactors come in under budget." WAGA-TV adds that "Georgia Power has called the plan illegal and unfair." The commission said they will wait until they hear more testimony before they give their final decision on the matter.

Blogger Supports Georgia Power Sharing Financial Risks Of New Nuclear Plants. In a blog on the Atlanta Journal-Constitution (4/5, 213K), Jay Bookman writes that federal loan guarantees and state law mean that American taxpayers and Georgia Power customers "share in the financial risk" of "two new nuclear plants being built near Augusta by Georgia Power." Bookman adds, "about the only people not sharing in the risks of building two expensive reactors are the people who actually own Georgia Power." He supports a "simple and modest" state Public Service Commission staff proposal that would allow the company to make higher profits if construction costs come under \$5.8 billion, while "if costs exceed \$6.4 billion, the company's return on its investment would be cut slightly." Bookman dismisses arguments by Georgia Power attorney Kevin

Greene that the arrangement "could penalized the utility for events that were outside of its control."

Despite Reactor Similar To Fukushima, Dresden Plant Has Safeguards.

WMAQ-TV Chicago (4/5) broadcast, "Exelon officials say they're confident all of their plants are safe. ... This is the Dresden generating station, America's first nuclear generating plant. It's a GE Mark One, just like Fukushima but, says Exelon, with notable differences. For instance, safeguards against hydrogen buildups like those that blew the roof off a containment building in Japan." Additionally, "In Japan, backup generators failed when aboveground fuel tanks were swamped by the tsunami. Here at Dresden, those tanks are buried. There are three diesel generators which can power pumps and safety systems and two more in this building backing those up."

Browns Ferry Operators Say Failed Valve Not A Threat.

The Florence (AL) Times Daily (4/5, Stokes, 29K) reported, "Browns Ferry Nuclear Plant operators told federal regulators Monday that a valve in the cooling system failed because of a manufacturing deficiency and that the failed valve was never a safety threat." The paper said the NRC, which "licenses US nuclear plants, slapped officials at Browns Ferry, operated by the Tennessee Valley Authority, with a safety warning Feb. 9." Rob Whalen, vice president of nuclear engineering at TVA, "told regulators the valve had threads that were too small."

TVA, NRC Will Meet Monday On Browns Ferry Valve Failure. WAFF-TV Huntsville, AL (4/3, 10:08 p.m. CDT) reports that the Nuclear Regulatory Commission will meet with TVA officials tomorrow about the Browns Ferry nuclear plant. The commission will be asking questions about a valve failure last fall that TVA reported during a reactor shutdown. The commission believes the valve would not have been able to fulfill its safety function if it was needed, but TVA says there was no safety threat. The meeting will take place Monday in Atlanta."

WAGA-TV Atlanta, GA (4/3, 10:16 p.m. EDT) reports that the TVA "will meet with federal regulators tomorrow to explain why a valve failed at a nuclear plant in Athens, Alabama. The Nuclear Regulatory Commission says failure of the valve could have left a residual heat removal system unable to do its job. TVA officials say it was never a safety threat, and that it was repaired while the reactor was shut down for refueling."

Feinstein Seeks New Safety Reviews For All US Nuclear Plants.

KUSI-TV San Diego, CA (4/2, 10:17 p.m. PDT) reports that Senator Diane Feinstein "is calling for 'safety reviews' of all US nuclear power plants. In a

statement, the senator said 'We need to think carefully about whether our country has properly estimated the threats to our nuclear facilities.. and designed the facilities to endure them.' Earlier this week, the California Democrat held a hearing to look at nuclear safety here in the US. The hearing follows the senator's visit to the San Onofre. and Diablo Canyon nuclear power plants."

NRC Sees Need For Improvements At Kansas' Wolf Creek Plant.

KWCH-TV Wichita, KS (4/2, 10:35 p.m. CDT) reports, "Regulators say there are continuing problems at the Wolf Creek nuclear power plant in Kansas, but officials there say they're running a safe facility. In a Congressional hearing this week, the Nuclear Regulatory Commission said the Wolf Creek nuclear power plant in Burlington needs more oversight, inspections and scrutiny. That's because of what the plant reported last year, from unplanned shutdowns to equipment issues, but a Wolf Creek spokesperson says there are already two full-time inspectors inside the facility to check for potential problems. The report also notes that the plant "is still awaiting the results of a comprehensive review done in February."

First Energy Executive Notes Industry Review At NRC.

On the "Roundtable" public affairs panel discussion on WTVG-TV Toledo, OH (4/3, 12:21 p.m. EDT), a representative of First Energy, asked whether US nuclear firms are being asked to assist Japan on its trouble Fukushima plant, responds that, "We are working with the industry in this country. One of our industry groups has asked all of the nuclear plants in the country to go back and verify their readiness to deal with emergency. It's a short timetable, within months." Asked whether that was a presidential initiative, he replies, "It was the president's initiative. We are responding to the industry group, and then the Nuclear Regulatory Commission." He adds that the agency "is also going to do an independent assessment," and that lessons learned in the review and in Japan "will be incorporated into our practices and policies. Ultimately it will make our plant even safer."

Proposed Environmental Rule Could Have Nuclear Plants Building Cooling Towers.

The NJ Spotlight (4/6, Johnson) reports, "A new rule proposed by federal environmental officials could re-ignite a two-decades-old fight over whether cooling towers should be installed at the Salem nuclear generating stations as a way of reducing massive fish kills at the plant." While it doesn't require cooling towers, it "gives state authorities the flexibility to decide how to protect aquatic life on a case-by-case basis." Over 500 power plants could be affected by the proposed rule, along with other industries.

Massachusetts Legislators Holding Hearing On Nuclear Plant Safety.

The AP (4/6) reports that environmental "Activists are holding a rally on Beacon Hill on Wednesday afternoon to urge that no new nuclear reactors be built, and no existing reactors relicensed, until meaningful protections are in place." Immediately afterward, Massachusetts legislators from four legislative committees will "hold a joint public hearing on safety at nuclear plants in and around Massachusetts." NRC officials previously "reassured Gov. Deval Patrick last week that regional nuclear power plants are safe even as they ordered new plant inspections." The Taunton (MA) Gazette (4/6, 7K) also covers this story.

Davis Besse Nuclear Plant Runs Emergency Drill.

WTVG-TV Toledo (4/5) reports, "Ottawa County officials are running drills to prepare for an emergency at Davis Besse" nuclear power plant. "Today's drill was a practice for a drill next month that will be evaluated by the federal emergency management agency."

WUPW-TV Toledo (4/5, Brown) reports, "Dozens of agencies worked together" in the drill. "If there was a disaster at the power plant, resources would have been split up to cover several emergencies. That's because two actual fires broke out during the training simulation."

Nuclear Power Output Hits Lowest Level In A Year.

Bloomberg News (4/6, McClelland) reports that the NRC said the nation's "nuclear-power output fell to the lowest level in a year," falling "655 megawatts, or 0.9 percent, from yesterday to 76,185 megawatts, or 75 percent of capacity," when PPL Corp. shut the Susquehanna 2 reactor. "Twenty-four of the nation's 104 reactors were offline."

Susquehanna 2 Reactor Shuts Down.

The Energy Business Review (4/6) reports that Susquehanna's Unit 2 reactor was "shut down to begin a planned refueling and maintenance outage." About 40% of its uranium fuel will be replaced and "a number of equipment maintenance tasks and upgrades" will be performed, including "installing an integrated digital control system for plant equipment and replacement of turbines that power pumps that provide water to the reactor vessel."

Panelists Say Nuclear Industry Freeze Unlikely, Say Industry Reacted Well To Japan Crisis.

Platts Energy Week, as aired on WUSA-TV Washington, DC (4/3, 8:11 a.m. EDT), interviewed former NRC member Peter Bradford and Washington lawyer Daniel Stenger. Both judged it unlikely that Congress would adopt a proposal by Rep. Ed Markey (D-MA) to freeze nuclear plant licensing, but noted that the additional review work required could slow down NRC's licensing actions. Later in the

segment, asked to evaluate the NRC's performance in responding to the Japanese crisis, attorney Stenger stated that the agency "is doing an excellent job. They got on top of the events right away and sent some of their technical experts to Japan" and "began its operations center immediately." He also noted that the NRC "is doing a near-term, 90-day review. with interim reports along the way. to identify what the equipment failures, the other failures and the lessons learned from the Fukushima accident and take actions as necessary."

California's Nuclear Plants Faces New Doubts.

The "Common Ground" public affairs program on KCRA-TV Sacramento, CA (4/2, Riggs, 11:08 a.m. PDT) reports that the Diablo Canyon nuclear power plant operated by Pacific Gas & Electric on the central coast near San Luis Obispo is no stranger to controversy. And now as the owners seek a renewal of its license, the tsunami-driven crisis in Japan has raised new doubts about the future of nuclear power in California. On camera, Rochelle Becker of the Alliance for Nuclear Responsibility calls the Japanese disaster "a huge game changer for California's nuclear industry," and the segment adds that "critics of the other nuclear industry say that Diablo Canyon and the state's other twin reactors San Onofre in San Diego County are just as vulnerable to earthquakes and tsunami damage as the plants in Japan." California Gov. Jerry Brown (D), who in his earlier term opposed siting the Diablo Canyon plant, says that Japan's experience causes "new problems" for nuclear plants in California. The report also notes that a public referendum in 1989 shut down the Rancho Seco reactor near Sacramento, and that several state legislators are seeking additional seismic safety studies for the state's nuclear plants.

Proposed Bill On Nuclear Storage Fees Advances Past Texas Senate Committee.

The AP (4/6, Ingram) reports, "A state Senate committee approved a" measure that permit Waste Control Specialists to establish "disposal fees" at a dump for low-level radioactive waste. At least 36 states have showed interested in the site. "Previously, environmental regulators were to determine the rates. Cyrus Reed of the Lone Star Chapter of the Sierra Club said allowing Waste Control Specialists to set the rates would be a 'major policy shift.'" The bill mandates that fees must be higher than those paid by Texas and Vermont, who previously formed a compact that allows Vermont to dispose of nuclear waste in the Lone Star State. The Ft. Worth Star-Telegram (4/5, Tinsley) and KWES-TV Odessa, Texas (4/6) also reports this.

Duke CEO Says Company Still Plans To Complete Proposed Lee Nuclear Plant.

The Charlotte (NC) Observer (4/5, 168K) reports that Duke

Energy CEO Jim Rogers said his company "will stick to its plan to build a new nuclear plant despite the crisis in Japan." In an interview, Rogers asked, "Do you think China is going to slow down on any of its 24 reactors (under construction), or India, or Abu Dhabi?" Rogers cautioned that more needs to be learned about the specifics of the Japanese disaster. Furthermore, "Rogers cited the safety record of US nuclear plants, which watchdog groups often criticize." Duke expects to win approval for a new plant in Lee plant by 2013, with completion expected by 2021.

UC Irvine Reactor Subject To NRC Review. The Orange County (CA) Register (4/5, Brennan) reported, "A small nuclear reactor used for research at UC Irvine is considered safe and adequately protected from potential terrorist threats, though it will be subject to the same Nuclear Regulatory Commission review as all other reactors in the nation." George Miller, a UC Irvine chemistry professor in charge of the reactor, said that "it passed its most recent NRC inspection in December." Also, the "reactor is too low powered to deliver lethal radiation doses even in the case of an accident or a terrorist attack."

Retaliation Alleged In San Onofre Manager's Firing. KSWB-TV San Diego, CA (4/3, Flores, 10:31 p.m. PDT) reports that a potential whistleblower says that the coastline San Onofre nuclear generating station "has safety issues, and he is suing." In a lawsuit filed in Los Angeles County, ex-manager Paul Diaz "claims at the San Onofre nuclear generating station, some workers felt threatened by management if they brought up safety concerns about working conditions like increased overtime and fatigue." On Casmera, Diaz says that the employees "would raise these concerns, and their management either wasn't responding in a timely fashion or wasn't responding at all." The reporter continues when Diaz went to his superiors on those issues, "they told him to leave their concerns alone." Diaz again appears, saying, "The exact words were, 'They don't need you to be their superhero, and then the employees were also told not to raise concerns outside of their chain of command.' Diaz then went to the Nuclear Regulatory Commission, "and two months after he did that in October of last year, he says he was fired." The reporter adds that, "According to plant officials, safety there has always been a top priority, and that a manager threatening their employees is not tolerated." A plant official is shown saying that, "We have established new ways that employees can provide their safety concerns in an easier manner and a more autonomous manner that we think are taking effect."

KUSI-TV San Diego, CA (4/2, Bosh, 10:18 p.m. PDT) reports that the lawsuit over Diaz's firing. It notes that Diaz, the plant's business manager, "had a clean record before

leaving voluntarily in 2008. Last year he was brought back with a promotion, but just a few months later he was fired." The reporter cites a March 2010 NRC letter finding that there was a chilling affect on employees raising safety issues at the plant, and the agency's policy that nuclear plants must let workers speak freely about safety concerns. He adds that worker complaints at the facility are 10 times the industry average, and that the NRC has found that in "five consecutive assessments at the plant, corrective actions were ineffectual." While it noted that a company official would not discuss reasons for Diaz's firing, the official's "opening statement indicated Mr. Diaz retaliated against the employees for raising those concerns," labeling retaliation fro raising safety concerns a "termination offense."

San Onofre Engineer To Discuss Nuclear Safety. The Laguna Beach (CA) Independent (4/6) reports, "San Onofre nuclear engineer Steve Jeppson is the guest speaker Thursday, April 7, at the noon meeting of the Laguna Beach Exchange Club," where he "will talk about the nuclear disaster resulting from the Sendai earthquake, safety at the San Onofre plant and will be accompanied by another staff member from the San Onofre facility."

Professor Calls For End of Nuclear Power. In an op-ed in The Indypendent (4/6), Chris Williams, a professor of physics and chemistry at Pace University, write that 23 of the 104 operational nuclear reactors in the US "are built on the same 1960s design by the same company, General Electric, as the reactors at Fukushima," they "have been recognized to have serious design faults," and "design vulnerabilities...are routinely discovered." Furthermore, many nuclear plants are "on geologically active faults, in coastal locations or close to large sources of fresh water." Finally, Williams argues that nuclear power requires subsidies to be economically practical. Williams argues the reason for nuclear power is to be a justification for researching "the power to destroy life on a planetary scale" and producing plutonium for bombs. He calls for pressuring the government to not new nuclear plants or relicense old ones.

Nuclear Power Said To Not Make Economic Sense. In an op-ed in Forbes (4/5, 924K), Cato Institute senior fellows Jerry Taylor and Peter Van Doren write that the current "relatively unshaken" political faith in nuclear power is "unfortunate," as "nuclear power makes no sense from an economic perspective." The electricity produces "is not even remotely competitive in power markets with gas-fired or coal-fired electricity now or in the foreseeable future." Furthermore, there is a high risk of cost overruns. The authors argue, "The political campaign to ram these plants down the market's throat threatens catastrophic harm to both taxpayers and ratepayers."

Worries About Radiation Contaminated Foods Growing. The New York Times (4/6, B1, Neuman, Fabricant, Subscription Publication) reports, "Despite assurances by health officials that radiation from the stricken Fukushima Daiichi nuclear power plant in Japan is unlikely to show up in the food supply, worries about contaminated foods are growing among consumers, businesses and governments across the globe." The FDA "restricted some foods from" Japan and is working "to screen incoming fish and other food for traces of radiation." Meanwhile, some restaurants are buying radiation detectors to screen their food.

US Fishermen Seek Testing Of Tuna For Radiation. ABC World News (4/5, story 3, 2:25, Sawyer, 8.2M) reported, "US fishermen have issued a plea. The tuna fish swimming in [radioactive] water right now over in Japan are going to be migrating into US waters." ABC (Karlinsky) added, "A group of concerned fishermen now urging the government to test the fish when they arrive."

IN THE BLOGS

House Yucca Investigation Noted. In continuing coverage from Friday's briefing, the New York Times (4/6, Rudolf, 950K) "Green" blog reports that "Republican leaders have begun a formal inquiry into the Obama administration's decision to halt development of a nuclear waste repository at Yucca Mountain in Nevada." Last Thursday, House Energy and Commerce Committee chairman Fred Upton (R-MI) "demanded documents and written answers from Energy Secretary Steven Chu and Gregory Jaczko, chairman of the Nuclear Regulatory Commission, detailing their agencies' decision-making process in moving to block construction of the controversial project." Power-Gen Worldwide (4/6) provides similar coverage of this story.

All Power Sources Said To Have Risks. In a blog on Reuters (4/5), Morven McCulloch writes that in an interview environment and climate scientist Lord Julian Hunt noted that while the Fukushima Daiichi nuclear plant crisis has people rethinking the use of nuclear power, all forms of power generation have risks. The extraction and burning of fossil fuels produce air, water, and ground pollution, which kill people. Meanwhile, renewable sources of energy, such as wind and solar power, can be unreliable. Their power shortages can cause issues leading to injury and death.

Public Expected To Have Opportunities To Be Involved In Nuclear Decision Making. On Treehugger (4/5), John Laumer writes, "It is reasonable to expect some mandatory changes growing out of" the NRC

report on lessons learned from the Japanese nuclear crisis. Along with increased scrutiny of relicensing proposals, "citizen involvement in nuclear decision making is certain to increase." Other opportunities for citizens to "have a say on design, safety procedures, and siting at the state and the local level" include "licensing; public hearings; cooling water withdrawal permits; zoning hearings; and so on." Laumer speculates that nuclear plant owners "probably are none too excited about going to public hearings for NRC-mandated safety upgrades."

INTERNATIONAL NUCLEAR NEWS

Crack Leaking Radioactive Water At Japan Plant Plugged. The CBS Evening News (4/5, story 4, 2:20, Smith, 6.1M) reported, "Something finally worked today in the fight to stop radiation leaking from that damaged nuclear plant in Japan." CBS (Hatton) added, "Since at least Saturday, highly radioactive water has been pouring out of this eight-inch crack straight into the Pacific Ocean. But now, after several failures, a combination of liquid glass and gravel seems to have stopped the leak."

The AP (4/6, Foster, Nakashima) reports that a crack in a maintenance pit at the Fukushima Dai-ichi nuclear power plant was fixed using sodium silicate and another agent, ending "a tide of radiation that was pouring into the Pacific and exacerbating concerns over the safety of seafood." However, officials "have not explicitly ruled out that radioactive water is leaking into the sea from another point."

The Christian Science Monitor (4/6, Grier, 48K) reports, "Japan's radioactive water problem has developed in large part due to the ad hoc methods workers have used to try to cool reactor fuel units and avoid the disaster of a complete meltdown of the reactors' cores."

The New York Times (4/6, A13, Pollack, Belson, Drew, Subscription Publication) reports that the end of the leak is "unlikely to calm worries about the growing contamination in nearby coastal waters." Meanwhile, "experts on radiation in seafood said it was nearly impossible to get a full sense of the scope of the environmental and health risks until the Japanese released information on radiation levels in more species of fish and seaweed and in a greater number of locations."

NBC Nightly News (4/5, story 8, 2:10, Williams, 8.37M) reported, "Fish caught last week south of the Fukushima plant contained levels of radioactive iodine high enough to cause concern. So much so the Japanese government hastily announced today that it would be setting a nationwide standard for an allowable limit. At least 25 countries have already restricted imports of Japanese milk and produce. India is banning virtually all food from Japan for the next three months."

Bloomberg News (4/6, Inajima, Lundgren) reports, "Radioactivity in fish exceeding health guidelines was detected for the first time off northern Japan," with cesium radioactivity of 526 becquerel per kilogram found in sand-lance caught south of the Fukushima Dai-ichi plant. Five-hundred becquerel is the health ministry standard. However, the International Atomic Energy Agency said that "the potential additional radiation dose to a person eating seaweed or seafood caught near the Fukushima plant every day for a year would be 0.6 millisievert," less than the exposure from "from a year of exposure to granite that comprises the US Capitol, according to the US Army Corps of Engineers."

The Los Angeles Times (4/6, Hall, Makinen, 657K) reports, "It was unclear what Tepco might offer the fishermen, but the company said Tuesday that it would be giving 'condolence payments' totaling about \$2 million to residents who had to evacuate their homes because of radiation from the Fukushima plant." While the company "offered \$240,000 to each of 10 villages, towns and cities within 12 miles of the plant," the town of Namie refused the money. This story is also covered by the Washington Post (4/6, Harlan, 572K), USA Today (4/6, Dorell, 1.83M), the Wall Street Journal (4/6, Obe, 2.02M), Bloomberg News (4/6, Nakayama, Suzuki), Reuters (4/6, Negishi, Nishikawa), the Financial Times (4/6, Soble, Subscription Publication, 448K), and AFP (4/6, Ozawa).

Russia Sending Barge To Japan; China And India React To Contamination Concerns. In his "Bric Breaker" blog, Kenneth Rapoza reported for Forbes (4/5, 924K) that Japan's neighbors are reacting to its nuclear crisis, with Russian nuclear power company Rosatom promising to send "a floating waste-disposal facility" for Japan's liquid waste from the Fukushima plant. "Meanwhile, in China on Tuesday, more radioactive particles have been found in 17 provinces, up from 13 on Monday," although "they pose no threat to public health or to the environment, according to a daily statement issued by China's National Nuclear Emergency Coordination Committee." India meanwhile "banned food imports" from Japan for three months or longer "over fears they may be contaminated."

The Japan Times (4/6) reports only that "the government is considering borrowing a Japan-funded radioactive waste disposal facility from Russia," according to Hidehiko Nishiyama, a Nuclear and Industrial Safety Agency spokesman. Japan gave Russia the barge after it "dumped radioactive waste into the Sea of Japan in 1993 in the process of dismantling its nuclear subs." The Japan Times also reports that "the government defended on Tuesday dumping massive amounts of low-level radioactive water from the Fukushima nuclear plant, saying the action doesn't violate

international laws, and pledged to fully inform the international community" of such steps.

Japan Defends Dumping Contaminated Water In Pacific. South Korea's Chosun Ilbo (4/6, 220K) reports that "the Japanese government neither consulted nor informed Korea about a plan to discharge some 10,000 tons of contaminated water from the Fukushima Daiichi nuclear power plant into the sea," although a TV report indicated that "Tokyo discussed the matter with the United States in advance" and "also told the International Atomic Energy Agency of the decision in conformity with the Convention on the Prevention of Marine Pollution." Japan, however, "did not tell individual neighboring countries because the water was discharged on the Pacific side" of the country. South Korea has found some "small levels of radiation," the report says.

Two Weeks Into Incident, Tepco Proposed Adding Reactors To Plant. The Washington Post (4/6, Higgins, 572K) reports that two weeks after the crisis at Tokyo Electric Power Co.'s Fukushima Daiichi power plant began, Tepco "proposed building two new nuclear reactors" at the plant next spring. Fukushima prefecture's governor, Yuhei Sato, "reacted with fury" to the proposal, and the company was told it was unacceptable. "Tokyo Electric pressed on, declining to alter its plans and submitting them to the Ministry of Economy, Trade and Industry, or METI, in Tokyo." Now that the proposal is in the open, Tepco "has another fiasco to contain" and has done "significant backpedaling." The company's "disarray...has sharpened" the "question that has dogged Tepco since the tsunami": is Tepco in "a managerial meltdown" due to the size of the disaster, or is it "sticking to the aloof, heedless habits of a corporate behemoth accustomed to getting its way?"

Fear, Not Radioactivity, Said To Be Biggest Threat To Japanese Seafood Industry. NPR (4/5, Hamilton) reports that Masashi Kusakabe, director of the Nakaminato Laboratory for Marine Radioecology, said that a tuna swimming by the Fukushima plant "wouldn't hang around long enough to become seriously contaminated." Meanwhile, most of what's detected in the water is iodine -131, which halves in amount every eight days. "Kusakabe says the biggest threat to the Japanese fishing industry right now isn't radiation. It's fear."

UK Will Study Lessons Of Japan Before Proceeding With Planned Nuclear Program.

Several major media outlets report that the UK will delay work for about three months on planned nuclear plants while it studies what happened in Japan and incorporates any lessons from the crisis into its own designs. Bloomberg News (4/5, Bakewell) reported that Climate Change Minister Greg Barker said "there will be no 'material delay' in the UK's plan to allow new nuclear generators at eight sites." Bloomberg

News pointed out "the UK estimates it needs investment of 200 billion pounds (\$320 billion) to replace aging generators including nuclear plants by 2010." Barker's remarks come after Deputy Prime Minister Nick Clegg said last week "that the new plants may never be built because of raising costs associated with new safety standards."

Platts (4/5, Stellfox) reported on its website that the UK had planned to release conclusions about "generic design assessment" in June, but that report will be delayed "until after a nuclear safety review investigates the implications of the nuclear accident at Fukushima on the safety of UK reactors." The Areva EPR and Westinghouse AP1000 reactor designs will be included in the final assessment, but the UK also will "proceed to publish all the GDA safety issues on the two reactor designs that it had identified as of June 30, as well as the reactor vendors' resolution plans for those issues."

Like other outlets, the UK's Guardian (4/5, Flannery) noted that the Fukushima incident will be studied by the UK's chief nuclear inspector, Mike Weightman. The Department of Energy and Climate change said, "It's too early to say exactly what impact this will have on the overall timeline," which "was in marked contrast to a statement by the climate change minister, Greg Barker" that there would be "no 'material delay.'" The UK's Nuclear Industry Association said, "We should take time to review and learn the lessons of the Japanese crisis, while at the same time recognising that new nuclear development is essential for the UK." Reuters (4/5, Fineren) and the Financial Times (4/6, Pfeifer, 448K) also reported the story.

Revision Of Japan's Nuclear Power Platform Suspended. Kyodo News (4/6) reports, "The Japan Atomic Energy Commission said Tuesday it will suspend its work to revise the country's nuclear power platform" and "look into the causes of the crisis at the Fukushima plant and monitor discussions on the country's energy policy on a national level." Commission chairman Shunsuke Kondo said, "We have to admit that there has been an error in the criteria of judgment in promoting the country's nuclear power policy." Meanwhile, "the panel called for strengthening urgent safety measures over nuclear plants which are now in operation or are scheduled to go into operation soon and giving sufficient reports to local residents living near such plants."

The Yomiuri Shimbun (4/6) reports, "The panel said the crisis has shaken confidence in the safety of nuclear power at home and abroad."

Initial Screening Okays Two Saskatchewan First Nations For Nuclear Waste Storage. The Canadian Press (4/6, 88K) reports, "Two First Nations in northern Saskatchewan have passed an initial site screening

for hosting a potential nuclear waste storage facility." Both "Pinehouse Lake and the English River seem to have the necessary geological features," but Nuclear Waste Management Organization "spokesman Mike Krizanc says these communities are still seven to 10 years away from having to make a decision about nuclear waste."

Expert: World Lags Behind US, Western Europe In Nuclear Security. CQ Homeland Security (4/6, Margetta, Subscription Publication) reports that if the US "and its Western European allies want to get the rest of the world to take nuclear terrorism seriously, the first challenge will be convincing other countries that the issue deserves their attention, a nuclear security expert says." Emma L. Belcher, the Stanton Nuclear Security Fellow at the Council on Foreign Relations, "said the United States and United Nations are leading the way in developing multinational agreements to criminalize activities such as the smuggling and selling of nuclear material." However, "other countries — like those in sub-Saharan Africa — lag behind, she said, but their reasoning has less to do with ill intent than a large slate of pressing problems and a paucity of resources."

Indian Farmers Point To Japan In Battle To Block Nuclear Plant. Bloomberg News (4/6, Narayan, Philip, Chaudhary) reports, "The temple for the Hindu monkey god Hanuman, near Jaitapur on the western coast of India, seems a long way from Japan's Fukushima Dai-Ichi, where the worst nuclear disaster since Chernobyl continues to unfold." But for the "crowd gathering" there, "the crisis is looming on their doorstep. Less than three miles away, the Indian government plans to build what would be the world's largest nuclear-power plant and the villagers, fearing a repeat of the Japanese catastrophe, are here to protest." Bloomberg says the "the planned complex sits in an area of seismic activity and state-owned Nuclear Power Corp. of India...is underplaying the risk, according to Janhit Seva Samiti, a movement comprising hundreds of locals opposed to the plans."

In a separate report, Bloomberg News (4/6), on its website and on the air, pointed out "fisherman Amjad Borkar and mango grower Praveen Gavankar talk about their opposition to a proposed nuclear power plant in Jaitapur on the western coast of India." The local people "fear the plant, to be built with France's Areva SA, will damage their health and their livelihoods," the report says.

Reports Conflict On Bulgaria's Belene Nuclear Power Plant Schedule. There are conflicting reports about whether Bulgaria's Belene nuclear power plant on the Danube River will be delayed by that country and Russia. The AP (4/6) reports both countries signed a memorandum of

understanding that they would postpone it “for three months while they analyze plant safety in the wake of the Fukushima nuclear disaster.” Bloomberg News (4/5, Konstantinova, Arkhipov), however, said a Rosatom spokesman in Moscow denied that and said “no such bilateral documents were signed.”

EC’s Barroso Says Europe’s Nuclear Plants Could Take Remedial Action After Checks.

Bloomberg News (4/5, Stearns) reported that European Commission President Jose Barroso told the European Parliament on Tuesday that “stress tests” will likely start on the EU’s 143 existing nuclear plants after July 1, and “should an installation fail the test, the question of remedial actions remains open. In case an upgrade is technically or economically not feasible, reactors will have to be shut down and decommissioned.”

Germany’s Power Market Again Links To Coal Prices. Reuters (4/5, Gloystein) reported that Germany’s decision to power down seven old nuclear plants, combined with election victories by the Green Party and unrest in the Mideast, has recoupled the country’s power market to the price of coal as utilities turn to it for electricity. Industry observers said coal was likely to remain a major piece of Germany’s power formula, although just months ago the country was planning to mothball some coal plants in the near future.

Wind Could Supply 65 Percent Of Germany’s Power Some Day, Trade Chief Says. Bloomberg News (4/5, Kjetland) reported that Hermann Albers, head of the German Wind Energy Association, predicted in a newspaper report that wind farms might “supply more than 65 percent of Germany’s energy needs in the long term” and “will be capable of meeting 25 percent of the country’s requirements by 2020.” Bloomberg News said the 65 percent figure would replace Germany’s nuclear power.

Spanish Farming Community Hopes For Decontamination From 1966 Accident.

The New York Times (4/6, Minder, 950K) reports that citizens of Palomares, Spain, are hopeful that Madrid and Washington will finally clean up contamination that still exists in the farming town some 45 years after a near incident of nuclear disaster that occurred in 1966 when a US bomber collided with a refueling tanker in mid-air and dropped four hydrogen bombs there. The bombs didn’t explode, but they contaminated the area with radioactive debris, and some areas remain untouched and still in need of decontamination by removing irradiated dirt. The Times says “the case of Palomares helps illustrate the ways that radioactive debris can continue to tear at a community decades later.” It also contains lessons learned, in one case that “the burning of

contaminated tomato crops...helped spread the contamination,” which “no one knew” in 1966.

Iran Expanding Ties To Latin America. The AP (4/6, Cassata) reports, “Iran has expanded its ties in Latin American beyond its close relationship with Venezuela, a top US commander said Tuesday as he described a troubling development that the United States is watching closely.” According to Gen. Douglas Fraser, the head of the US Southern Command, “Iran has nearly doubled the number of embassies in the region, from six in 2005 to 10 in 2010 while also building cultural centers in 17 countries. Last year, Iran also has hosted heads of state from three countries – Bolivia, Guyana and Venezuela.”

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NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

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NRC NEWS

NRC Assessment Sees New Problems At Fukushima. In a front-page article, the New York Times (4/6, A1, Glanz, Broad, Subscription Publication, 950K)

reports that an assessment produced by the NRC from data provided by "numerous" organizations, including the United States Department of Energy and General Electric, says that the Fukushima nuclear station faces "a wide array of fresh threats that could persist indefinitely." Seawater used to cool the reactors may have produced explosive hydrogen;

“semimolten fuel rods and salt buildup are impeding the flow of fresh water meant to cool the nuclear cores”; cooling water filling the containment structures stresses them and makes them vulnerable to aftershocks. “The document raises new questions about whether pouring water on nuclear fuel in the absence of functioning cooling systems can be sustained indefinitely,” and the cooling water creates a “panoply of complex challenges.” Additionally, the document “suggests that fragments or particles of nuclear fuel” were thrown up to one mile away, possibly indicating “more extensive damage to the extremely radioactive pools than previously disclosed.”

KOFY-TV San Francisco (4/5, 9:15 a.m. PDT) reports that “according to the New York Times and a report by the Nuclear Regulatory Commission, there are mounting stresses on the containment structure as they fill with radioactive cooling water making them more vulnerable to rupture in one of the aftershocks rattling the site.” The NRC report also says that there is a “possibility of explosion in the structure from the release of hydrogen and oxygen from the water used to cool the cores.” Finally the report says that “the fuel rod and salt buildup are impeding the flow of water meant to cool the nuclear core.”

Nuclear Technology Predicted To Become Safer. In an op-ed in the Wall Street Journal (4/6, Subscription Publication, 2.02M), Richard Lester, head of MIT’s department of nuclear science and engineering, writes that while the Fukushima Daiichi has scared people. While there needs to be a review of US plants’ safety and spent fuel storage, Lester predicts the accident will have little impact in the country, as few new plants would be built, anyway. However, Lester predicts that nuclear engineering will advance to create safer, more advanced nuclear generators, likening today’s plants to Model Ts. Lester calls for the brightest nuclear scientists and engineers to continue in their professions so that the technology can quickly become safer and cheaper.

Scientist Seeking New Way Of Communicating Radiation Risks. Reuters (4/6, Doyle) reports that scientists say a new way to discuss radiation risks with the public, without provoking overblown fears, is needed. One issue is that often scientists are conveying both good and bad news. Different sources can quote very different risks, and often sources are seen as having their own agendas.

Feds Reassure Public Americans Not At Risk From Radiation. The Washington Post (4/6, Brown, 572K) reports, “In a display of solidarity, eight representatives of the Centers for Disease Control and Prevention, the Food and Drug Administration and the Environmental Protection Agency delivered the slightly complicated message that while no amount of radiation is absolutely safe, the amount released by the damaged” Japanese reactors “is so small that

the chance it will cause disease is nil,” so Americans “should take no protective measures and should avoid no foods.” CDC director Thomas Frieden said that the very low levels of radioactive isotopes found and expected to arrive “s say more about the sensitivity of the machinery than about the levels found.” He added, “There is no reason for anyone in the United States to take potassium iodide at the present time.”

Trace Amounts Of Radiation From Japan Found In US. The Beaver County (PA) Times (4/6, O’Shea, 35K) reports that radioactive rain was collected at the Beaver Valley Nuclear Power Station, “but the readings were not as high as those reported in eastern Pennsylvania and Ohio, and were well below levels considered hazardous by the federal government.” Tests found 14.8 picocuries per liter of radioiodine-131, which “has been reported in the atmosphere throughout the United States since Japan’s Fukushima nuclear plant began releasing radiation after a March 11 earthquake and tsunami.”

The Minnesota Daily (4/6, Potter, 20K) reports, “Ongoing radiation monitoring performed by the Minnesota Department of Health” found in St. Paul “trace amounts of radiation that likely came from Japan.” However, the MDH report says that it is “thousands of times less than normal background radiation and well below levels that would be of health concern,” at .011 millirem per year.

NRC Responds To Group’s Concerns About Vermont Yankee. The Brattleboro (VT) Reformer (4/6, Stilts) reports, “Last week the Nuclear Regulatory Commission addressed the concerns of the Safe and Green Campaign regarding the Vermont Yankee nuclear power plant.” Eric Leeds, director of the office of nuclear reactor regulation, wrote to Robert Bady, Vermont coordinator of the campaign, saying “that the NRC is not researching the plant’s decommissioning,” but when it occurs, “the radiological health and safety of workers and members of the public will be subject to NRC requirements, and the NRC will exercise ongoing oversight of decommissioning activities to monitor compliance with its requirement.” Bady argues that the NRC has a financial conflict of interest and “that through activism, he hopes to effect a change in the NRC that safety be on equal footing of profits.”

WCAX-TV Burlington, Vermont (4/5, 11:11 p.m. EDT) reports that opponents of the Vermont Yankee Nuclear Plant want operators to “set aside enough money to close the plant.” Those advocates in favor of shutting down the plant say that the Fukushima crisis “woke Vermonters up to the dangers of nuclear power.” However, according to WCAX-TV, the plant “may not shut down in 2012 despite Vermont lawmakers voting against a new license.” Plant officials say that “one option is to stay open without state approval.”

Vermont Yankee Preparing For Emergency Exercise. WPTZ-TV Burlington, Vermont (4/6, Bender) reports that Vermont Yankee is preparing "for an evaluation by the federal government...that happens every 6 years." Workers practiced measuring the spread of radiation in the air and coordinating evacuations. VT Emergency Management official Peter Coffey said, "This is a lead up exercise to what will be a FEMA evaluated Vermont Yankee exercise May 3rd and 4th."

Anti-Nuclear Groups To Discuss Vermont Yankee Shutdown. WCAX-TV Burlington, Vermont (4/5) reports, "With Vermont Yankee set to close in 2012," three officials from anti-nuclear groups will be in Rutland to "discuss transition, clean up, long-term waste storage and what role residents can play."

Vermont Legislature Argues Over Fee To Replace Vermont Yankee Fund Contribution. The AP (4/6, Gram) reports, "Bitter debate erupted" in the Vermont House over a 55-cent charge on monthly electric bills "intended to replace a portion of the roughly \$6 million the Vermont Yankee nuclear plant contributes each year to the Clean Energy Development Fund." The plant's agreement to make the payments "expires in March 2012, along with its state operating permit." However, the "House gave preliminary approval" to the bill. WCAX-TV Burlington, Vermont (4/5) also covers this story.

NRC: Japanese Crisis Doesn't Support Pulling Oyster Creek's License. The AP (4/6, Parry) reports that in a response the NRC filed, "to a federal appeals court that had asked if the Japanese crisis should lead to a re-thinking of the Oyster Creek Nuclear Generating Station's current 20-year license," the agency said "nothing it has learned from the Japanese nuclear disaster warrants revoking" the plant's license. "The New Jersey Sierra Club says the NRC has not learned anything from the Japanese disaster," and the group's director, Jeff Tittel, called the NRC "a cheerleader for industry" that "looks the other way it comes to relicensing."

The Asbury Park (NJ) Press (4/6, Moore) reports, "Judges with the Third Circuit Court of Appeals in Philadelphia asked the NRC for its opinion on whether events at the Fukushima Daiichi nuclear complex — with General Electric Mark I boiling water reactors similar in basic design to Oyster Creek — should have any bearing on the NRC's design to issue a 20-year operating license extension in 2009." The NRC told the court it "is paying close attention to findings coming out of Japan and will apply any short-term safety upgrades immediately — and use longer-term analysis to develop safety upgrades."

The Newark (NJ) Star-Ledger (4/6, Caroom, 235K) reports, "The NRC's response today pointed to a 'lessons learned' model for studying disasters that could affect nuclear

security," such as Three Mile Island and 9/11. NRC spokeswoman Diane Screnci said that the "lessons learned" process' first phase "would conclude within three months, and a longer one would take stock of the Japanese nuclear saga as it unfolds over years." She added, "If we determine that changes are appropriate, those will be applied across the industry, not just one plant or plants in license renewals."

Additional Commentary. In an op-ed in the Bergen (NJ) Record (4/6, 161K), Jeff Tittel, director the New Jersey Sierra Club, writes, "The design of Oyster Creek is the same as the Fukushima Daiichi Unit 1, a GE Mark I boiling water reactor." He argues that, at the least, the plant needs to be better prepared for disasters, have more safety precautions, and change its cooling system. Tittel questions the ability to evacuate the surrounding area, as well. He concludes that New Jersey doesn't need the danger nuclear power represents "and instead promote energy security and good jobs, and stimulate our economy through renewable energy."

In an op-ed in the Brick (NJ) Patch (4/5), journalist Patricia Miller writes, "I've covered [Oyster Creek] for way too long not to have some concerns," focusing on evacuation plants. "If there was an emergency at Oyster Creek that mandated evacuation in the 10-mile radius around the plant, there would be no way out" because "Route 9 would be packed with frantic residents." Furthermore, during the summer "the populations in the affected areas skyrocket."

County Legislators In New York Want Larger Evacuation Zone For Indian Point. The AP (4/6) reports that six Westchester County, New York legislators "are suggesting that everyone within 50 miles of the Indian Point nuclear plants be evacuated in case of a serious nuclear accident," including "most of New York City's 8 million residents." The group notes that the NRC "recommended that US citizens stay at least 50 miles away from the plant in Japan that was damaged by an earthquake and tsunami. However, the NRC said Tuesday that the 50-mile advisory was issued based on limited data and conservative assumptions," while "the 10-mile zone around US reactors is based on extensive planning studies."

The Kingston (NY) Daily Freeman (4/6, 16K) reports that the NRC "sees 'no basis at this point' for expanding the size of the evacuation zone around the Indian Point nuclear power plant in Westchester County or any other nuclear site in the country." Still, "commission spokesman Neil Sheehan said the radius could be studied further" and "a wider evacuation area could be mandated if a situation warrants it."

The Middletown (NY) Times Herald-Record (4/6, Bosch, 61K) reports that while the NRC said that people outside a 10 mile radius "were not expected to confront dangerous levels of radiation 'under most accident scenarios,'" supporters of a

wider emergency zone “want a zone that covers all accident scenarios at Indian Point, not just most of them.”

The Westchester (NY) Journal News (4/6, Clary) reports that Westchester County Legislator Michael Kaplowitz wants “Congress to force the Nuclear Regulatory Commission and the Federal Emergency Management Agency to expand the zone” or “create a ‘New York exemption’ for Indian Point.” This story is also covered by WABC-TV New York (4/5, Solis) and WCBS-TV New York (4/5).

Local Television. Local cable news channel News 12 Woodbury, NY (4/6, 12:03 a.m. EDT) reports that Westchester County legislators “want a larger evacuation zone around the Indian Point Nuclear Power Plant” from the current ten mile evacuation zone to a 50 mile zone. If it is expanded to 50 miles, “nearly 25 million people from” Long Island “all the way to New Jersey could be affected.” Michael Kaplowitz, Westchester County legislator, said that “If something bad happens, that artificial line on the map of ten miles will not shield anybody from any of the potential negative impacts.” However, “The Nuclear Regulatory Commission says it sees no reason to expand the emergency zone at Indian Point or any other nuclear power plant.”

WPIX-TV New York (4/5, 10:06 p.m. EDT) and WNYW-TV New York (4/5, 6:10 p.m. EDT) provides similar coverage.

More Protests On Indian Point Plant. News 12 Westchester, NY (4/3, 6:35 a.m. EDT) reports “more calls today for the shutdown of Indian Point,” showing activists in New York City’s Union Square “pledging to keep raising their voices until the Nuclear Regulatory Commission agrees to reconsider the re-licensing of the Buchanan-based plant. Protestors said they’re concerned the plant is unsafe and doesn’t have an adequate evacuation plan in place in the event of a tragedy like the one in Japan. But Entergy, who owns Indian Point, says the plant was designed to survive the strongest earthquake ever anticipated for the Hudson Valley.”

Citing Japanese Disaster, Activists Call For US To Broaden 10-Mile Evacuation Zone. WPLG-TV Miami, FL (4/3, 7:38 a.m. EDT) noted briefly that the disaster in Japan “has also sparked some calls to reassess nuclear disaster plants here in the US. Activists want regulators to expand the current ten-mile evacuation zone, but the nuclear regulatory committee says the area provides enough assurance of protecting residents.”

Concerns Expressed Over NRC Allowing Plants To Increase Output. KVNO-FM Omaha (4/4, Bohall) reported, “The aftermath of Japan’s recent nuclear crisis has left many in the United States questioning the overall safety of nuclear power plants across the country.” Some groups “voiced concerns at the ease in which the NRC grants permission” for nuclear plants to increase their output. “Questions have also been raised about financial motives

possibly outweighing safety factors.” However, Viktoria Mitlyng, the Senior Public Affairs Officer for the Duane Arnold Energy Center, “said the increase approval process through the NRC is actually a lengthy one” and requires “a rigorous review process.”

NRC Told Crystal River Shut Down Extended After New Gap Found. Zacks Equity Research (4/5) reports that Progress Energy’s Crystal River Nuclear Plant told the NRC and regulators that it “remain shut for repairs as they have discovered a new gap in the wall of the containment building last month.” After competing repairs and reviewing it, Progress Energy will restart Crystal River. “Progress Energy said it is now conducting a thorough engineering analysis and review of the new separation, while also analyzing the options to bring the plant back to service. However, the company said that the exact time for reopening the plant cannot be ascertained at this time.” The repair’s cost the utility \$150 million, while buying replacement power for 1.6 million customers has cost Progress \$290 million. The Orlando Sentinel (4/6, 187K) and Greenwire (4/6, Northey) also cover this.

However, the Charlotte (NC) Business Journal (4/6, Downey, Subscription Publication, 14K) adds, “Progress Energy Florida has announced it is conducting a thorough engineering analysis and review at its Crystal River nuclear plant that could result in closing down the 860-megawatt facility.” Jessica Lambert, a Progress spokeswoman, said, “We are looking at all options.”

Dozens Attend NRC Open House In Cordova. On its website, KWQC-TV Davenport, Iowa (4/5) reports, “Organizers of a meeting Tuesday to discuss the safety at the Cordova nuclear plant expected more interest” due to Japan’s nuclear crisis, and dozens attended the open house. “Representatives with the Nuclear Regulatory Commission were there to answer questions on the plants in both Japan and Cordova,” including information on the Exelon plant’s yearly review. The NRC “determined that overall, the Quad Cities station operated safely in 2010.” NRC spokesperson Viktoria Mitlyng said, “The plant has been performing safely.”

The Quad-City (IA/IL) Times (4/6, Geyer) reports that Mitlyng “said inspectors at the Cordova facility always learn something from the experiences of other nuclear plants around the globe.” WQAD-TV Davenport, Iowa (4/5, Smith) reports, “The purpose of the town hall was to give people an idea of what happens at nuclear power facilities and what kind of oversight is involved.”

Local Television. WHBF-TV Davenport, Iowa (4/5, 10:08 CT) reports that operators of a QCA power plant appeared at an annual Nuclear Regulatory Commission open house in Cordova, IA today in order to assure the public that

their plant is "running smoothly and safely." Bill Stoerner, communications manager for Exelon, the company that operates the QCA plant, said "our plant in Cordova has had many upgrades and modifications done since it began operations in 1972. it is one of the most state of the art nuclear plants in America." WHBF-TV adds that "Exelon workers say the Cordova plant got an 'a plus' rankings in this year's inspections." KWQC-TV Davenport, Iowa (4/5, 10:00 p.m. ET) provides similar coverage

PSC Postpones Georgia Power Nuclear Plant Financial-Risk-Sharing Decision.

The AP (4/6, Henry) reports, "The state's top utility regulators indefinitely postponed a big financial decision Tuesday that could have trimmed Georgia Power's earnings if costs escalate on what may become the country's first brand-new nuclear plant in a generation." AP says that "instead of deciding the long-delayed issue," the PSC members "voted unanimously to allow another delay so the Atlanta-based Southern Co. can file its own risk-sharing plan and offer more testimony on accounting rules. The issue has dragged on for more than two years without resolution." The article said a long delay "could push the commission's decision closer to the start of major construction at Plant Vogtle, which could begin after the" NRC "decides whether to license the plant, possibly later this year."

The Atlanta Journal Constitution (4/6, Newkirk) reports, "Commissioner Stan Wise, who proposed the latest delay, said Georgia Power raised new accounting issues last week that will require the PSC to reopen hearings and examine new evidence on the cost-containment plan." According to Georgia Power spokesman Jeff Wilson, "the company didn't raise the accounting issue earlier because it assumed the PSC staff would be aware of them."

The Augusta Chronicle (4/5, Jones, 64K) reported, "Georgia Power customers will have to wait to see if they'll be sharing the risk of construction costs overruns with the company's investors for two nuclear reactors at Plant Vogtle near Augusta after the Public Service Commission today postponed its decision." The Chronicle said the "issue is a proposal by the PSC staff that the company not be allowed to make the same profit on construction costs that exceed by more than \$300 million the \$6.4 billion budget for the reactors." Notably, the agency "already has authority to completely disallow charging customers for any unnecessary expenses." The Power-Gen Worldwide (4/5) also covered the news, citing the Atlanta Business Chronicle article.

Georgia Power Attorney Says Risk-Sharing Plan Illegal. The Atlanta Business Chronicle (4/6, Williams) reports the state utility regulator "ordered Georgia Power Co. to show why its profit margin should not be reduced if the expansion of nuclear Plant Vogtle goes over budget." In

response to the agency's staff for linking profits to cost overruns, "attorney Kevin Greene of Troutman Sanders LLP, representing Georgia Power, argued that the risk-sharing plan is illegal under state law because it would penalize the utility for results that are beyond its control and disallow substantial costs already approved by the commission as 'prudently incurred.'"

"PSC Staff will make a recommendation regarding dates for the filing of testimony and a hearing date at the PSC's regularly scheduled Energy Committee meeting next Thursday, April 14th," reported the Peachtree Corners (GA) Weekly (4/5). The paper provided more details, saying "Plant Vogtle's first two units, which came online in the late 1980s, were originally budgeted at about \$1 billion. But regulatory hold-ups caused project costs to soar." The final amount on the bill has reached \$9 billion. Notably, "Georgia Power is now 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." Right now Georgia Power is allowed profit margin of 11.15 percent, the article added.

The Georgia Public Broadcasting (4/5, Stiers) also covered the news of the PSC postponing the announcement on the risk-sharing plan.

Local Television. WAGA-TV Atlanta (4/6, 1:34 a.m. EDT) reports that the Georgia Public Service Commission is still hasn't made a decision on whether "Georgia Power should bear more financial risk as it seeks to build a new nuclear plant." The current "proposal would trim the company's earnings if project construction costs run over budget, but give them more money if these new reactors come in under budget." WAGA-TV adds that "Georgia Power has called the plan illegal and unfair." The commission said they will wait until they hear more testimony before they give their final decision on the matter.

Blogger Supports Georgia Power Sharing Financial Risks Of New Nuclear Plants. In a blog on the Atlanta Journal-Constitution (4/5, 213K), Jay Bookman writes that federal loan guarantees and state law mean that American taxpayers and Georgia Power customers "share in the financial risk" of "two new nuclear plants being built near Augusta by Georgia Power." Bookman adds, "about the only people not sharing in the risks of building two expensive reactors are the people who actually own Georgia Power." He supports a "simple and modest" state Public Service Commission staff proposal that would allow the company to make higher profits if construction costs come under \$5.8 billion, while "if costs exceed \$6.4 billion, the company's return on its investment would be cut slightly." Bookman dismisses arguments by Georgia Power attorney Kevin Greene that the arrangement "could penalized the utility for events that were outside of its control."

Despite Reactor Similar To Fukushima, Dresden Plant Has Safeguards.

WMAQ-TV Chicago (4/5) broadcast, "Exelon officials say they're confident all of their plants are safe. ... This is the Dresden generating station, America's first nuclear generating plant. It's a GE Mark One, just like Fukushima but, says Exelon, with notable differences. For instance, safeguards against hydrogen buildups like those that blew the roof off a containment building in Japan." Additionally, "In Japan, backup generators failed when aboveground fuel tanks were swamped by the tsunami. Here at Dresden, those tanks are buried. There are three diesel generators which can power pumps and safety systems and two more in this building backing those up."

Browns Ferry Operators Say Failed Valve Not A Threat.

The Florence (AL) Times Daily (4/5, Stokes, 29K) reported, "Browns Ferry Nuclear Plant operators told federal regulators Monday that a valve in the cooling system failed because of a manufacturing deficiency and that the failed valve was never a safety threat." The paper said the NRC, which "licenses US nuclear plants, slapped officials at Browns Ferry, operated by the Tennessee Valley Authority, with a safety warning Feb. 9." Rob Whalen, vice president of nuclear engineering at TVA, "told regulators the valve had threads that were too small."

TVA, NRC Will Meet Monday On Browns Ferry Valve Failure. WAFF-TV Huntsville, AL (4/3, 10:08 p.m. CDT) reports that the Nuclear Regulatory Commission will meet with TVA officials tomorrow about the Browns Ferry nuclear plant. The commission will be asking questions about a valve failure last fall that TVA reported during a reactor shutdown. The commission believes the valve would not have been able to fulfill its safety function if it was needed, but TVA says there was no safety threat. The meeting will take place Monday in Atlanta."

WAGA-TV Atlanta, GA (4/3, 10:16 p.m. EDT) reports that the TVA "will meet with federal regulators tomorrow to explain why a valve failed at a nuclear plant in Athens, Alabama. The Nuclear Regulatory Commission says failure of the valve could have left a residual heat removal system unable to do its job. TVA officials say it was never a safety threat, and that it was repaired while the reactor was shut down for refueling."

Feinstein Seeks New Safety Reviews For All US Nuclear Plants.

KUSI-TV San Diego, CA (4/2, 10:17 p.m. PDT) reports that Senator Diane Feinstein "is calling for 'safety reviews' of all US nuclear power plants. In a statement, the senator said 'We need to think carefully about whether our country has properly estimated the threats to our nuclear facilities.. and designed the facilities to endure them.'"

Earlier this week, the California Democrat held a hearing to look at nuclear safety here in the US. The hearing follows the senator's visit to the San Onofre. and Diablo Canyon nuclear power plants."

NRC Sees Need For Improvements At Kansas' Wolf Creek Plant.

KWCH-TV Wichita, KS (4/2, 10:35 p.m. CDT) reports, "Regulators say there are continuing problems at the Wolf Creek nuclear power plant in Kansas, but officials there say they're running a safe facility. In a Congressional hearing this week, the Nuclear Regulatory Commission said the Wolf Creek nuclear power plant in Burlington needs more oversight, inspections and scrutiny. That's because of what the plant reported last year, from unplanned shutdowns to equipment issues, but a Wolf Creek spokesperson says there are already two full-time inspectors inside the facility to check for potential problems. The report also notes that the plant "is still awaiting the results of a comprehensive review done in February."

First Energy Executive Notes Industry Review At NRC.

On the "Roundtable" public affairs panel discussion on WTVG-TV Toledo, OH (4/3, 12:21 p.m. EDT), a representative of First Energy, asked whether US nuclear firms are being asked to assist Japan on its trouble Fukushima plant, responds that, "We are working with the industry in this country. One of our industry groups has asked all of the nuclear plants in the country to go back and verify their readiness to deal with emergency. It's a short timetable, within months." Asked whether that was a presidential initiative, he replies, "It was the president's initiative. We are responding to the industry group, and then the Nuclear Regulatory Commission." He adds that the agency "is also going to do an independent assessment," and that lessons learned in the review and in Japan "will be incorporated into our practices and policies. Ultimately it will make our plant even safer."

Proposed Environmental Rule Could Have Nuclear Plants Building Cooling Towers.

The NJ Spotlight (4/6, Johnson) reports, "A new rule proposed by federal environmental officials could re-ignite a two-decades-old fight over whether cooling towers should be installed at the Salem nuclear generating stations as a way of reducing massive fish kills at the plant." While it doesn't require cooling towers, it "gives state authorities the flexibility to decide how to protect aquatic life on a case-by-case basis." Over 500 power plants could be affected by the proposed rule, along with other industries.

Massachusetts Legislators Holding Hearing On Nuclear Plant Safety.

The AP (4/6) reports that

environmental "Activists are holding a rally on Beacon Hill on Wednesday afternoon to urge that no new nuclear reactors be built, and no existing reactors relicensed, until meaningful protections are in place." Immediately afterward, Massachusetts legislators from four legislative committees will "hold a joint public hearing on safety at nuclear plants in and around Massachusetts." NRC officials previously "reassured Gov. Deval Patrick last week that regional nuclear power plants are safe even as they ordered new plant inspections." The Taunton (MA) Gazette (4/6, 7K) also covers this story.

Davis Besse Nuclear Plant Runs Emergency Drill. WTVG-TV Toledo (4/5) reports, "Ottawa County officials are running drills to prepare for an emergency at Davis Besse" nuclear power plant. "Today's drill was a practice for a drill next month that will be evaluated by the federal emergency management agency."

WUPW-TV Toledo (4/5, Brown) reports, "Dozens of agencies worked together" in the drill. "If there was a disaster at the power plant, resources would have been split up to cover several emergencies. That's because two actual fires broke out during the training simulation."

Nuclear Power Output Hits Lowest Level In A Year. Bloomberg News (4/6, McClelland) reports that the NRC said the nation's "nuclear-power output fell to the lowest level in a year," falling "655 megawatts, or 0.9 percent, from yesterday to 76,185 megawatts, or 75 percent of capacity," when PPL Corp. shut the Susquehanna 2 reactor. "Twenty-four of the nation's 104 reactors were offline."

Susquehanna 2 Reactor Shuts Down. The Energy Business Review (4/6) reports that Susquehanna's Unit 2 reactor was "shut down to begin a planned refueling and maintenance outage." About 40% of its uranium fuel will be replaced and "a number of equipment maintenance tasks and upgrades" will be performed, including "installing an integrated digital control system for plant equipment and replacement of turbines that power pumps that provide water to the reactor vessel."

Panelists Say Nuclear Industry Freeze Unlikely, Say Industry Reacted Well To Japan Crisis. Platts Energy Week, as aired on WUSA-TV Washington, DC (4/3, 8:11 a.m. EDT), interviewed former NRC member Peter Bradford and Washington lawyer Daniel Stenger. Both judged it unlikely that Congress would adopt a proposal by Rep. Ed Markey (D-MA) to freeze nuclear plant licensing, but noted that the additional review work required could slow down NRC's licensing actions. Later in the segment, asked to evaluate the NRC's performance in responding to the Japanese crisis, attorney Stenger stated

that the agency "is doing an excellent job. They got on top of the events right away and sent some of their technical experts to Japan" and "began its operations center immediately." He also noted that the NRC "is doing a near-term, 90-day review. with interim reports along the way. to identify what the equipment failures, the other failures and the lessons learned from the Fukushima accident and take actions as necessary."

California's Nuclear Plants Faces New Doubts. The "Common Ground" public affairs program on KCRA-TV Sacramento, CA (4/2, Riggs, 11:08 a.m. PDT) reports that the Diablo Canyon nuclear power plant operated by Pacific Gas & Electric on the central coast near San Luis Obispo is no stranger to controversy. And now as the owners seek a renewal of its license, the tsunami-driven crisis in Japan has raised new doubts about the future of nuclear power in California. On camera, Rochelle Becker of the Alliance for Nuclear Responsibility calls the Japanese disaster "a huge game changer for California's nuclear industry," and the segment adds that "critics of the other nuclear industry say that Diablo Canyon and the state's other twin reactors San Onofre in San Diego County are just as vulnerable to earthquakes and tsunami damage as the plants in Japan." California Gov. Jerry Brown (D), who in his earlier term opposed siting the Diablo Canyon plant, says that Japan's experience causes "new problems" for nuclear plants in California. The report also notes that a public referendum in 1989 shut down the Rancho Seco reactor near Sacramento, and that several state legislators are seeking additional seismic safety studies for the state's nuclear plants.

Proposed Bill On Nuclear Storage Fees Advances Past Texas Senate Committee. The AP (4/6, Ingram) reports, "A state Senate committee approved a" measure that permit Waste Control Specialists to establish "disposal fees" at a dump for low-level radioactive waste. At least 36 states have showed interested in the site. "Previously, environmental regulators were to determine the rates. Cyrus Reed of the Lone Star Chapter of the Sierra Club said allowing Waste Control Specialists to set the rates would be a 'major policy shift.'" The bill mandates that fees must be higher than those paid by Texas and Vermont, who previously formed a compact that allows Vermont to dispose of nuclear waste in the Lone Star State. The Ft. Worth Star-Telegram (4/5, Tinsley) and KWES-TV Odessa, Texas (4/6) also reports this.

Duke CEO Says Company Still Plans To Complete Proposed Lee Nuclear Plant. The Charlotte (NC) Observer (4/5, 168K) reports that Duke Energy CEO Jim Rogers said his company "will stick to its plan to build a new nuclear plant despite the crisis in Japan."

In an interview, Rogers asked, "Do you think China is going to slow down on any of its 24 reactors (under construction), or India, or Abu Dhabi?" Rogers cautioned that more needs to be learned about the specifics of the Japanese disaster. Furthermore, "Rogers cited the safety record of US nuclear plants, which watchdog groups often criticize." Duke expects to win approval for a new plant in Lee plant by 2013, with completion expected by 2021.

UC Irvine Reactor Subject To NRC Review. The Orange County (CA) Register (4/5, Brennan) reported, "A small nuclear reactor used for research at UC Irvine is considered safe and adequately protected from potential terrorist threats, though it will be subject to the same Nuclear Regulatory Commission review as all other reactors in the nation." George Miller, a UC Irvine chemistry professor in charge of the reactor, said that "it passed its most recent NRC inspection in December." Also, the "reactor is too low powered to deliver lethal radiation doses even in the case of an accident or a terrorist attack."

Retaliation Alleged In San Onofre Manager's Firing. KSWB-TV San Diego, CA (4/3, Flores, 10:31 p.m. PDT) reports that a potential whistleblower says that the coastline San Onofre nuclear generating station "has safety issues, and he is suing." In a lawsuit filed in Los Angeles County, ex-manager Paul Diaz "claims at the San Onofre nuclear generating station, some workers felt threatened by management if they brought up safety concerns about working conditions like increased overtime and fatigue." On Casmera, Diaz says that the employees "would raise these concerns, and their management either wasn't responding in a timely fashion or wasn't responding at all." The reporter continues when Diaz went to his superiors on those issues, "they told him to leave their concerns alone." Diaz again appears, saying, "The exact words were, 'They don't need you to be their superhero, and then the employees were also told not to raise concerns outside of their chain of command.' Diaz then went to the Nuclear Regulatory Commission, "and two months after he did that in October of last year, he says he was fired." The reporter adds that, "According to plant officials, safety there has always been a top priority, and that a manager threatening their employees is not tolerated." A plant official is shown saying that, "We have established new ways that employees can provide their safety concerns in an easier manner and a more autonomous manner that we think are taking effect."

KUSI-TV San Diego, CA (4/2, Bosh, 10:18 p.m. PDT) reports that the lawsuit over Diaz's firing. It notes that Diaz, the plant's business manager, "had a clean record before leaving voluntarily in 2008. Last year he was brought back with a promotion, but just a few months later he was fired."

The reporter cites a March 2010 NRC letter finding that there was a chilling affect on employees raising safety issues at the plant, and the agency's policy that nuclear plants must let workers speak freely about safety concerns. He adds that worker complaints at the facility are 10 times the industry average, and that the NRC has found that in "five consecutive assessments at the plant, corrective actions were ineffectual." While it noted that a company official would not discuss reasons for Diaz's firing, the official's "opening statement indicated Mr. Diaz retaliated against the employees for raising those concerns," labeling retaliation fro raising safety concerns a "termination offense."

San Onofre Engineer To Discuss Nuclear Safety. The Laguna Beach (CA) Independent (4/6) reports, "San Onofre nuclear engineer Steve Jeppson is the guest speaker Thursday, April 7, at the noon meeting of the Laguna Beach Exchange Club," where he "will talk about the nuclear disaster resulting from the Sendai earthquake, safety at the San Onofre plant and will be accompanied by another staff member from the San Onofre facility."

Professor Calls For End of Nuclear Power. In an op-ed in The Indypendent (4/6), Chris Williams, a professor of physics and chemistry at Pace University, write that 23 of the 104 operational nuclear reactors in the US "are built on the same 1960s design by the same company, General Electric, as the reactors at Fukushima," they "have been recognized to have serious design faults," and "design vulnerabilities...are routinely discovered." Furthermore, many nuclear plants are "on geologically active faults, in coastal locations or close to large sources of fresh water." Finally, Williams argues that nuclear power requires subsidies to be economically practical. Williams argues the reason for nuclear power is to be a justification for researching "the power to destroy life on a planetary scale" and producing plutonium for bombs. He calls for pressuring the government to not new nuclear plants or relicense old ones.

Nuclear Power Said To Not Make Economic Sense. In an op-ed in Forbes (4/5, 924K), Cato Institute senior fellows Jerry Taylor and Peter Van Doren write that the current "relatively unshaken" political faith in nuclear power is "unfortunate," as "nuclear power makes no sense from an economic perspective." The electricity produces "is not even remotely competitive in power markets with gas-fired or coal-fired electricity now or in the foreseeable future." Furthermore, there is a high risk of cost overruns. The authors argue, "The political campaign to ram these plants down the market's throat threatens catastrophic harm to both taxpayers and ratepayers."

Worries About Radiation Contaminated Foods Growing. The New York Times (4/6, B1, Neuman, Fabricant, Subscription Publication) reports, "Despite assurances by health officials that radiation from the stricken Fukushima Daiichi nuclear power plant in Japan is unlikely to show up in the food supply, worries about contaminated foods are growing among consumers, businesses and governments across the globe." The FDA "restricted some foods from" Japan and is working "to screen incoming fish and other food for traces of radiation." Meanwhile, some restaurants are buying radiation detectors to screen their food.

US Fishermen Seek Testing Of Tuna For Radiation. ABC World News (4/5, story 3, 2:25, Sawyer, 8.2M) reported, "US fishermen have issued a plea. The tuna fish swimming in [radioactive] water right now over in Japan are going to be migrating into US waters." ABC (Karlinsky) added, "A group of concerned fishermen now urging the government to test the fish when they arrive."

IN THE BLOGS

House Yucca Investigation Noted. In continuing coverage from Friday's briefing, the New York Times (4/6, Rudolf, 950K) "Green" blog reports that "Republican leaders have begun a formal inquiry into the Obama administration's decision to halt development of a nuclear waste repository at Yucca Mountain in Nevada." Last Thursday, House Energy and Commerce Committee chairman Fred Upton (R-MI) "demanded documents and written answers from Energy Secretary Steven Chu and Gregory Jaczko, chairman of the Nuclear Regulatory Commission, detailing their agencies' decision-making process in moving to block construction of the controversial project." Power-Gen Worldwide (4/6) provides similar coverage of this story.

All Power Sources Said To Have Risks. In a blog on Reuters (4/5), Morven McCulloch writes that in an interview environment and climate scientist Lord Julian Hunt noted that while the Fukushima Daiichi nuclear plant crisis has people rethinking the use of nuclear power, all forms of power generation have risks. The extraction and burning of fossil fuels produce air, water, and ground pollution, which kill people. Meanwhile, renewable sources of energy, such as wind and solar power, can be unreliable. Their power shortages can cause issues leading to injury and death.

Public Expected To Have Opportunities To Be Involved In Nuclear Decision Making. On Treehugger (4/5), John Laumer writes, "It is reasonable to expect some mandatory changes growing out of" the NRC

report on lessons learned from the Japanese nuclear crisis. Along with increased scrutiny of relicensing proposals, "citizen involvement in nuclear decision making is certain to increase." Other opportunities for citizens to "have a say on design, safety procedures, and siting at the state and the local level" include "licensing; public hearings; cooling water withdrawal permits; zoning hearings; and so on." Laumer speculates that nuclear plant owners "probably are none too excited about going to public hearings for NRC-mandated safety upgrades."

INTERNATIONAL NUCLEAR NEWS

Crack Leaking Radioactive Water At Japan Plant Plugged. The CBS Evening News (4/5, story 4, 2:20, Smith, 6.1M) reported, "Something finally worked today in the fight to stop radiation leaking from that damaged nuclear plant in Japan." CBS (Hatton) added, "Since at least Saturday, highly radioactive water has been pouring out of this eight-inch crack straight into the Pacific Ocean. But now, after several failures, a combination of liquid glass and gravel seems to have stopped the leak."

The AP (4/6, Foster, Nakashima) reports that a crack in a maintenance pit at the Fukushima Dai-ichi nuclear power plant was fixed using sodium silicate and another agent, ending "a tide of radiation that was pouring into the Pacific and exacerbating concerns over the safety of seafood." However, officials "have not explicitly ruled out that radioactive water is leaking into the sea from another point."

The Christian Science Monitor (4/6, Grier, 48K) reports, "Japan's radioactive water problem has developed in large part due to the ad hoc methods workers have used to try to cool reactor fuel units and avoid the disaster of a complete meltdown of the reactors' cores."

The New York Times (4/6, A13, Pollack, Belson, Drew, Subscription Publication) reports that the end of the leak is "unlikely to calm worries about the growing contamination in nearby coastal waters." Meanwhile, "experts on radiation in seafood said it was nearly impossible to get a full sense of the scope of the environmental and health risks until the Japanese released information on radiation levels in more species of fish and seaweed and in a greater number of locations."

NBC Nightly News (4/5, story 8, 2:10, Williams, 8.37M) reported, "Fish caught last week south of the Fukushima plant contained levels of radioactive iodine high enough to cause concern. So much so the Japanese government hastily announced today that it would be setting a nationwide standard for an allowable limit. At least 25 countries have already restricted imports of Japanese milk and produce. India is banning virtually all food from Japan for the next three months."

Bloomberg News (4/6, Inajima, Lundgren) reports, "Radioactivity in fish exceeding health guidelines was detected for the first time off northern Japan," with cesium radioactivity of 526 becquerel per kilogram found in sand-lance caught south of the Fukushima Dai-ichi plant. Five-hundred becquerel is the health ministry standard. However, the International Atomic Energy Agency said that "the potential additional radiation dose to a person eating seaweed or seafood caught near the Fukushima plant every day for a year would be 0.6 millisievert," less than the exposure from "from a year of exposure to granite that comprises the US Capitol, according to the US Army Corps of Engineers."

The Los Angeles Times (4/6, Hall, Makinen, 657K) reports, "It was unclear what Tepco might offer the fishermen, but the company said Tuesday that it would be giving 'condolence payments' totaling about \$2 million to residents who had to evacuate their homes because of radiation from the Fukushima plant." While the company "offered \$240,000 to each of 10 villages, towns and cities within 12 miles of the plant," the town of Namie refused the money. This story is also covered by the Washington Post (4/6, Harlan, 572K), USA Today (4/6, Dorell, 1.83M), the Wall Street Journal (4/6, Obe, 2.02M), Bloomberg News (4/6, Nakayama, Suzuki), Reuters (4/6, Negishi, Nishikawa), the Financial Times (4/6, Soble, Subscription Publication, 448K), and AFP (4/6, Ozawa).

Russia Sending Barge To Japan; China And India React To Contamination Concerns. In his "Bric Breaker" blog, Kenneth Rapoza reported for Forbes (4/5, 924K) that Japan's neighbors are reacting to its nuclear crisis, with Russian nuclear power company Rosatom promising to send "a floating waste-disposal facility" for Japan's liquid waste from the Fukushima plant. "Meanwhile, in China on Tuesday, more radioactive particles have been found in 17 provinces, up from 13 on Monday," although "they pose no threat to public health or to the environment, according to a daily statement issued by China's National Nuclear Emergency Coordination Committee." India meanwhile "banned food imports" from Japan for three months or longer "over fears they may be contaminated."

The Japan Times (4/6) reports only that "the government is considering borrowing a Japan-funded radioactive waste disposal facility from Russia," according to Hidehiko Nishiyama, a Nuclear and Industrial Safety Agency spokesman. Japan gave Russia the barge after it "dumped radioactive waste into the Sea of Japan in 1993 in the process of dismantling its nuclear subs." The Japan Times also reports that "the government defended on Tuesday dumping massive amounts of low-level radioactive water from the Fukushima nuclear plant, saying the action doesn't violate

international laws, and pledged to fully inform the international community" of such steps.

Japan Defends Dumping Contaminated Water In Pacific. South Korea's Chosun Ilbo (4/6, 220K) reports that "the Japanese government neither consulted nor informed Korea about a plan to discharge some 10,000 tons of contaminated water from the Fukushima Daiichi nuclear power plant into the sea," although a TV report indicated that "Tokyo discussed the matter with the United States in advance" and "also told the International Atomic Energy Agency of the decision in conformity with the Convention on the Prevention of Marine Pollution." Japan, however, "did not tell individual neighboring countries because the water was discharged on the Pacific side" of the country. South Korea has found some "small levels of radiation," the report says.

Two Weeks Into Incident, Tepco Proposed Adding Reactors To Plant. The Washington Post (4/6, Higgins, 572K) reports that two weeks after the crisis at Tokyo Electric Power Co.'s Fukushima Daiichi power plant began, Tepco "proposed building two new nuclear reactors" at the plant next spring. Fukushima prefecture's governor, Yuhei Sato, "reacted with fury" to the proposal, and the company was told it was unacceptable. "Tokyo Electric pressed on, declining to alter its plans and submitting them to the Ministry of Economy, Trade and Industry, or METI, in Tokyo." Now that the proposal is in the open, Tepco "has another fiasco to contain" and has done "significant backpedaling." The company's "disarray...has sharpened" the "question that has dogged Tepco since the tsunami": is Tepco in "a managerial meltdown" due to the size of the disaster, or is it "sticking to the aloof, heedless habits of a corporate behemoth accustomed to getting its way?"

Fear, Not Radioactivity, Said To Be Biggest Threat To Japanese Seafood Industry. NPR (4/5, Hamilton) reports that Masashi Kusakabe, director of the Nakaminato Laboratory for Marine Radioecology, said that a tuna swimming by the Fukushima plant "wouldn't hang around long enough to become seriously contaminated." Meanwhile, most of what's detected in the water is iodine -131, which halves in amount every eight days. "Kusakabe says the biggest threat to the Japanese fishing industry right now isn't radiation. It's fear."

UK Will Study Lessons Of Japan Before Proceeding With Planned Nuclear Program.

Several major media outlets report that the UK will delay work for about three months on planned nuclear plants while it studies what happened in Japan and incorporates any lessons from the crisis into its own designs. Bloomberg News (4/5, Bakewell) reported that Climate Change Minister Greg Barker said "there will be no 'material delay' in the UK's plan to allow new nuclear generators at eight sites." Bloomberg

News pointed out “the UK estimates it needs investment of 200 billion pounds (\$320 billion) to replace aging generators including nuclear plants by 2010.” Barker’s remarks come after Deputy Prime Minister Nick Clegg said last week “that the new plants may never be built because of raising costs associated with new safety standards.”

Platts (4/5, Stellfox) reported on its website that the UK had planned to release conclusions about “generic design assessment” in June, but that report will be delayed “until after a nuclear safety review investigates the implications of the nuclear accident at Fukushima on the safety of UK reactors.” The Areva EPR and Westinghouse AP1000 reactor designs will be included in the final assessment, but the UK also will “proceed to publish all the GDA safety issues on the two reactor designs that it had identified as of June 30, as well as the reactor vendors’ resolution plans for those issues.”

Like other outlets, the UK’s Guardian (4/5, Flannery) noted that the Fukushima incident will be studied by the UK’s chief nuclear inspector, Mike Weightman. The Department of Energy and Climate change said, “It’s too early to say exactly what impact this will have on the overall timeline,” which “was in marked contrast to a statement by the climate change minister, Greg Barker” that there would be “no ‘material delay.’” The UK’s Nuclear Industry Association said, “We should take time to review and learn the lessons of the Japanese crisis, while at the same time recognising that new nuclear development is essential for the UK.” Reuters (4/5, Fineren) and the Financial Times (4/6, Pfeifer, 448K) also reported the story.

Revision Of Japan’s Nuclear Power Platform Suspended. Kyodo News (4/6) reports, “The Japan Atomic Energy Commission said Tuesday it will suspend its work to revise the country’s nuclear power platform” and “look into the causes of the crisis at the Fukushima plant and monitor discussions on the country’s energy policy on a national level.” Commission chairman Shunsuke Kondo said, “We have to admit that there has been an error in the criteria of judgment in promoting the country’s nuclear power policy.” Meanwhile, “the panel called for strengthening urgent safety measures over nuclear plants which are now in operation or are scheduled to go into operation soon and giving sufficient reports to local residents living near such plants.”

The Yomiuri Shimbun (4/6) reports, “The panel said the crisis has shaken confidence in the safety of nuclear power at home and abroad.”

Initial Screening Okays Two Saskatchewan First Nations For Nuclear Waste Storage. The Canadian Press (4/6, 88K) reports, “Two First Nations in northern Saskatchewan have passed an initial site screening

for hosting a potential nuclear waste storage facility.” Both “Pinehouse Lake and the English River seem to have the necessary geological features,” but Nuclear Waste Management Organization “spokesman Mike Krizanc says these communities are still seven to 10 years away from having to make a decision about nuclear waste.”

Expert: World Lags Behind US, Western Europe In Nuclear Security. CQ Homeland Security (4/6, Margetta, Subscription Publication) reports that if the US “and its Western European allies want to get the rest of the world to take nuclear terrorism seriously, the first challenge will be convincing other countries that the issue deserves their attention, a nuclear security expert says.” Emma L. Belcher, the Stanton Nuclear Security Fellow at the Council on Foreign Relations, “said the United States and United Nations are leading the way in developing multinational agreements to criminalize activities such as the smuggling and selling of nuclear material.” However, “other countries — like those in sub-Saharan Africa — lag behind, she said, but their reasoning has less to do with ill intent than a large slate of pressing problems and a paucity of resources.”

Indian Farmers Point To Japan In Battle To Block Nuclear Plant. Bloomberg News (4/6, Narayan, Philip, Chaudhary) reports, “The temple for the Hindu monkey god Hanuman, near Jaitapur on the western coast of India, seems a long way from Japan’s Fukushima Dai-Ichi, where the worst nuclear disaster since Chernobyl continues to unfold.” But for the “crowd gathering” there, “the crisis is looming on their doorstep. Less than three miles away, the Indian government plans to build what would be the world’s largest nuclear-power plant and the villagers, fearing a repeat of the Japanese catastrophe, are here to protest.” Bloomberg says the “the planned complex sits in an area of seismic activity and state-owned Nuclear Power Corp. of India...is underplaying the risk, according to Janhit Seva Samiti, a movement comprising hundreds of locals opposed to the plans.”

In a separate report, Bloomberg News (4/6), on its website and on the air, pointed out “fisherman Amjad Borkar and mango grower Praveen Gavankar talk about their opposition to a proposed nuclear power plant in Jaitapur on the western coast of India.” The local people “fear the plant, to be built with France’s Areva SA, will damage their health and their livelihoods,” the report says.

Reports Conflict On Bulgaria’s Belene Nuclear Power Plant Schedule. There are conflicting reports about whether Bulgaria’s Belene nuclear power plant on the Danube River will be delayed by that country and Russia. The AP (4/6) reports both countries signed a memorandum of

understanding that they would postpone it “for three months while they analyze plant safety in the wake of the Fukushima nuclear disaster.” Bloomberg News (4/5, Konstantinova, Arkhipov), however, said a Rosatom spokesman in Moscow denied that and said “no such bilateral documents were signed.”

EC’s Barroso Says Europe’s Nuclear Plants Could Take Remedial Action After Checks.

Bloomberg News (4/5, Stearns) reported that European Commission President Jose Barroso told the European Parliament on Tuesday that “stress tests” will likely start on the EU’s 143 existing nuclear plants after July 1, and “should an installation fail the test, the question of remedial actions remains open. In case an upgrade is technically or economically not feasible, reactors will have to be shut down and decommissioned.”

Germany’s Power Market Again Links To Coal Prices. Reuters (4/5, Gloystein) reported that Germany’s decision to power down seven old nuclear plants, combined with election victories by the Green Party and unrest in the Mideast, has recoupled the country’s power market to the price of coal as utilities turn to it for electricity. Industry observers said coal was likely to remain a major piece of Germany’s power formula, although just months ago the country was planning to mothball some coal plants in the near future.

Wind Could Supply 65 Percent Of Germany’s Power Some Day, Trade Chief Says. Bloomberg News (4/5, Kjetland) reported that Hermann Albers, head of the German Wind Energy Association, predicted in a newspaper report that wind farms might “supply more than 65 percent of Germany’s energy needs in the long term” and “will be capable of meeting 25 percent of the country’s requirements by 2020.” Bloomberg News said the 65 percent figure would replace Germany’s nuclear power.

Spanish Farming Community Hopes For Decontamination From 1966 Accident.

The New York Times (4/6, Minder, 950K) reports that citizens of Palomares, Spain, are hopeful that Madrid and Washington will finally clean up contamination that still exists in the farming town some 45 years after a near incident of nuclear disaster that occurred in 1966 when a US bomber collided with a refueling tanker in mid-air and dropped four hydrogen bombs there. The bombs didn’t explode, but they contaminated the area with radioactive debris, and some areas remain untouched and still in need of decontamination by removing irradiated dirt. The Times says “the case of Palomares helps illustrate the ways that radioactive debris can continue to tear at a community decades later.” It also contains lessons learned, in one case that “the burning of

contaminated tomato crops...helped spread the contamination,” which “no one knew” in 1966.

Iran Expanding Ties To Latin America. The AP (4/6, Cassata) reports, “Iran has expanded its ties in Latin American beyond its close relationship with Venezuela, a top US commander said Tuesday as he described a troubling development that the United States is watching closely.” According to Gen. Douglas Fraser, the head of the US Southern Command, “Iran has nearly doubled the number of embassies in the region, from six in 2005 to 10 in 2010 while also building cultural centers in 17 countries. Last year, Iran also has hosted heads of state from three countries -- Bolivia, Guyana and Venezuela.”

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NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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NRC NEWS

U.S. Sees Array Of New Threats At Japan's Nuclear Plant (NYT)

By James Glanz And William J. Broad

New York Times, April 6, 2011

United States government engineers sent to help with the crisis in Japan are warning that the troubled nuclear plant there is facing a wide array of fresh threats that could persist indefinitely, and that in some cases are expected to increase as a result of the very measures being taken to keep the plant stable, according to a confidential assessment prepared by the Nuclear Regulatory Commission.

Among the new threats that were cited in the assessment, dated March 26, are the mounting stresses placed on the containment structures as they fill with radioactive cooling water, making them more vulnerable to rupture in one of the aftershocks rattling the site after the earthquake and tsunami of March 11. The document also cites the possibility of explosions inside the containment structures due to the release of hydrogen and oxygen from seawater pumped into the reactors, and offers new details on how semimolten fuel rods and salt buildup are impeding the flow of fresh water meant to cool the nuclear cores.

In recent days, workers have grappled with several side effects of the emergency measures taken to keep nuclear fuel at the plant from overheating, including leaks of radioactive water at the site and radiation burns to workers who step into the water. The assessment, as well as interviews with officials familiar with it, points to a new panoply of complex challenges that water creates for the safety of workers and the recovery and long-term stability of the reactors.

While the assessment does not speculate on the likelihood of new explosions or damage from an aftershock, either could lead to a breach of the containment structures in one or more of the crippled reactors, the last barriers that prevent a much more serious release of radiation from the nuclear core. If the fuel continues to heat and melt because of ineffective cooling, some nuclear experts say, that could also leave a radioactive mass that could stay molten for an extended period.

The document, which was obtained by The New York Times, provides a more detailed technical assessment than Japanese officials have provided of the conundrum facing the Japanese as they struggle to prevent more fuel melting at the Fukushima Daiichi plant. But it appears to rely largely on data shared with American experts by the Japanese.

Among other problems, the document raises new questions about whether pouring water on nuclear fuel in the absence of functioning cooling systems can be sustained indefinitely. Experts have said the Japanese need to continue to keep the fuel cool for many months until the plant can be stabilized, but there is growing awareness that the risks of pumping water on the fuel present a whole new category of challenges that the nuclear industry is only beginning to comprehend.

The document also suggests that fragments or particles of nuclear fuel from spent fuel pools above the reactors were blown "up to one mile from the units," and that pieces of highly radioactive material fell between two units and had to be "bulldozed over," presumably to protect workers at the site. The ejection of nuclear material, which may have occurred during one of the earlier hydrogen explosions, may indicate more extensive damage to the extremely radioactive pools than previously disclosed.

David A. Lochbaum, a nuclear engineer who worked on the kinds of General Electric reactors used in Japan and now directs the nuclear safety project at the Union of Concerned Scientists, said that the welter of problems revealed in the document at three separate reactors made a successful outcome even more uncertain.

"I thought they were, not out of the woods, but at least at the edge of the woods," said Mr. Lochbaum, who was not involved in preparing the document. "This paints a very different picture, and suggests that things are a lot worse. They could still have more damage in a big way if some of these things don't work out for them."

The steps recommended by the nuclear commission include injecting nitrogen, an inert gas, into the containment structures in an attempt to purge them of hydrogen and oxygen, which could combine to produce explosions. The document also recommends that engineers continue adding boron to cooling water to help prevent the cores from restarting the nuclear reaction, a process known as criticality.

Even so, the engineers who prepared the document do not believe that a resumption of criticality is an immediate likelihood, Neil Wilmshurst, vice president of the nuclear sector at the Electric Power Research Institute, said when contacted about the document. "I have seen no data to suggest that there is criticality ongoing," said Mr. Wilmshurst, who was involved in the assessment.

The document was prepared for the commission's Reactor Safety Team, which is assisting the Japanese government and the Tokyo Electric Power Company, which owns the plant. It says it is based on the "most recent available data" from numerous Japanese and American organizations, including the electric power company, the Japan Atomic Industrial Forum, the United States Department of Energy, General Electric and the Electric Power Research Institute, an independent, nonprofit group.

The document contains detailed assessments of each of the plant's six reactors along with recommendations for action. Nuclear experts familiar with the assessment said that it was regularly updated but that over all, the March 26 version closely reflected current thinking.

The assessment provides graphic new detail on the conditions of the damaged cores in reactors 1, 2 and 3. Because slumping fuel and salt from seawater that had been used as a coolant is probably blocking circulation pathways, the water flow in No. 1 "is severely restricted and likely blocked." Inside the core itself, "there is likely no water level," the assessment says, adding that as a result, "it is difficult to determine how much cooling is getting to the fuel." Similar problems exist in No. 2 and No. 3, although the blockage is probably less severe, the assessment says.

Some of the salt may have been washed away in the past week with the switch from seawater to fresh water cooling, nuclear experts said.

A rise in the water level of the containment structures has often been depicted as a possible way to immerse and cool the fuel. The assessment, however, warns that "when flooding containment, consider the implications of water weight on seismic capability of containment."

Experts in nuclear plant design say that this warning refers to the enormous stress put on the containment structures by the rising water. The more water in the structures, the more easily a large aftershock could rupture one of them.

Margaret Harding, a former reactor designer for General Electric, warned of aftershocks and said, "If I were in the Japanese's shoes, I'd be very reluctant to have tons and tons of water sitting in a containment whose structural integrity hasn't been checked since the earthquake."

The N.R.C. document also expressed concern about the potential for a “hazardous atmosphere” in the concrete-and-steel containment structures because of the release of hydrogen and oxygen from the seawater in a highly radioactive environment.

Hydrogen explosions in the first few days of the disaster heavily damaged several reactor buildings and in one case may have damaged a containment structure. That hydrogen was produced by a mechanism involving the metal cladding of the nuclear fuel. The document urged that Japanese operators restore the ability to purge the structures of these gases and fill them with stable nitrogen gas, a capability lost after the quake and tsunami.

Nuclear experts say that radiation from the core of a reactor can split water molecules in two, releasing hydrogen. Mr. Wilmshurst said that since the March 26 document, engineers had calculated that the amount of hydrogen produced would be small. But Jay A. LaVerne, a physicist at Notre Dame, said that at least near the fuel rods, some hydrogen would in fact be produced, and could react with oxygen. “If so,” Mr. LaVerne said in an interview, “you have an explosive mixture being formed near the fuel rods.”

Nuclear engineers have warned in recent days that the pools outside the containment buildings that hold spent fuel rods could pose an even greater danger than the melted reactor cores. The pools, which sit atop the reactor buildings and are meant to keep spent fuel submerged in water, have lost their cooling systems.

The N.R.C. report suggests that the fuel pool of the No. 4 reactor suffered a hydrogen explosion early in the Japanese crisis and could have shed much radioactive material into the environment, what it calls “a major source term release.”

Experts worry about the fuel pools because explosions have torn away their roofs and exposed their radioactive contents. By contrast, reactors have strong containment vessels that stand a better chance of bottling up radiation from a meltdown of the fuel in the reactor core.

“Even the best juggler in the world can get too many balls up in the air,” Mr. Lochbaum said of the multiplicity of problems at the plant. “They’ve got a lot of nasty things to negotiate in the future, and one missed step could make the situation much, much worse.”

Why Fukushima Won't Kill Nuclear Power (WSJ)

Today's most advanced designs move toward the goal of 'walk-away safety'—reactors that shut down and cool themselves without electricity or any human intervention.

By Richard K. Lester

[Wall Street Journal](#), April 6, 2011

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

ANALYSIS-New Atomic Risk Strategy Needed After Fukushima (REU)

By Alister Doyle

[Reuters](#), April 6, 2011

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

Japanese Radioactive Releases Are No Threat To American Health, Federal Officials Say (WP)

By David Brown

[Washington Post](#), April 6, 2011

Americans have no reason to fear any health effects from the nuclear power plant accident in Japan, should take no protective measures and should avoid no foods, federal health officials said Tuesday.

In a display of solidarity, eight representatives of the Centers for Disease Control and Prevention, the Food and Drug Administration and the Environmental Protection Agency delivered the slightly complicated message that while no amount of radiation is absolutely safe, the amount released by the damaged reactors is so small that the chance it will cause disease is nil.

“Due to distance and dispersion to the U.S., we do not expect levels [of radioactivity] to reach us that would cause a public health effect,” Thomas Frieden, director of the CDC, told reporters in a telephone news conference.

He said, however, that radioactive iodine has been detected in the United States and “we would be surprised if we did not detect very low levels” of radioactive cesium and strontium — two other released contaminants — in coming days. The anticipated detections say more about the sensitivity of the machinery than about the levels found, he said.

“It’s not as if there is none in the environment before this. Now, extraordinarily small amounts are being added,” Frieden said.

On Tuesday, Japan placed radiation safety standards on fish for the first time. According to press reports, samples of a fish called a sand lance caught in Japanese waters last week had elevated levels of iodine-131, which loses half its radioactivity every eight days.

The CDC director said the agency has heard that numerous poison control centers around the country have gotten calls from people who took potassium iodide, a pill that blocks the thyroid gland from absorbing radioactive iodine. He did not provide details about the calls but said: "I want to be unambiguous. There is no reason for anyone in the United States to take potassium iodide at the present time."

There are no other medicines that protect against radiation exposure, and the public should be wary of substances advertised as able to do so, the experts said.

"There's absolutely nothing approved that might be called a silver bullet," said Patricia Hansen, an FDA scientist.

William Jones of the agency's office of food safety said there "isn't any concern of contamination of seafood" consumed in the United States because of the "extreme dilution factor" of the radioactive water currently being released into the ocean from the Japanese plant.

All shipping containers entering the United States, including ones containing food products, are screened for radioactivity, said Siobhan DeLancey, an FDA spokeswoman. If elevated levels are found, the contents can be sampled and further checked by hand.

The agency has banned imports of Japanese leafy vegetables and some head vegetables (such as cauliflower) from Fukushima prefecture, where the plant is located; milk from two prefectures; and specified fresh food from four prefectures. It is in the process of testing seven food imports that fall into the broad categories of artificial flavorings, dry tea and starches, DeLancey said.

Radioactivity In Rain Is Well Below Danger Level, Officials Say (BEAVCT)

By Patrick O'Shea

Beaver County (PA) Times, April 6, 2011

SHIPPINGPORT - Radioactive rain was collected in Beaver County recently, but the readings were not as high as those reported in eastern Pennsylvania and Ohio, and were well below levels considered hazardous by the federal government.

Tests conducted on rainwater collected in puddles at the Beaver Valley Nuclear Power Station on March 26 detected 14.8 picocuries per liter of radioiodine-131, a byproduct of nuclear fission, according to Todd Schneider, spokesman for FirstEnergy Corp., operator of the Shippingport plant. The sample was taken before significant rainfall and snow hit the area over the last week.

Schneider said the levels reported are still well below the federal Environmental Protection Agency's safety limit of 20,000 picocuries per liter for rainwater.

Radioiodine has been reported in the atmosphere throughout the United States since Japan's Fukushima nuclear plant began releasing radiation after a March 11 earthquake and tsunami.

Pennsylvania first reported levels of radiation in rainwater on March 25 with readings of 41 picocuries per liter in Harrisburg and 90 to 100 picocuries per liter at the Three Mile Island and Limerick nuclear plants.

Schneider said FirstEnergy first noticed the radioactive rain at its Perry Nuclear Power Plant in North Perry, Ohio, near Cleveland. Readings of 46.8 picocuries per liter of radioiodine were reported March 25. Radioactive precipitation also has been reported in Massachusetts, Connecticut and Minnesota.

When officials discovered the radioactive rain at the Perry nuclear plant, they ordered samples taken at FirstEnergy's two other area plants - Beaver Valley and Davis-Besse Nuclear Power Plant near Toledo, Ohio - Schneider said.

When the samples were taken, very little precipitation had fallen since the Japan disaster. But since last Thursday, the area has had at least small amounts of rain and snow every day.

It is unclear whether the additional precipitation has pushed more radiation to the ground or diluted the existing radiation levels, because the state and federal governments have yet to release any updated testing results on drinking water and milk monitoring.

But U.S. officials have continued to say they have not seen enough radiation anywhere to impact residents' health and safety.

Trace Amounts Of Radiation From Japan Found In Minn. (MINDLY)

Minnesota Daily, April 6, 2011

Ongoing radiation monitoring performed by the Minnesota Department of Health has found trace amounts of radiation that likely came from Japan, according to an MDH report.

Discovered from samples taken in St. Paul, the radiation from Japan is "thousands of times less than normal background radiation and well below levels that would be of health concern," according to the report.

Radiation levels measured on March 29 clocked in at .011 millirem per year.

"The exposure level at which we would begin to have concerns for human health is 10,000 millirem," Sherrie Flaherty, radiation control supervisor for MDH, said in the report.

MDH performs radiation monitoring weekly in St. Paul, and once every two weeks at each of Minnesota's two nuclear power plants: Monticello Nuclear Power Generating Plant outside of Monticello and Prairie Island Nuclear Generating Plant outside of Red Wing. Both plants are owned and operated by Xcel Energy.

The 9.0 magnitude earthquake and subsequent tsunami that struck Japan's east coast March 11 severely damaged several reactors in the Fukushima Daiichi nuclear power plant. Radiation has been leaking from the plant over the past several weeks.

Escaped radiation from Japan was detected in Hawaii on March 22, according to the Environmental Protection Agency's monitoring.

MDH officials said they will continue to monitor radiation levels throughout Minnesota, but expect the increase to disappear in four to six weeks.

NRC Focused On VY Safety, Not Shutdown (BRATBORO)

By Josh Stilts

Brattleboro Reformer (VT), April 6, 2011

BRATTLEBORO – Last week the Nuclear Regulatory Commission addressed the concerns of the Safe and Green Campaign regarding the Vermont Yankee nuclear power plant.

In a letter sent to Robert Bady, Vermont coordinator of the campaign, Eric Leeds, director of the office of nuclear reactor regulation, wrote that the NRC is not researching the plant's decommissioning.

"When the decommissioning of VY does occur, the radiological health and safety of workers and members of the public will be subject to NRC requirements, and the NRC will exercise ongoing oversight of decommissioning activities to monitor compliance with its requirement," Leeds wrote.

On March 21, the NRC issued a renewed license to the Vermont Yankee nuclear power plant in Vernon.

"While radiological health and safety aspects of decommissioning are subject to NRC requirements, some of the concerns expressed in the enclosed letters regarding closure and decommissioning of VY go beyond radiological health and safety," he wrote. "For example, the NRC does not have the authority to require that VY workers be given preference for decommissioning jobs or be given particular severance packages."

Last fall members of the Safe and Green Campaign presented letters to neighboring town officials of Vermont Yankee, Entergy, which owns and operates the plant, the Vermont Legislature and the Public Service Board.

In the letter, it asks for the shutdown of the plant, that employees be given the first opportunity for any decommissioning jobs and that town officials in Massachusetts, New Hampshire and Vermont that are near the plant, be able to have a say in its shutdown.

Officials at VY have not informed the NRC that they intend to close prior to the expiration of its renewed license in March 2032, the letter states.

"The NRC will continue to ensure VY is meeting the appropriate public health and safety standards regardless of the reactor's ultimate operating status," the letter states.

Bady said the problem is financial, however.

"The NRC tries to maintain the safety of the nuclear reactor while also maintaining the profitability of the nuclear industry," Bady said. "The profitability shouldn't be the NRC's concern. If the NRC put safety before profit, they wouldn't allow a spent fuel pool to be stored seven feet above ground."

He added that through activism, he hopes to effect a change in the NRC that safety be on equal footing of profits.

"The NRC is not focusing on the decommissioning of the plant at this time but rather on its continued safe operation," Neil Sheehan, spokesman for NRC said.

Members of the Brattleboro Selectboard are scheduled to discuss the Safe and Green letter of concern tonight during their meeting.

VT Emergency Management Stages Drill (WPTZ)

By Jackie Bender

WPTZ-TV Burlington, VT, April 6, 2011

VERNON, Vt. --

Officials at Vermont Yankee are telling people to stay calm if they see workers near the nuclear plant in Tyvek suits. It's all a part of their preparations for an evaluation by the federal government and evaluation that happens every 6 years.

"This is a lead up exercise to what will be a FEMA evaluated Vermont Yankee exercise May 3rd and 4th," explained VT Emergency Management official Peter Coffey.

For practice, the workers measure the spread of radiation in the air if there was an accident at Vermont Yankee.

From those samples, they can determine how far the plume has extended, and what areas would need to be evacuated.

Meanwhile, at their staging area in Dummerston, workers were practicing coordinating those evacuations.

"We would stage busses, ambulances, that sort of thing here if they needed to do precautionary transfers to move people out of the emergency planning zone," said Coffey

Anti-nuclear Groups Hold Post-Yankee Discussion (WCAXTV)

WCAX-TV Burlington, VT, April 6, 2011

With Vermont Yankee set to close in 2012, there will be a discussion Tuesday night about life after the nuclear plant shuts down.

Three officials from anti-nuclear groups will discuss transition, clean up, long-term waste storage and what role residents can play. An update on Japan's nuclear crisis will also be offered.

The forum starts at 7 p.m. at the Rutland Free Library, 10 Court St., Rutland, Vt. A question-and-answer session will follow the panel discussion.

Vermont House Advances Energy Bill; 55-cent Charge On Electric Bills Draws Heated Debate (AP)

By Dave Gram

Associated Press, April 6, 2011

MONTPELIER, Vt. (AP) - The Vermont House gave preliminary approval Tuesday to legislation that would help Vermont electric consumers generate their own power and deduct it from their electric bill, but not before bitter debate erupted over a 55-cent charge on monthly electric bills designed to promote renewable energy.

Initial action came on a 99-39 vote after Rep. Paul Poirier said he would offer an amendment before the bill comes up for final passage to exempt low-income people from the 55-cent charge.

The charge, which would raise an estimated \$2.4 million, is intended to replace a portion of the roughly \$6 million the Vermont Yankee nuclear plant contributes each year to the Clean Energy Development Fund, which provides grants to support renewable energy projects in the state. The agreement under which Vermont Yankee makes those payments expires in March 2012, along with its state operating permit.

Lawmakers came up with the flat charge of 55 cents per electric meter per year.

Poirier, a Democrat-turned-independent from Barre, appeared before a meeting of Democratic House members on Tuesday and described an amendment that he said would exempt people making up to 185 percent of the federal poverty level — an amount equal to \$40,700 for a family of four — and raise the charge on those making more than that to 65 cents a month.

Poirier has been sharply critical of his former Democratic colleagues this year over their reluctance to raise taxes to avoid cuts in human services programs. Tensions rose again Tuesday as Poirier focused his ire on one lawmaker, Rep. Tony Klein, chairman of the House Natural Resources and Energy Committee and a key architect of the energy bill.

During an exchange in the Democratic caucus, Poirier asked Klein if he was supporting the amendment Poirier intended to offer and Klein said no.

"Why'd you call me last night and tell me you were?" Poirier asked.

Klein tried to answer him but Poirier cut him off. "Tony, Tony, Tony," Poirier said. "You lied last year on the floor and you're lying again."

"That's very inappropriate," Klein said. "He only hears what he wants to hear," he added as Poirier exited the room. He added that he expects an apology from Poirier.

Poirier did not immediately return a call seeking comment later. Klein said he believed the earlier incident Poirier referred to related to House debate on a bill related to the Vermont Yankee decommissioning fund.

The bill, on which final action is expected Wednesday, would double the size of a "net-metering" system property owners would be able to use. With net-metering, customers can make their own electricity, share it with their utility and subtract the amount of power the utility takes from their monthly electric bill.

Plan To Tack Surcharge On Vt. Electric Bills Draws Fire (WCAXTV)

By Anson Tebbetts

WCAX-TV Burlington, VT, April 6, 2011

There is a program called the Clean Energy Fund. It contains millions of dollars. The fund helps finance renewable energy projects like solar and wind through grants and tax credits. Vermont's nuclear power plant, Vermont Yankee, puts about \$6 million into the fund each year. But with Vermont Yankee scheduled to close next year, the Legislature needs to find a way to keep the program going. And the popularity of the program already has lawmakers trying to find dollars. Under a comprehensive energy bill that's making its way through the Legislature there is a proposal to attach a fee to utility bills.

"This is a policy statement as much as anything else we want to create incentives to. We want to incent the development of the solar industry," said Rep. Adam Greshin, I-Warren.

Under the bill, the state would place a 55-cent fee each month on utility bills to support renewable energy projects, like solar. Some were critical for starting the fee now even though Vermont Yankee is still paying in, and some are also concerned Vermonters will be asked to pay more if the nuclear plant stops financing the program.

"It may be a small amount now but it could potentially grow and grow and grow just like Efficiency Vermont has," said Rep. Heidi Scheuermann, R-Stowe.

Efficiency Vermont is another program financed through a fee on utility bills. And some argued this new fee should be voluntary, criticizing the authors of the bill for asking the public to pay for a \$2.3 million program at a time when the economy is still trying to recover.

"I support the purposes of the clean energy development fund but during a recession it is not a good idea to raise broad base taxes, even if the exact tax for each person would not be large. It is still not a good idea," said Rep. Cynthia Browning, D-Arlington.

The bill was given preliminary approval. But more amendments could come Wednesday including one that could waive the 55-cent fee for low-income Vermonters.

Prior to the debate on the floor there was a sharp exchange where one member accused another of lying. The Democrats were discussing the energy bill in their weekly caucus.

Rep. Paul Poirier, I-Barre City, asked lawmakers to exempt low-income Vermonters from a fee to help finance the renewable energy program. At the end of the presentation he asked Rep. Tony Klein of East Montpelier if he would support his amendment. Klein said no. That prompted Poirier to say, that's not what you said last night and then he called Klein "a liar" and stormed out of the room.

Klein demanded an apology and the Democratic leader asked for civility from members.

NRC: Japan Is No Reason To De-license Oyster Creek (AP)

By Wayne Parry

Associated Press, April 6, 2011

The U.S. Nuclear Regulatory Commission says nothing it has learned from the Japanese nuclear disaster warrants revoking the license of the nation's oldest nuclear power plant.

The agency filed its response Tuesday to a federal appeals court that had asked if the Japanese crisis should lead to a re-thinking of the Oyster Creek Nuclear Generating Station's current 20-year license that was awarded two years ago.

The agency says that while it is studying the ongoing crisis in Japan, it remains confident of the safety of U.S. nuclear plants.

"Licensed nuclear power reactors in the United States are currently safe and may continue to operate under NRC's comprehensive scheme of safety regulations and inspections, pending development of any new safety measures that emerge," the agency wrote.

A coalition of anti-nuclear groups is challenging Oyster Creek's 2009 license renewal. It asked the appeals court to reconsider whether Oyster Creek's license should have been renewed, citing concerns about its age and wear and tear on the plant, which went online in 1969.

The New Jersey Sierra Club says the NRC has not learned anything from the Japanese disaster.

"NRC stands for No Regulatory Commission," said Jeff Tittel, the group's director. "The agency is a cheerleader for industry and looks the other way it comes to relicensing, especially around issues of public safety.

"The NRC should be saying license renewals across the country should be on hold while we reevaluate the safety of these facilities," said Tittel. "This brief shows the NRC will not learn any lessons from Japan, just as they did not learn any lessons from Three Mile Island or Chernobyl. Given what we are learning about Japan, it does not make any sense and could be outright dangerous to keep Oyster Creek open."

The NRC noted in its response that it adopted new standards and practices following Three Mile Island, and the Sept. 11, 2001, terrorist attacks.

"As with the post-TMI and post-9/11 regulatory enhancements, any lessons learned from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation," the agency wrote. "No safety, technical, or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review."

Oyster Creek's license allows it to operate until 2029. But its owners, Chicago-based Exelon Corp., struck a deal with New Jersey in December to shut Oyster Creek 10 years early, in 2019. In return, the state dropped its insistence that Oyster Creek build costly cooling towers to drastically reduce the number of fish and small aquatic creatures the plant's operations kill each year.

NRC: Expanded Review Of Oyster Creek Not Needed (ASBPP)

By Kirk Moore

Asbury Park Press, April 6, 2011

The nuclear disaster in Japan does not warrant expanding judicial review of the Oyster Creek nuclear power plant's operating license beyond the issues of "aging management" already presented by challengers, lawyers for the U.S. Nuclear Regulatory Commission told a federal appeals court in papers filed Monday.

Judges with the Third Circuit Court of Appeals in Philadelphia asked the NRC for its opinion on whether events at the Fukushima Daiichi nuclear complex — with General Electric Mark I boiling water reactors similar in basic design to Oyster Creek — should have any bearing on the NRC's design to issue a 20-year operating license extension in 2009.

The agency's response "acknowledges the need to monitor and learn from the events at the Fukushima Daiichi nuclear power plant to ensure safety at U.S. reactors," said Neil Sheehan, an NRC spokesman.

In its reply, the NRC assures the court the agency is paying close attention to findings coming out of Japan and will apply any short-term safety upgrades immediately — and use longer-term analysis to develop safety upgrades as it did for the nuclear industry after the 1979 Three Mile Island reactor accident in Pennsylvania and the 2001 terrorist attacks.

"As with the post-TMI and post-9/11 regulatory enhancements, any 'lessons learned' from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation," the brief says.

"No safety, technical or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review."

The agency has not altered its usual licensing procedures following the Japan earthquake and tsunami, the brief notes: "For instance, NRC issued a renewed license for the Vermont Yankee Nuclear Power Plant quite recently — on March 21, 2011 — despite the events at Fukushima Daiichi. This decision reflects NRC's confidence in the robust and redundant safety design and construction of currently operating U.S. nuclear reactors."

The New Jersey Environmental Federation and allied groups brought the case to appeals court, arguing the NRC did not give adequate consideration to aging issues such as corrosion in the Oyster Creek reactor's containment vessel. The agency countered that an extensive record in the license-renewal process shows that it did its job properly.

Those appellants have until April 18 to file their responses to the NRC's brief, said Jeff Tittel of the Sierra Club.

"The NRC doesn't seem to have learned anything from Japan," Tittel said of the brief. He contends Oyster Creek's aging components — the plant opened in 1969 — call for reconsideration of what a moderate East Coast earthquake might do. The state Geological Survey says quakes of strength 5.0 on the Richter scale have been recorded in New Jersey, most recently in 1927 when downed chimneys and some structural damage was reported in Long Branch and Asbury Park.

The NRC license extension pushed Oyster Creek's operating potential out to 2029. But recently plant owners Exelon Corp. struck a deal with the Christie administration to close the plant by 2019 instead of being required to build cooling towers to reduce the daily draw of cooling water from Barnegat Bay.

Oyster Creek License Safe Despite Japan Disaster, Nuclear Regulatory Commission Tells Court (NSL)

By Eliot Caroom

Newark (NJ) Star-Ledger, April 6, 2011

The Nuclear Regulatory Commission told a federal court today that the meltdown of reactors in Japan of a similar design to Oyster Creek isn't cause to overturn the plant's license.

"The disaster at the Fukushima Daiichi reactors in Japan is, of course, tragic and serious, and has triggered a full lessons-learned inquiry at NRC that may well lead to new safety measures at American operating reactors," said a filing by the commission. "But the disaster is not a basis for judicial relief in this (Oyster Creek) case."

Environmentalists fighting for scrutiny of Oyster Creek, the oldest operating plant in the country, said today they weren't satisfied by that response.

"This is just another example of the NRC and Exelon refusing to listen to the valid concerns of environmentalists and concerned citizens," said Kevin Pflug, staff attorney for the Eastern Environmental Law Center, one of Oyster Creek's opponents, in court.

After Oyster Creek was approved for 20 more years of service in 2009, the center appealed on behalf of a coalition of five environmental organizations. It specifically complained about problems at the plant like a corroded steel containment unit that got thinner over time.

Since then the plant's owner, Exelon, agreed to close it in 2019 rather than install new cooling towers.

When the Japanese meltdowns occurred, the U.S. Third Circuit Court of Appeals in Philadelphia asked the NRC and Exelon to respond to the meltdown and explain what impact it should have on the Oyster Creek appeal.

The NRC's response today pointed to a "lessons learned" model for studying disasters that could affect nuclear security. Three Mile Island and 9/11 were cited as examples.

After Three Mile Island, the motion said, the NRC came up with a new rule for reactors. That rule wasn't put in place, but other licensing rules were enacted and, a decade later, the commission's staff reported that the lessons learned had been implemented.

But the Eastern Environmental Law Center's Pflug said that's not enough.

"That whole 'lessons learned' approach is a wait-and-see approach, and that can take years," Pflug said. "The problem with that approach is, with Sept. 11 the NRC proposed a whole host of new regulations and industry really pushed back against it. Obviously we wouldn't want to see that happen here."

The "lessons learned" process for the Japanese crisis will be both short-term and long-term, NRC spokeswoman Diane Screnci said today.

She said the first process would conclude within three months, and a longer one would take stock of the Japanese nuclear saga as it unfolds over years.

"If we determine that changes are appropriate, those will be applied across the industry, not just one plant or plants in license renewals," Screnci said.

The court is awaiting a response from the New Jersey Environmental Federation and the Eastern Environmental Law Center due April 18.

Opinion: Lessons For Us From The Nuclear Crisis In Japan (BERGR)

By Jeff Tittel

Bergen (NJ) Record, April 6, 2011

Jeff Tittel is director the New Jersey Sierra Club.

AS OUR HEARTS and prayers go out to the Japanese people, we need to look at what lessons we can learn from this unfolding disaster at the Fukushima Daiichi nuclear facility.

Whatever mankind can do, nature can destroy. There is a certain arrogance of humans when we think we can engineer and conquer nature. The lessons of Katrina and Chernobyl prove that time and time again the question isn't "Can it happen here?" the question is "Should these facilities be constructed?"

This disaster deserves an important public policy discussion that examines if this type of energy is really in the best interest of public health and safety and our environment.

What type of natural disasters can impact America's nuclear power plants? Sometimes it's just a mistake in design or human error. But if a problem with nuclear power does occur, the consequences can be devastating and long-lasting.

The design of Oyster Creek is the same as the Fukushima Daiichi Unit 1, a GE Mark I boiling water reactor. We know the Fukushima plant was designed to withstand a magnitude 7.2 earthquake, but we do not know what earthquake design standard, if any, was used at Oyster Creek.

According to the U.S. Geological Survey, Toms River has experienced earthquakes of a magnitude 5.0 or greater in the last 150 years. The highest intensity earthquake ever observed in New Jersey occurred on June 1, 1927, in the Asbury Park area, less than 35 miles away from Oyster Creek.

Three shocks were felt along the coast from Sandy Hook to Toms River.

Greater risk

Even a moderate earthquake at Oyster Creek could impact the dry well or the spent fuel rod storage system. The Japanese reactor had a cement dome over the containment vessel and Oyster Creek does not, possibly making it more at risk if a build-up of hydrogen occurs.

Excavation during an emergency at Oyster Creek would be difficult as Ocean County's population doubles on a summer weekend. There is close to 1 million people in a 13-mile radius of the power plant. It is hard enough to get home from a day at the beach, let alone when you have to evacuate people during an emergency.

Salem is in a less populated area but can be impacted by storm surges and flooding.

The plant is currently applying for relicensing. That process must ensure the facility is safe and can handle worst-case scenarios, natural or man-made, before any licenses are issued. At the very least, the plant must install a closed-loop system with cooling towers. The current water intake system, pulling from the Delaware River, could result in more problems during emergency.

Especially troubling at the Japan facility is that four reactors are onsite, magnifying the problem significantly. A fourth reactor is being proposed at the Salem plant, which adds to potential problems at the site.

This disaster reminds us of the dangers nuclear power can pose and challenges the notion that nuclear is a necessary component in our clean energy future. New Jersey's solar energy portfolio, with the second greatest number of installations in the country, continues to grow and our state has taken the first steps in leading the nation on off-shore wind development.

Energy commitments

New Jersey is on track to meet the renewable energy and energy-efficiency commitments outlined in our Energy Master Plan. Over time, New Jersey can continue to phase out the dirtiest and most dangerous energy sources and instead promote energy security and good jobs, and stimulate our economy through renewable energy.

The nuclear scientist Ed Teller said, "People believe they can make nuclear power fool-proof. The problem is, there are too many fools proving it's not fool-proof."

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Let's Hope Oyster Creek's Critics Are Wrong (BRPAT)

By Patricia A. Miller

Brick (NJ) Patch, April 6, 2011

Journalists strive for objectivity. It's been a priority for me ever since I started as a stringer for the Asbury Park Press back in 1984, and it always will be.

I try to be as objective as possible about Oyster Creek. I live about nine miles from the oldest nuclear plant in the country. But I've covered it for way too long not to have some concerns.

Let's put aside the unplanned scrams, tritium leaks, malfunctioning generators, fish kills, the radiation detection device on top of the stack that didn't work for four years, the threat of terrorist attacks and the stored spent fuel rods that aren't going anywhere for now.

Let's focus on one topic — evacuation.

When Gov. Chris Christie announced recently that the state will be taking a closer look at safety and emergency preparedness plans at the four nuclear plants in New Jersey, I wasn't reassured.

And state Department of Environmental Protection Commissioner Robert Martin was positively cheery in his assessment of the state Office of Emergency Management's existing plans for a nuclear emergency.

"We already have an excellent response system in place, one that is continuously updated as we gather new science and facts," Martin said. "We also have excellent cooperation from the owners of nuclear facilities in our state. But you can never be too prepared. If there are lessons for New Jersey from what is happening in Japan, we should draw from that information."

Well, apparently Bob hasn't been on Route 9 in the last several decades. Perhaps he's never been stuck on traffic-choked Route 9 during a minor car accident or road improvement work.

Because that's all it takes to bring cars on two-lane Route 9 in southern Ocean County to a standstill. Route 9 here is like a transportation time capsule. Any minute now you expect to see a 1950s Studebaker chugging along the highway.

Route 9 from Bayville on down to Manahawkin hasn't changed one iota from the roadway it was back in the 1930s and 1940s. The late George Moore — who founded Moore's Farm Market in Bayville back in 1952 — once told me that you could lie down on Route 9 after 8 p.m. and not worry about getting hit by a car. Those days are over.

Because in the event of a nuclear emergency, Route 9 would be packed with frantic residents looking for a way out. Jammed with parents trying to get to their children, if schools were open.

And that's the problem. If there was an emergency at Oyster Creek that mandated evacuation in the 10-mile radius around the plant, there would be no way out.

I have my handy-dandy booklet "Community Emergency Planning Information for Oyster Creek Nuclear Generating Station" at the ready. It's provided free, courtesy of the state's Office of Emergency Management to residents who live within the

10-mile Emergency Planning Zone (EPZ in state speak). It's chock full of useful tips about what to do if there's a serious emergency at Oyster Creek.

A three-minute steady siren will be our first hint that something is amiss. Then residents will have to determine if they should shelter-in-place or get the heck out of Dodge.

If you are advised to leave, you must then determine where your Emergency Response Planning Area (ERPA in state speak) is. If you have no friends or relatives outside the 10-mile radius, you head off to your designated "Congregate Care Shelter" or "Reception Center."

There are six centers in Ocean County — Pinelands Regional High School in Tuckerton, Brick Township High School, Christa McAuliffe Middle School in Jackson, the Whiting Fire Company in Manchester Township, Lakewood Middle School and Manchester High School.

The problem would be in getting to those shelters. And it's not just the people living on the mainland that would be affected. Long Beach Island, Island Beach State Park and the South Seaside Park section of Berkeley Township are included in the 10-mile radius.

Residents in those areas would have to rely on Route 35, the Long Beach Island Causeway and Route 72. An evacuation would be further hampered if it happened during the summer, when the populations in the affected areas skyrocket.

Exelon, the plant's owner, also mails out instructions to residents. Nuclear reactors cannot produce a nuclear explosion, and nuclear power plants are built to prevent the release of radiation, the instructional booklet states.

"A serious incident, however, could allow some radiation to escape, most likely as a cloud or plume of radioactive steam that would be carried away from the plant by the wind," it reads. "The degree of risk to the public would depend on the size of the plume, the direction and speed of the wind, and other factors."

The booklet also provides classifications of accidents that could occur at the plant. They run the gamut from an unusual event — a "potential degradation of safety" or security threat with no radioactive release — to a full-blown general emergency.

That's the biggie. A general emergency would involve "substantial core degradation or melting with the potential for loss of containment integrity or security events that result in actual loss of physical control of the facility."

And Exelon has a few more words of advice for us..

"Remain calm," the booklet states. "Do not rush."

I hope Oyster Creek's many critics over the years are wrong. Because if they are right, we all lose.

Now, where did I put those potassium iodide pills?

Lawmakers Want Larger Evacuation Zone At NY Nukes (AP)

Associated Press, April 6, 2011

WHITE PLAINS, N.Y. (AP) — Several local lawmakers are suggesting that everyone within 50 miles of the Indian Point nuclear plants be evacuated in case of a serious nuclear accident. That would include most of New York City's 8 million residents.

Federal regulators said the existing 10-mile rule is sufficient.

Six Westchester County lawmakers proposed a resolution that would be forwarded to a long list of officials including President Barack Obama. They noted that the Nuclear Regulatory Commission recommended that U.S. citizens stay at least 50 miles away from the plant in Japan that was damaged by an earthquake and tsunami.

However, the NRC said Tuesday that the 50-mile advisory was issued based on limited data and conservative assumptions. It said the 10-mile zone around U.S. reactors is based on extensive planning studies.

No Need To Expand Indian Point Evacuation Zone, NRC Says (KINGSTON)

Kingston (NY) Daily Freeman, April 6, 2011

BUCHANAN — The Nuclear Regulator Commissions said on Tuesday that it sees "no basis at this point" for expanding the size of the evacuation zone around the Indian Point nuclear power plant in Westchester County or any other nuclear site in the country.

In light of the current nuclear crisis in Japan, the Westchester Board of Legislators has been preparing a resolution calling on the federal agency to expand Indian Point's evacuation area, formally known as an Emergency Planning Zone, from the current 10-mile radius to a 50-mile radius.

Westchester's proposed evacuation area would include all of New York City, the northern border of which is just 25 miles south of Indian Point, and would get within 10 miles of Kingston, which is about 60 miles north of the plant.

The Nuclear Regulatory Commission said it will not change the 10-mile zone but noted a wider evacuation area could be mandated if a situation warrants it. Also, commission spokesman Neil Sheehan said the radius could be studied further.

Indian Point's 10-mile evacuation zone has been in place since the 1970s and was the result of extensive emergency planning studies performed by a federal task force, the nuclear agency said. That group concluded a 10-mile radius evacuation zone would assure that "prompt and effective actions can be taken to protect the public in the event of an accident" at the plant.

The study was based on research showing "the most significant impacts of an accident would be expected in the immediate vicinity of a plant, and therefore, any initial protective actions, such as evacuations or sheltering in place, should be focused there."

The desire among Westchester leaders to widen Indian Point's evacuation zone is based, in part, on the Nuclear Regulator Commission's suggestion that all Americans within 50 miles of Japan's crippled the Fukushima Dai-ichi nuclear plant evacuate. That plant, however, has three hobbled reactors, while there is only one reactor at Indian Point.

Also, the federal agency noted it had to issue its Japan advisory based on "limited data and conservative assumptions."

NRC Backs Indian Point Safety Zone (MTWNHER)

10-mile evacuation radius OK, commission says - despite Japan

By Adam Bosch

Middletown (NY) Times Herald-Record, April 6, 2011

BUCHANAN — Ten miles is fine.

That's what federal regulators said Tuesday about the Emergency Planning Zone around the Indian Point nuclear plant — a 10-mile radius established in the 1970s that includes parts of southeastern Orange County.

Environment groups and elected officials have called for extending the zone in light of the nuclear disaster in Japan. Experts from the United States said Japan should have evacuated residents in a 50-mile radius.

Federal officials said a bigger safety zone isn't needed around Indian Point. The Nuclear Regulatory Commission said the 10-mile zone would evacuate those who faced the most significant threat in a nuclear accident.

The commission said those outside the zone were not expected to confront dangerous levels of radiation "under most accident scenarios."

Supporters of a wider emergency zone said the commission's reasoning is flawed. They want a zone that covers all accident scenarios at Indian Point, not just most of them.

Deborah Brancato, staff attorney at the watchdog group Riverkeeper, said the Japanese disaster already has showed radiation can travel farther than 10 miles by air.

"It just shows they're not looking at a worst-case scenario," Brancato said of the commission's statement. "The worst-case scenario is no longer a theoretical — it's a reality."

The 10-mile zone covers more than 414,000 people in Orange, Putnam, Rockland and Westchester counties. A 50-mile radius such as endorsed for Japan would encompass roughly 20 million people, including most of New York City, Long Island and parts of Connecticut and New Jersey.

Westchester Legislators Want 50-mile Indian Point Evacuation Zone (WESTJN)

By Greg Clary

Westchester Journal News, April 6, 2011

WHITE PLAINS — Some Westchester lawmakers want their counterparts in Congress to push for enlarging the 10-mile evacuation zone around Indian Point to 50 miles, a move County Executive Rob Astorino says is premature.

If the request becomes law, it would force emergency officials from the nuclear plant and surrounding communities to include the New York City metro area in all of its planning.

"Wake up New York. Wake up Connecticut. Wake up New Jersey," said Legislator Michael Kaplowitz, D-Somers. "Based on what's happened in Japan, we are now on notice that if something untoward happens at Indian Point...up to 50 miles or 20 million Americans could be affected."

Kaplowitz, who chairs the Westchester County Board of Legislators Committee on Environment & Energy, announced that lawmakers will work to put the new legislation up for a local vote to strengthen their efforts to get Congress to force the Nuclear Regulatory Commission and the Federal Emergency Management Agency to expand the zone.

If Congress won't make the change for the whole country, Kaplowitz said, then it should create a "New York exemption" for Indian Point.

Astorino spokesman Ned McCormack said the Westchester leader wants more answers before lobbying for a bigger zone.

"Safety is always the paramount concern at Indian Point," McCormack said after a meeting with New York Mayor Michael Bloomberg on issues including Indian Point. "Any discussions calling for a 50-mile evacuation zone at this point are premature. Now is the time to gather information so that any decisions made are based on the best facts available and not emotion."

Officials from Entergy Nuclear, owners of Indian Point, said Kaplowitz is really pushing against nuclear energy.

"This is simply a ploy by a long-time anti-nuclear activist to exploit the tragedy in Japan to further his own agenda of closing an important part of N.Y. state's energy infrastructure," said Entergy spokesman Jerry Nappi. "If there develops a consensus among scientists and other experts, and our federal regulator required a change to our existing emergency planning programs, we would of course implement it."

NRC officials have said clearly that they will do whatever Congress tells them. They don't agree, however, that the 10-mile zone should be increased.

"The NRC sees no basis at this point for expanding the 10-mile-radius Emergency Planning Zone (EPZ) around U.S. nuclear power plants," said agency spokesman Neil Sheehan. "That does not mean the protective actions could not expand beyond the 10-mile radius. Indeed, U.S. nuclear power plants are required to consider and drill for the possibility of radiation releases that could have impacts up to 50 miles away."

Rep. Nita Lowey, D-Harrison, said late yesterday she supports the expansion, has raised it with FEMA and the NRC, and would be taking the 50-mile radius map with her to a Homeland Security subcommittee hearing today as a visual aide.

"In Japan, NRC was quick to recommend evacuation of Americans within 50 miles of the nuclear facility," Lowey said. "We should be prepared to apply the same standard at Indian Point."

Sheehan said the Japan advisory was made using limited data and conservative assumptions.

Proposal To Extend Indian Point Evacuation Plan After Japan Scare (WABC)

By Scott Curkin

WABC-TV New York City, April 6, 2011

WESTCHESTER COUNTY (WABC) – In the aftermath of the nuclear power plant crisis in Japan, some legislators in Westchester county want plans drawn up for a bigger evacuation zone around Indian Point if something should go wrong.

They want to draw up plans for a 50 mile evacuation which would include New York City, Long Island and parts of New Jersey.

Current plans cover a ten mile area.

They're sounding the alarm figuratively in the event these sirens literally go off during an emergency.

Current federal guidelines require evacuation plans for a 10-mile radius around nuclear reactors. At Indian Point that area includes four counties in New York and a population of 480,000.

Expanding the zone to 50-miles would encompass parts of four states and 20 million people.

Lawmakers say they find it odd Americans in Japan were warned to move 50 miles from the crippled Fukushima Daiichi plant by the same U.S. regulators who set the 10 mile limit here.

In a statement the NRC claims a federal task force concluded a 10-mile-radius emergency planning zone would assure that "prompt and effective actions can be taken to protect the public in the event of an accident" at a plant.

The NRC says the area could always be expanded if warranted. An Indian Point spokesman says the proposed legislation is politically motivated.

Emergency Services Commissioner Battles Westchester County Board Over Indian Point Evacuation Plan (CBSNY)

CBS New York, April 6, 2011

BUCHANAN, NY (CBSNewYork) - To some, having school kids brought to one location and their parents evacuate to another might not seem like a good evacuation plan for the Indian Point nuclear power plant.

WCBS 880's Catherine Cioffi: Emergency Commissioner Says They'll Follow The NRC's Lead

But Westchester County emergency services commissioner Tony Sutton says the evacuation plan is sound.

"You can never have a plan that's gonna cover every single scenario, but by the planning process, you develop the ability to address contingencies and to develop on them on the fly," says Sutton. "I know lots of people want to see action and deliberate action, but it's very early in this event."

"Our primary responsibility is to protect the health and safety of the citizens of our county and that's what we do every day," said Sutton. "But I can tell you right now that the plan works the way we have it."

That's a statement some county lawmakers just aren't comfortable with.

As for expanding the evacuation zone beyond ten miles, Sutton testified before the county Board of Legislators that they'll do whatever the Nuclear Regulatory Commission asks of them.

WCBS 880's Catherine Cioffi: 20 Million People Live Within 50 Miles

On Tuesday, some Westchester County lawmakers called for the Indian Point emergency evacuation zone to be expanded from ten miles around the plant to 50 miles around the plant.

The Indian Point evacuation map is seen at the Westchester County Board of Legislators - White Plains, NY - Apr 5, 2011 - Photo: Catherine Cioffi / WCBS 880

"Given the population size and density, it is absolutely critical that there be a fifty mile zone," says County Legislator Mike Kaplowitz, who adds that the 20 million people who live in the 50-mile radius around the plant need to be protected. "If there is a risk and public safety potentially being imperiled, our job is to do something about it."

Meanwhile, NRC officials say they see no basis for the expansion.

Questions Raised About Nuclear Safety (KVNO)

By Ben Bohall

KVNO-FM Omaha, April 5, 2011

Omaha, NE – The aftermath of Japan's recent nuclear crisis has left many in the United States questioning the overall safety of nuclear power plants across the country, including here in the heartland.

On March 17th, President Barack Obama made the announcement that in light of the recent radiation leaks at the Fukushima Nuclear Power Plant in Japan, the Nuclear Regulatory Committee would conduct a comprehensive review on the safety of nuclear plants throughout the United States.

That review led to a hearing on March 29th before the Senate Energy Committee on nuclear safety and how to prevent an incident similar to Fukushima's. Several expert panelists testified at the meeting, including David Lauchbaum, the Director of Nuclear Power Projects with the Union of Concerned Scientists. Lauchbaum voiced concerns about the similarities between many nuclear power plants within the U.S. and Fukushima.

"There are lessons that can and should be applied to lessen the vulnerabilities of U.S. reactors," said Lauchbaum. "I cannot emphasize enough that the lessons from Japan apply to all U.S. reactors, not just the boiling water reactors like those affected at Fukushima. None are immune to station blackout problems, all should be made less vulnerable to those problems."

Duane Arnold Energy Center (Photo courtesy Wikimedia, Jssteinke)

One of those dangers, according to Lauchbaum, includes increases in potential power output increases at plants in the United States. The NRC has allowed stations to increase their output as long as they pass safety checks. One of the stations that recently requested to increase its power output is the Duane Arnold Energy Center in Palo, Iowa. The plant has a GE Mark 1 reactor, a very similar design to that of the Fukushima Daiichi 1 Unit. That unit exploded and released radiation from the plant on March 13th as a result of complications brought on by Japan's recent earthquake and tsunami.

Over time, Iowa's plant has increased its power output by 20 percent – a 15 percent increase came in 2001 alone. Viktoria Mityng is the Senior Public Affairs Officer for the Duane Arnold Energy Center. She said the increase approval process through the NRC is actually a lengthy one.

"It has to undergo a rigorous review process," pointed out Mityng. "To the extent in which all of the necessary issues have been addressed, and the NRC is satisfied that the plant will continue to operate safely, permission is granted for a power upgrade."

Some groups like the Advisory Committee on Reactor Safeguards have voiced concerns at the ease in which the NRC grants permission to increase power. Questions have also been raised about financial motives possibly outweighing safety factors. But Mityng said modifications are put into place at the plants in order to accommodate the power increase in several forms.

"If you are increasing power by something like 15 to 20 percent, you are talking about increase in wear and tear on the equipment," said Mityng. "There's more vibration, more steam going through the pipes, the turbine is working harder, the cooling is working harder, backup safety systems need to be taken into account in case there is an unexpected dangerous condition. So, all of those conditions are taken into account."

Fort Calhoun's Nuclear Power plant in Nebraska is also currently planning a power increase, although its design is not the same as that of the GE Mark 1 reactor.

On April 28th, the Duane Arnold Energy Center will be holding its annual Plant Performance Assessment meeting. That meeting will be open to the public to give residents a chance to voice their concerns about the safety of nuclear power plants in their backyards.

Cracks In Progress' Nuclear Unit (ZER)

Zacks Equity Research, April 5, 2011

Progress Energy Inc.'s (NYSE: PGN - News) Florida subsidiary has informed state and federal regulators that its Crystal River Nuclear Plant will remain shut for repairs as they have discovered a new gap in the wall of the containment building last month. The company informed the Nuclear Regulatory Commission (NRC) and the Florida Public Service Commission (FPSC) that it will restart the plant only after complete review and repair of the defect.

Progress Energy said it is now conducting a thorough engineering analysis and review of the new separation, while also analyzing the options to bring the plant back to service. However, the company said that the exact time for reopening the plant cannot be ascertained at this time.

The new gap discovered in the wall of the nuclear plant's containment building, in mid March, forced the company to suspend the restoration work at the plant. Progress Energy said it was in the final stages of completing the complex task of tightening structural cables, which would have brought an end to the already in force 18-month plant outage. Before discovering this new gap, Progress had planned to begin the restart process in April.

Progress Energy said the plant was actually shut down for refueling and maintenance in September 2009. When the work of refueling and replacement of steam generators was in progress, in late 2009, the contractors discovered a fissure in the wall of the containment building, which was opened to facilitate the replacement of the steam generators.

This further extended the plant outage, which was originally scheduled for a three month outage. The repair effort has forced the utility to buy a replacement power to serve its 1.6 million Florida customers.

Progress Energy said it has spent about \$150 million on the repair work and about \$290 million on replacement power costs as of year-end 2010. Of this, the company said the insurance company has paid nearly \$64 million of the repair cost and about \$171 million of the replacement costs.

Located near Crystal River, Florida, the 860 MW Crystal River Nuclear Plant has been an important asset in providing carbon-free, reliable power for decades to Progress Energy's Florida customers. The plant has been operational since March 1977. Its current license expires in 2016. The company has filed for license renewal with the NRC in 2008, requesting an additional 20 years of operation.

Raleigh, North Carolina-based Progress Energy Inc. is an energy utility engaged in regulated electricity operations in the southeastern U.S. The company also has certain non-regulated businesses. Progress Energy is a holding company, comprising two electric utilities, serving 3.1 million customers in North Carolina, South Carolina and Florida. The company primarily competes with NextEra Energy Inc. (NYSE: NEE - News) and Southern Company (NYSE: SO - News).

Progress Energy Inc. currently retains a Zacks #3 Rank (short-term Hold rating). This supports our Neutral recommendation on the stock.

Crystal River Nuclear Plant To Remain Shut Down (ORS)

Orlando Sentinel, April 6, 2011

Crystal River nuclear plant to remain shut down

The ongoing saga of repairs at Progress Energy's nuclear power plant in Crystal River will continue as the company plans to further analyze damage to the reactor's containment structure. The plant was shut down for regular maintenance in September 2009 and some cracks in the containment wall were found. Several target dates to reopen the plant have come and gone with the latest being an announcement Monday that further work was needed. The North Carolina

The ongoing saga of repairs at Progress Energy's nuclear power plant in Crystal River will continue as the company plans to further analyze damage to the reactor's containment structure.

The plant was shut down for regular maintenance in September 2009 and some cracks in the containment wall were found. Several target dates to reopen the plant have come and gone with the latest being an announcement Monday that further work was needed. The North Carolina-based company's news release gave no new target date for the plant, about 80 miles from Orlando, to come back on line.

Last week I wrote about how Progress Energy was under increased pressure on its nuclear projects as a result of the crisis in Japan and a waning financial appetite for the power source in the United States over the last few years.

The problems at Crystal River, which were detected when the plant was already taken down for routine maintenance, are proving to be expensive.

The latest release from the company shows just how much it is costing. The total so far is \$440 million, with \$290 million of that amount resulting from the need to buy power to serve customers from more expensive sources while the nuclear reactor is

idle. The company's insurance has covered \$181 million of the total, leaving it to continue to be a drain on the company's finances. Progress Energy plans to be acquired by Duke Energy, also of North Carolina, by the end of the year.

Utility Shuts Troubled Fla. Plant For Inspections (GWIRE)

By Hannah Northey

Greenwire, April 6, 2011

Progress Energy Florida is shuttering its 860-megawatt Crystal River nuclear plant for inspections following the discovery of two gaps in the plant's concrete containment building.

Progress notified the Nuclear Regulatory Commission yesterday that the pressurized water reactor will be out of service while the company conducts an engineering analysis. The reactor and four adjacent coal units generate 3,151 megawatts about 80 miles north of Tampa.

"Options to return the plant to service will be analyzed after the report is complete," Progress said in a statement.

Progress shut down the reactor in 2009 for refueling and to replace the facility's giant steam generators, a process that the company expected to take three months, spokeswoman Jessica Lambert said.

The first gap in the containment wall was discovered in 2009 when Progress replaced steam generators inside the large concrete building that houses the entire reactor system.

The company cut the 42-inch containment wall to remove the generators and noticed the gap. The wall contains steel cables and provides extra protection from any internal pressure.

Last month, NRC canceled a meeting to restart the reactor after finding a second gap in the containment wall (E&ENews PM, March 18).

Progress said it is continuing to coordinate repairs and restart plants with NRC and that the plant is currently in "shut down" condition.

As of last December, the company had spent \$150 million on repairing the wall and an additional \$290 million to replace power the reactor would have produced. Progress has received \$181 million in insurance to cover the expenses and is continuing to file additional claims, Lambert said.

Regulators say it is too early to determine whether the shutdown will affect the company's relicensing application. Progress submitted a relicensing application in December 2008 to operate the plant for an additional 20 years; the current application expires in 2016.

Progress Energy May Leave Fla. Reactor Shut Down (CLTBIZJ)

By John Downey

Charlotte (NC) Business Journal, April 6, 2011

Progress Energy Florida has announced it is conducting a thorough engineering analysis and review at its Crystal River nuclear plant that could result in closing down the 860-megawatt facility.

"We are looking at all options," says Progress spokeswoman Jessica Lambert.

The plant has not operated since September 2009, when Progress started work on replacing steam generators in the plant. That work caused damage to the containment building several weeks later. The company has missed several targets for completing repairs and restarting the plant.

Until March, Progress had hoped to restart the plant this month. Then the company discovered there was evidence of further separation in the walls for the containment building. No threat

That discovery led to Progress' decision for a complete review of the plant's condition. Lambert says the company will conduct an engineering study, a cost-benefit analysis and also review the situation from a legal, financial and regulatory perspective.

Progress stresses that the plant has been shut down since before the damage occurred. The company says the plant is safe and there is no threat to the public.

Through the end of last year, Progress had spent \$150 million on repairing the plant and \$290 million more to buy power to replace what the plant would have generated.

The company has insurance against property damage and the cost of buying replacement power, above what it would have cost to generate it. To date, the insurer has paid \$181 million, with \$117 million covering the cost of replacement power and \$64 million on repairs. 'Systematic review'

"The Crystal River Nuclear Plant has been an important asset in providing carbon-free, reliable power for decades to our customers," Vincent Dolan, president and chief executive of Progress Energy Florida, says in a written statement. "We are doing a careful and systematic review of the new (containment building problems) and the options to return the plant to service."

Progress operates utilities in the Carolinas and Florida. It is based in Raleigh.

Charlotte-based Duke Energy proposes to buy Progress for \$13.8 billion in a stock swap that Duke hopes to complete by the end of the year. 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.

Nuclear Power Meeting Draws Dozens (KWQCTV)

KWQC-TV Davenport, IA, April 6, 2011

In the wake of Japan's nuclear crisis there is concern about nuclear plants in the U.S. and even the Exelon plant in Cordova. Organizers of a meeting Tuesday to discuss the safety at the Cordova nuclear plant expected more interest because of that, and they got it. Dozens showed up at the open house style meeting with questions and concerns.

It's supposed to be an opportunity for the public to hear about the Exelon plant's safety record for the past year. The meeting happens annually but in the past, no one from the community really came. "We believe there is some additional interest in peoples minds based on circumstances in Japan," said Bill Stoermer, Communications Manager for Exelon's Quad Cities Generating Station.

Representatives with the Nuclear Regulatory Commission were there to answer questions on the plants in both Japan and Cordova. "The age of the plant is a good one. What they have to say about that and how much longer it's going to last," said Cordova resident Morrie McLaughlin. Both units began operation in 1973. The current operating license expires in 2032.

Irvin Huebner wanted to know about security and procedures in case of a meltdown because, he too, lives just miles away in LeClaire. "We're within the circle, don't know how far, but we're within it. It doesn't ever bother me but it's good to know," said Huebner.

"How they do their cooling, how they do get rid of all the radiation, and how important it is their regulation," was what Peter Bechtel of Clinton was wondering. There are multiple backup systems for cooling and the structure is built to withstand the highest natural phenomenon in this area, plus more. But could what happened in Japan happen here? NRC officials say, because of regulations, it's extremely unlikely. However, if there were to be a huge explosion or accident like in Japan, it is possible.

The NRC also had information on the Exelon plant's yearly review. It determined that overall, the Quad Cities station operated safely in 2010. It was ranked in the top of five performance columns. "There are about 2,000 hours of inspection per plant, per year. Our inspectors are looking at various safety systems, structures and programs," said NRC spokesperson Viktoria Mityng, "There have not been major findings, major issues, no cultural cross-cutting issues. The plant has been performing safely." There are two, full-time inspectors who work as the NRC's eyes and ears at the Cordova plant everyday.

In Wake Of Japan, Cordova Nuclear Forum Attracts Curious (QUADCITY)

By Thomas Geyer

Quad-City Times, April 6, 2011

CORDOVA, Ill. - As Dwayne Luebbe of Davenport walked around the Cordova Civic Center, he carefully looked over the exhibits created by Exelon Corp. to show its nuclear power plant near the Mississippi River here.

About 30 people came to Tuesday's open house, hosted by the U.S. Nuclear Regulatory Commission.

"I'm sure many people are here with questions since that situation in Japan," Luebbe said, speaking of the March 11 earthquake and tsunami that severely damaged the Fukushima Dai-ichi nuclear power plant.

"I've learned some things," he said.

Luebbe, 76, said nuclear reactors are "the most economical way to get the power we need."

Nuclear also seems to be safe, he added. There simply was no way to predict the 9.0 earthquake coupled with a tsunami that struck Japan.

Bill Stoermer, communications manager for Exelon's Quad-Cities Generating Station, explained that the earthquake did not damage the Fukushima plant.

"The power plant did what it was supposed to do," he said. "It was the tsunami that went beyond the plant's design capacity."

Viktoria Mityng, senior public affairs officer for the Nuclear Regulatory Commission, said inspectors at the Cordova facility always learn something from the experiences of other nuclear plants around the globe.

"There are two resident inspectors at the plant," said Mitlyng, who was born and raised with 60 miles of the nuclear plant that exploded April 26, 1986, in Chernobyl, Russia. "Their job is to be invasive, annoying, to poke and prod and ask questions."

She said Exelon's Cordova facility has an excellent history and rating for safety and security in its daily operation.

Mark Ring, an inspector with the Nuclear Regulator Commission, said there are things the U.S. is learning from Japan's disaster.

That is why inspectors always are asking, "If this thing happens, what are you going to do," he said. "In the wake of 9/11, security also was changed. People had thought of new ways to damage things. We have to think of the unexpected."

Mitlyng said there also are redundant systems at nuclear power plants that provide multiple levels of protection. If one system fails for any reason, another takes over in its place.

Two students from Ashford University in Clinton, Iowa, attended the open house.

Peter Bechtel, 22, of Toronto, Ontario, Canada, a sports and recreation management major, came to get credit for his environmental chemistry class. His friend and fellow student, Andy Kavanagh, 20, of Dublin, Ireland, also a sports and recreation management major, tagged along. Both are soccer players.

"I don't know that we have any nuclear power plants around Toronto," Bechtel said.

Like many people, he said he never thought of nuclear power plants until the Japan disaster.

Kavanagh said he does not know of any nuclear plants in Ireland. "But there are some in England, so if something happened, we'd still get some effects," he said.

Neither of the students seemed concerned about any dangers.

"I feel that unless something like Japan happens, nuclear power plants are hush-hush," Bechtel said.

Exelon, NRC Calm Nuclear Concerns (WQAD)

WQAD Davenport (IA), April 6, 2011

CORDOVA, IL—

As we watch the Fukushima nuclear disaster overseas, all eyes are on our nuclear facilities here in the U.S.

Tuesday, the Nuclear Regulatory Commission gave concerned residents an assessment of the Cordova plant.

The purpose of the town hall was to give people an idea of what happens at nuclear power facilities and what kind of oversight is involved.

They did that by providing brochures and graphical displays.

A lot of people showed up, they say, because of what happened in Japan.

"Just hope and pray they make it safe," said Mary McCarthy, who lives near the plant.

According to the U.S. Nuclear Regulatory Commission, the Exelon Nuclear plant in Cordova is safe.

"I think people should feel safe because the plant is operating safely and as a regulator, their safety is our number one priority.

It's our mission," said Viktoria Mitlyng, Sr. Public Affairs Officer with the U.S. Nuclear Regulatory Commission.

Part of making it safe, according to Mitlyng, is having a system of redundancy in place.

"If one system fails, you have another one," she said. "There are multiple levels of protection, so you don't get to the kind of accident you have in Japan."

The NRC thinks it's highly unlikely, something like Japan's accident, will happen here.

"It's just not really feasible geographically around the QC."

There's actually only been one level 5 nuclear accident in this country- Three Mile Island.

It happened in Pennsylvania in 1979.

Exelon now operates one of two reactors there.

The company didn't operate the reactor at the time of the accident, but has taken away invaluable lessons from that disaster.

"A lot of the modifications today are a result of lessons learned at Three Mile Island," said Bill Stoermer, Communications Manager with Exelon.

PSC Stalls Key Money Decision On Ga. Nuclear Plant (AP)

By Ray Henry

Associated Press, April 6, 2011

ATLANTA (AP) – The state's top utility regulators indefinitely postponed a big financial decision Tuesday that could have trimmed Georgia Power's earnings if costs escalate on what may become the country's first brand-new nuclear plant in a generation.

Instead of deciding the long-delayed issue, the elected members of the Public Service Commission voted unanimously to allow another delay so the Atlanta-based Southern Co. can file its own risk-sharing plan and offer more testimony on accounting rules. The issue has dragged on for more than two years without resolution.

PSC Chairman Stan Wise, who introduced the motion to take more testimony, said there is no rush.

"We're on time, we're on budget," Wise said, referencing the latest reports from the construction site. "There's absolutely no reason we can't put this off for another month or so."

Wise said he wants to make a final decision in a matter of months, but he conceded the process may take longer. A lengthy delay could push the commission's decision closer to the start of major construction at Plant Vogtle, which could begin after the U.S. Nuclear Regulatory Commission decides whether to license the plant, possibly later this year.

It remains unclear whether an ongoing crisis at the Fukushima Dai-ichi nuclear plant in Japan could affect the project's schedule. A March 11 earthquake and tsunami apparently disabled the plant's cooling systems, leading to radioactive releases. Federal safety regulators are reviewing whether U.S. nuclear plants need changes in the aftermath of the disaster in Japan.

The first two reactors at Plant Vogtle demonstrate how costs can skyrocket while building nuclear power plants. Georgia Power originally estimated the project would cost \$660 million. But the final bill reached nearly \$9 billion by the time the reactors started producing commercial power in 1987 and 1989. Utility customers paid for the bulk of those costs.

Citing that experience, PSC staff members have proposed a carrot-and-stick plan giving Georgia Power a financial incentive to keep costs under control. Under the plan, if construction bills on the new reactors exceed \$6.4 billion, then regulators would trim the money Georgia Power can make off the new reactors. If the project costs less than \$5.8 billion, the company could earn more money off its new reactors.

The utility would not be held responsible if NRC safety regulators change the rules for building nuclear plants, resulting in higher costs. Safety changes required after the 1979 accident at the Three Mile Island nuclear plant in Pennsylvania raised the cost of construction throughout the industry.

This debate has simmered for more than two years without a decision.

PSC staffers proposed a similar concept before the elected commissioners allowed Georgia Power to pursue the Plant Vogtle expansion on March 17, 2009. In its order, the commissioners directed their staff and the utility to draft a risk-sharing plan and report back within 180 days. An agreement was never struck.

Last year, the Southern Alliance For Clean Energy, a project critic, accused Georgia Power of negotiating in bad faith and urged the commission to impose a risk-sharing deal to protect customers. In response, the commission told Georgia Power to keep negotiating. It instructed its staff and the company to file separate plans by December if they could not reach a deal.

Once again, neither side could agree.

Georgia Power did not file its own risk-sharing proposal in December. Since then, the company said it's been unable to negotiate a compromise. It calls the current plan illegal and said it would unfairly penalize the utility for construction problems that are beyond its control. The firm also raised last-minute objections, saying that accounting rules would force the company to take a write-off if the proposal passed.

Although the company had not raised that argument in previous testimony, the commissioners decided to explore it.

"We're comfortable with the commission's decision," Georgia Power spokesman Jeff Wilson said. "Their decision to make sure they understand all the implications of this proposal is certainly prudent."

The commission's vote to reexamine the case may not bode well for consumers, said Clare McGuire, director of the consumer energy program at Georgia Watch, which supported the risk-sharing proposal.

"It seems to be sort of a do-over for Georgia Power," she said.

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PSC Delays Vote Again On Nuke Risk-sharing (AJC)

By Margaret Newkirk

Atlanta Journal-Constitution, April 6, 2011

For the fourth time in two years, the state Public Service Commission delayed a decision Tuesday on a proposal to trim Georgia Power profits if its Plant Vogtle nuclear expansion goes too far over budget.

The measure's supporters questioned whether regulators really are in control of the issue.

Commissioner Stan Wise, who proposed the latest delay, said Georgia Power raised new accounting issues last week that will require the PSC to reopen hearings and examine new evidence on the cost-containment plan.

"It is important that we look at these issues," Wise said.

"Georgia Power is gaming this commission," said Stephen Smith, of the Southern Alliance for Clean Energy. "Its really challenging the fundamental premise of who's in charge here."

Angela Speir Phelps, who heads consumer group Georgia Watch, said the delay is "a second chance for the utility to raise new arguments."

Georgia Power spokesman Jeff Wilson said the company didn't raise the accounting issue earlier because it assumed the PSC staff would be aware of them.

At issue is how to deal with potential cost overruns as the heavy construction part of the \$14 billion project to build new reactors inches closer.

Georgia Power customers began paying financing costs for the project in January, and will pay for the construction itself after the reactors are finished in 2016 and 2017.

The PSC has certified \$6.1 billion as the utility's allowed costs for the project, with the rest of the money coming from electric co-ops and city-owned power companies.

The staff proposal would shave Georgia Power's allowed profit margin on the project if it runs more than \$300 million over budget, and boost its allowed profits if it beats budget by the same amount. The utility would lose \$300 million in profits on the reactors over a 30-year time period, for instance, if the project went \$900 million over budget.

The utility says the proposal is illegal and unnecessary and would punish shareholders for cost overruns outside its control.

The PSC delayed action in 2009 and asked its staff and Georgia Power to come up with a compromise last summer. Only the staff submitted a proposal, which was on the table Tuesday.

Last week the company said the proposal would require parent Southern Co. to report all profits lost over the reactor's life in one reporting quarter, skewing its financial results.

PSC Postpones Decision On Vogtle Risk-sharing (AUGC)

By Walter Jones

Augusta Chronicle, April 6, 2011

ATLANTA – Georgia Power customers will have to wait to see if they'll be sharing the risk of construction costs overruns with the company's investors for two nuclear reactors at Plant Vogtle near Augusta after the Public Service Commission today postponed its decision.

The five commissioners unanimously supported scheduling a hearing at some future date that will allow experts to testify about the company's assertion that industry accounting guidelines limit the PSC's legal options.

At issue is a proposal by the PSC staff that the company not be allowed to make the same profit on construction costs that exceed by more than \$300 million the \$6.4 billion budget for the reactors. The commission already has authority to completely disallow charging customers for any unnecessary expenses.

The company argues that since Georgia law requires customers to pay all legitimate expenses, that includes financing costs. Having adequate profits to entice investors to use their money in financing the project is just as much a construction cost as the actual concrete and steel and therefore must be passed on to electricity customers, according to the company.

Commission Chairman Stan Wise recommended postponing Tuesday's scheduled vote on the staff's risk-sharing recommendation.

"Clearly, there is no urgency for us to act because we are on time and on budget," he said.

The commission has hired a consultant – at Georgia Power's expense – to stay on the construction site and monitor expenses. Also, the company submits monthly reports which the commission approves every six months. The first three of those semi-annual approvals have been granted, and the next is up for consideration this summer.

Commissioner Tim Echols voted with his colleagues on the delay and hearing but not before sounding skeptical about the benefits.

"The company seems to have made it very clear that they are not interested in negotiating," he said.

Since February, Georgia Power lawyers and members of the commission staff have been in talks about how to design a risk-sharing plan. The company never presented a proposal, instead taking a stance opposed to any risk sharing based on actual costs.

During a committee meeting last week, Georgia Power attorney Kevin Greene told the commissioners, "We just couldn't get there because we continue to maintain that a properly structured incentive plan should be directed toward the conduct of the company, not simply the results."

Georgia Regulators Question Vogtle Nuclear Reactor Cost Plan (POWGENWLD)

Power-Gen Worldwide, April 6, 2011

Georgia regulators ordered Southern Co. operating unit Georgia Power to show why its profit margin should not be reduced if the proposed addition of two nuclear reactors at its Plant Vogtle site goes over budget.

Regulators were to vote April 5 on a risk-sharing plan recommended by the agency's staff. According to the Atlanta Business Chronicle, the plan calls for trimming Georgia Power's profit margin on the project if construction costs rise \$300 million or more above the utility's planned \$6.1 billion investment. If the project comes in \$300 million or more under budget, Georgia Power would be allowed a higher profit margin.

But in a letter to the PSC dated March 29, an attorney representing Georgia Power argued the risk-sharing plan is illegal because it would penalize the utility for results beyond its control and disallow costs already approved by the commission as prudently incurred.

In a response dated March 30, regulatory commission staff lawyers argued that Georgia law provides "ample authority" for the commission to adopt a risk-sharing plan.

Regulators reportedly voted April 5 to order Georgia Power to defend its position and the staff to file a response to the utility's argument.

After the two sides have made their arguments, the regulators will hold a hearing and render a decision.

Subscribe to Nuclear Power International magazine.

PSC Delays Vote On Plant Vogtle (ATLBIZ)

By Dave Williams

Atlanta Business Chronicle, April 6, 2011

The Georgia Public Service Commission Tuesday ordered Georgia Power Co. to show why its profit margin should not be reduced if the expansion of nuclear Plant Vogtle goes over budget.

The PSC was due to vote on a risk-sharing plan recommended by the agency's staff that calls for trimming Georgia Power's profit margin on the project if construction costs rise \$300 million or more above the utility's planned \$6.1 billion investment. Likewise, if the project comes in \$300 million or more under budget, Georgia Power would be allowed a higher profit margin.

But in a letter to the PSC dated March 29, attorney Kevin Greene of Troutman Sanders LLP, representing Georgia Power, argued that the risk-sharing plan is illegal under state law because it would penalize the utility for results that are beyond its control and disallow substantial costs already approved by the commission as "prudently incurred."

In a response dated March 30, PSC staff lawyers argued that Georgia law provides "ample authority" for the commission to adopt a risk-sharing plan.

On Tuesday, commissioners voted unanimously for a motion proposed by PSC Chairman Stan Wise ordering Georgia Power to submit testimony defending its position and the PSC staff to then file a response to the utility's argument.

"This is a huge issue," Wise said. "The commission needs to fully explore what these issues are."

Under Wise's motion, after the two sides have made their arguments, the PSC will hold a hearing and render a decision.

The two additional reactor units at the plant near Augusta are due to be completed in 2016-17.

Georgia Power, a unit of Southern Co. (NYSE: SO) is building the \$14 billion Vogtle expansion in a partnership with Oglethorpe Power Corp., the Municipal Electric Authority of Georgia and Dalton Utilities.

Commissioners Delay Action On Risk Sharing Mechanism (PEACHTR)

Ratepayers Remain In Limbo On Cost Control Protection for Vogtle Construction

Peachtree Corners (GA) Weekly, April 6, 2011

ATLANTA, Ga., (April 5, 2011) – The Public Service Commission voted today to delay action on the adoption of a cost control plan for two new reactors at Plant Vogtle.

The five commissioners decided unanimously that a further hearing was necessary to explore accounting issues raised last week by Georgia Power's attorney in a letter to the Commission.

PSC Staff will make a recommendation regarding dates for the filing of testimony and a hearing date at the PSC's regularly scheduled Energy Committee meeting next Thursday, April 14th.

"This second round of hearings is simply a second chance for Georgia Power to raise new arguments. We hope this new hearing will result in fairness to all parties and a decision that protects ratepayers," said Georgia Watch Executive Director Angela Speir Phelps, herself a former Public Service Commissioner.

PSC Staff has urged commissioners to adopt a risk sharing mechanism (RSM) that encourages Georgia Power to finish the new units on time and under budget. The Staff RSM calls for a slightly lower profit margin for Georgia Power if construction costs rise above \$6.4 billion, or \$300 million over budget. It also calls for a slightly higher profit margin if construction is completed on time and under budget.

Georgia Watch supports the adoption of Staff's RSM as a way to better align the financial interests of ratepayers and Georgia Power shareholders.

Georgia Power has come out strongly against the plan, 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 at the PSC's March 31st Energy Committee meeting last week.

Plant Vogtle's first two units, which came online in the late 1980s, were originally budgeted at about \$1 billion. But regulatory hold-ups caused project costs to soar. The final bill ultimately clocked in at \$9 billion.

Georgia Power is now 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.

"Without a risk sharing mechanism, customers would be unfairly exposed to potentially ballooning costs. Ratepayers should not be solely responsible for cost overruns," said Georgia Watch Consumer Energy Program Director Clare McGuire.

Under Staff's RSM proposal, Georgia Power would still recover from ratepayers all cost overruns deemed prudent by the Commission. The only difference is how much profit Georgia Power would be allowed to collect on these overruns. Under Staff's proposal, if total construction costs for the two new reactors falls between \$5.8 billion and \$6.4 billion, Georgia Power would collect its normal allowed profit margin: 11.15 percent. If total construction costs increase 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. On the other hand, if Georgia Power finishes construction at a final cost below \$5.8 billion, its allowed profit margin would jump to more than 12 percent. The two new units – Vogtle units 3 and 4 – are scheduled for completion in 2016-17.

PSC Delays Vote On Nuclear Cost Check (GPB)

By Melissa Stiers

Georgia Public Broadcasting, April 6, 2011

ATLANTA —

State regulators have delayed vote on a plan to protect consumers from cost over-runs at Plant Vogtle.

The proposal would tie Georgia Power's profits to its ability to come in on time and at cost for its estimated 14 billion dollar nuclear expansion project.

The Public Service Commission unanimously decided to hear more testimony from its public advocacy staff that created the plan and the utility that opposes it.

The company says the plan is illegal and could harm its financial standing. PSC members want more details before making their decision.

Ga. Power Ought To Share Financial Risk In Nukes (AJC)

By Jay Bookman

Atlanta Journal-Constitution, April 6, 2011

Thanks to \$3.4 billion in federal loan guarantees, American taxpayers are on the hook for two new nuclear plants being built near Augusta by Georgia Power.

Thanks to a bill enacted two years ago by the Legislature, Georgia Power customers share in the financial risk, required to start paying for the nuclear plants long before they produce power.

In fact, about the only people not sharing in the risks of building two expensive reactors are the people who actually own Georgia Power. However, that may change, at least to a small degree, if the state Public Service Commission votes today to accept a proposed risk-sharing mechanism from its staff.

The proposal itself is rather simple and modest. In seeking the PSC's permission to build the two reactors, Georgia Power estimated that its share of the project would come to \$6.1 billion. Given the history of enormous cost overruns in the nuclear industry, commissioners were understandably wary. However, company experts repeatedly reassured the PSC that Georgia Power and its partners would keep costs within that estimate, and in the early phases of construction they have done well in keeping that pledge.

Based on those assurances, PSC staff has proposed a way to encourage Georgia Power to continue to control costs. If the final cost of construction comes in between \$5.8 billion and \$6.4 billion — a \$300 million cushion on either side of the original estimate — nothing changes and the company collects its standard return on its investment.

However, if costs come in below \$5.8 billion, the company would be rewarded by earning a slightly higher profit on its investment, just as it would in a competitive industry. Conversely, if costs exceed \$6.4 billion, the company's return on its investment would be cut slightly.

For example, at an estimated cost of \$6.1 billion, Georgia Power shareholders could expect to make an estimated \$10 billion in profit over the lifetime of those plants. But under the risk-sharing mechanism, if costs somehow jumped to \$7 billion, ratepayers would take a hit but so would Georgia Power. Its long-term profit would fall to \$9.7 billion, a decline of \$300 million or 3 percent.

As PSC staff attorney Jeff Stair asked in a public hearing last week, "If the company is in fact so confident (of its cost estimate), why do they so oppose a mechanism that won't ever take effect unless its costs go above \$6.4 billion?"

Kevin Greene, an attorney for Georgia Power, told commissioners that the mechanism could penalize the utility for events that were outside of its control. The extraordinary cost overruns at the two existing Vogtle plants in the '80s, he reminded commissioners, occurred in large part because the federal government ordered extensive safety changes while construction was underway.

However, as Greene knows, the risk-sharing mechanism drafted by PSC staff is specifically designed to protect the company in such a situation. Under its proposal, any cost overruns that are caused by government-ordered safety changes could not be used to lower the company's return on its investment.

Greene also suggested that the risk-sharing mechanism would be illegal under state law, raising the specter of a legal fight should commissioners approve the idea. In his comments, he even seemed to imply indirectly that if necessary, the company might seek intervention from its friends in the state Legislature, as it has in the past when the PSC proved insufficiently obedient.

While Greene's legal claims seem unconvincing, a judge might come to a different conclusion. As a policy matter, however, the argument for at least some risk-sharing is overwhelming. After all, Georgia Power has asked its ratepayers to take on a financially risky investment in nuclear power, and it has used its considerable political clout to ensure that they do so.

It's only fair that they share a small part of that risk.

– Jay Bookman

Operators Say Failed Valve Not A Threat (FLOTD)

By Trevor Stokes

Florence (AL) Times Daily, April 6, 2011

Browns Ferry Nuclear Plant operators told federal regulators Monday that a valve in the cooling system failed because of a manufacturing deficiency and that the failed valve was never a safety threat.

The Nuclear Regulatory Commission that licenses U.S. nuclear plants slapped officials at Browns Ferry, operated by the Tennessee Valley Authority, with a safety warning Feb. 9.

The warning stemmed from a federal inspection that noted a potential problem with a degraded valve in a system used to cool one of the reactors. 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 was reported to the NRC.

More than two dozen officials from NRC and TVA met in Atlanta on Monday in a three-hour session. No regulatory actions were taken.

TVA officials purchased the valve as part of a component built by an outside company. The valve was screwed into place like a bolt where TVA officials said the weakness was found.

Rob Whalen, vice president of nuclear engineering at TVA, told regulators the valve had threads that were too small.

"Undersized threads are the root cause of problem," Whalen said.

In October, cooling was initiated at the plant, yet a cooling system failed to flow because the valve stuck, NRC officials cited.

TVA officials said they were not at fault with the valve and the degraded valve would have released water within seven minutes of activation.

Plant operators turned off the valve when they noticed 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 will determine the significance of the failure within 30 days, said NRC regional administrator Victor McCree. If the NRC decides 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."

Construction on the reactor started in 1967 and began operation in Aug. 1, 1974. On March 22, 1975, an electrical engineer started a fire accidentally that shut down the reactor. TVA board members agreed in 2002 to restart the reactor, a \$1.8 billion project completed in May 2007.

The Associated Press contributed to this report.

Federal Proposal Could Raise Cooling Towers At Salem Nuclear Site (NJSPOT)

Draft rule aims to reduce fish kills at factories and power plants across the country

By Tom Johnson

[NJ Spotlight](#), April 6, 2011

A new rule proposed by federal environmental officials could re-ignite a two-decades-old fight over whether cooling towers should be installed at the Salem nuclear generating stations as a way of reducing massive fish kills at the plant.

The proposal, unveiled last week, aims to protect billions of fish and aquatic life drawn into cooling water systems at power plants and factories around the country. Several environmental groups, although unhappy with the full scope of the rule, seized upon it to call on the state to require PSEG Nuclear to install cooling towers at the two nuclear units in Lower Alloways Township.

"We are disappointed that the DEP draft rules is not as strong as it should be," said Jim Walsh, eastern region director for Food & Water Watch. "Nonetheless, we call on the Department of Environmental Protection to require closed-loop cooling systems at the Salem facility, a move that will not only protect our environment, but also support sustainable commercial and recreational fishing." *The Power Plant 500*

The proposed rule affects more than 500 power plants, as well as other industry sectors that draw large amounts of water for their operations, including chemical and petroleum facilities and paper manufacturers. The rule stops short of mandating cooling towers at existing power plants, but gives state authorities the flexibility to decide how to protect aquatic life on a case-by-case basis.

According to the Nuclear Energy Institute, the requirement to retrofit so-called once-through cooling systems could affect 62 of the 104 reactors in the United States. Cooling towers also figured into the fight to close Oyster Creek, with the Corzine administration ordering Exelon to install towers at the Lacey Township plant. But the company worked out a deal with the Christie administration to close within nine years without having to build the structures.

In New Jersey, PSEG owns several plants that could be affected by the rule, including its two coal-fired power plants in Mercer and Hudson counties. The two nuclear units at Salem, however, will draw the most scrutiny, in part, because environmentalists have been pushing for cooling towers there to reduce fish kills for more than 20 years.

At one point in the Florio administration, the Department of Environmental Protection (DEP) ordered the PSEG to build cooling towers, but that decision was later reversed and the company reduced fish kills by installing screens over the plant's intakes, which draw in three billion gallons of water from the Delaware River each day. PSEG also agreed to undertake a 32-square mile marshland restoration project to help restore fisheries.

Eric Svenson, vice president for environment, health and safety for PSEG, noted the proposed rule does not mandate cooling towers, but relies on the "best professional judgment" of the staffers overseeing permitting of the facility to use the best available technology.

"I don't think there is a scientific basis to put that type of technology on the units," Svenson said. "I don't think it's warranted. There are more cost-effective approaches." *Meeting the Standards*

PSEG, however, does have some concerns about the rule, particularly its requirement that existing power plants meet numeric mortality standards for reducing fish killed by screen intakes. "PSEG has serious concerns about whether these standards can be met reliably and economically," Svenson said.

The proposal allows flexibility in dealing with fish killed on the screen intakes, or impingement, by either demonstrating a reduction in fish mortality or by showing the intake structure meets specific design criteria. With regard to fish killed by being sucked into the power plant, or entrainment, the Environmental Protection Agency (EPA) is proposing a more flexible standard, requiring a site-specific determination to be made based on local concerns.

Environmental groups say that framework allows the state to take aggressive steps to protect its water resources.

"While EPA's proposal gives states too much discretion, it does permit states power to do the right thing," said David Pringle, campaign director of the New Jersey Environmental Federation. "Now is the time for Gov. Christie to deliver on his promise to fix the failed cooling systems at Salem. It's clear the law requires cooling towers, not PSEG's failed mitigation that continues the fish slaughter."

Beyond the Salem reactors and the Hudson and Mercer coal plants, environmentalists said the rule proposal could affect the B.L. England coal-powered plant in Cape May.

Mass. Lawmakers To Hold Hearing On Nuclear Safety (AP)

Associated Press, April 6, 2011

BOSTON—Environmental activists and Massachusetts lawmakers are planning to converge on the Statehouse to address concerns about nuclear power plant safety following last month's disaster at a nuclear power complex in Japan.

Activists are holding a rally on Beacon Hill on Wednesday afternoon to urge that no new nuclear reactors be built, and no existing reactors relicensed, until meaningful protections are in place.

The rally is scheduled immediately before members of four legislative committees hold a joint public hearing on safety at nuclear plants in and around Massachusetts, including the Pilgrim nuclear station in Plymouth, Mass., and the Vermont Yankee plant in Vernon, Vt.

Officials from the Nuclear Regulatory Commission reassured Gov. Deval Patrick last week that regional nuclear power plants are safe even as they ordered new plant inspections.

Sen. Marc Pacheco Organizing Nuclear Oversight Hearing In Boston (TAUGAZ)

By Gerry Tuoti

Taunton (MA) Gazette, April 6, 2011

State Sen. Marc Pacheco, D-Taunton, is organizing a nuclear oversight hearing, which is scheduled to be held at 2:15 p.m. Wednesday at the State House.

Pacheco, who chairs the Committee on the Environment, Natural Resources and Agriculture, said several state officials and citizens groups are scheduled to testify.

Executives from Entergy, which owns and operates Pilgrim nuclear power and Vermont Yankee, is also scheduled to testify. Officials from New Era, which represents Seabrook power plant in New Hampshire and Yankee Atomic, are also expected to testify, as they oversee the storage of spent nuclear fuel at the decommissioned Yankee Rowe plant.

Davis Besse Drills For Nuclear Emergency (WTVG)

WTVG-TV Toledo (OH), April 5, 2011

The nuclear disaster in Japan is prompting many across our area to question security and safety procedures at the power plants in our area.

Ottawa County officials are running drills to prepare for an emergency at Davis Besse.

Within minutes of that call, representatives from multiple county and state agencies entered the Emergency Operations Center in Ottawa County.

Fred Petersen, director of Ottawa County EMA, says, "I think we have about 25 agencies, represented 50-60 people here just coordinating their response and following their plans and procedures for specified events that would happen at the plant."

All of the participating agencies have designated areas in the Emergency Control Center. There are some participating agencies you might not think of, like local school districts. Deputy director Mike Drusbacky of the Ottawa County EMA says, "We use bus drivers and buses to support our evacuation whether it's evacuating a school district or relocating or to help move the general public."

Today, there were no evacuations needed. There was no emergency at the Davis Besse nuclear power plant, but today's drill is helping prepare personnel for disasters of any kind. And all these representatives play a role and today was an opportunity to practice the procedures in place to keep the public safe.

Today's drill was a practice for a drill next month that will be evaluated by the federal emergency management agency.

Davis-Besse Runs Disaster Simulation (WUPW)

By Allison Brown

WUPW-TV Toledo (OH), April 6, 2011

OAK HARBOR, Ohio (WUPW) - Dozens of agencies worked together in Ottawa County Tuesday playing out potential emergency disasters at Davis-Besse Nuclear Power Station.

If there was a disaster at the power plant, resources would have been split up to cover several emergencies. That's because two actual fires broke out during the training simulation.

"You've got fire personnel responding to these areas and those fire personnel are players in our drill," said Ottawa County Sheriff Bob Bratton.

Those unexpected real scenerios were all part of the learning experience in Ottawa County as dozens of agencies huddled together in the EMA's executive room, delegating to crews out in the field during a potential disaster at Davis-Besse.

"They have an issue developed at the plant a scenerio where there is a failure of some sort today, it was an explosion on a diesel generator," said Ottawa County Commissioner Jim Sass, added. "It's for the benefit of the residents of the area as far as if we declare emergency evacuation, that type of thing. They need to be aware to when the sirens go off what they are for."

This type of training happens about every two years. The ongoing nuclear crisis in Japan from the March 11 9.0 earthquake and tsunami didn't really effect this event. Rather, it just raised awareness for people involved.

Sheriff Bratton believes that Oak Harbor, Carroll Township and other Ottawa County residents are more prepared for a disaster than those in Japan were, mainly because Tuesday's training is mandatory.

U.S. Nuclear Output Falls To Lowest In Year As PPL Shuts Plant (BLOOM)

By Colin McClelland

Bloomberg News, April 6, 2011

U.S. nuclear-power output fell to the lowest level in a year as PPL Corp. (PPL) shut the Susquehanna 2 reactor in Pennsylvania, the Nuclear Regulatory Commission said.

Power generation nationwide decreased by 655 megawatts, or 0.9 percent, from yesterday to 76,185 megawatts, or 75 percent of capacity, the smallest amount since April 5, 2010, according to a report today from the NRC and data compiled by Bloomberg. Twenty-four of the nation's 104 reactors were offline.

PPL closed the 1,140-megawatt Susquehanna 2 reactor after it was operating at 88 percent of capacity yesterday. Another unit at the site, the 1,149-megawatt Susquehanna 1, was operating at full capacity. The plant is located in Luzerne County, 50 miles (80 kilometers) northwest of Allentown.

Duke Energy Corp. (DUK) started the 1,100-megawatt McGuire 2 in North Carolina and boosted the reactor to 10 percent of capacity. Another unit at the site, the 1,100-megawatt McGuire 1, is operating at full power. The plant is located 15 miles north of Charlotte.

Progress Energy Inc. (PGN) said in a statement late yesterday it remained unclear when the 838-megawatt Crystal River reactor in Florida will start up as it conducts an engineering analysis of concrete damage, or "delamination," in the containment building.

"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 officer of Progress Energy Florida, said in the statement. "The company cannot estimate a return-to-service date."

The unit has been shut for repairs since September 2009. The utility said in August that the reactor would start in the fourth quarter of 2010, then in November delayed that until the first quarter of this year. The plant is located 70 miles north of Tampa, Florida.

The damage occurred during maintenance to replace steam generators, when crews created an opening in the structure that caused separation of a portion of the concrete at the periphery of the containment building.

Raleigh, North Carolina-based Progress spent about \$150 million on the repair and \$290 million on replacement power costs to Dec. 31, it said in yesterday's statement. Insurance covered \$181 million, the company said.

NextEra Energy Inc. (NEE) boosted the 839-megawatt Saint Lucie 1 reactor in Florida to 92 percent of capacity from 80 percent yesterday. Another reactor at the plant, the 839-megawatt Saint Lucie 2, was shut. The station is located about 45 miles north of Palm Beach.

Southern Co. (SO) increased output from the 1,109-megawatt Vogtle 1 reactor in Georgia to 87 percent of capacity from 80 percent yesterday. 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.

FirstEnergy Corp. (FE) increased output at the 1,235-megawatt Perry nuclear reactor in Ohio to 86 percent of capacity from 80 percent yesterday. 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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Unit 2 At Susquehanna Nuclear Plant Shuts Down For Planned Outage: PPL (EGYBUS)

Energy Business Review, April 6, 2011

Nuclear power generation company PPL said that the Unit 2 reactor at Susquehanna nuclear plant near Pennsylvania has been safely shut down to begin a planned refueling and maintenance outage.

The company said that the workers will replace about 40% of its uranium fuel and complete a number of equipment maintenance tasks and upgrades when the Unit 2 reactor is shut down.

The equipment maintenance to be performed will enhance reliability and help meet the demand for electricity to power the region's economy.

This year's upgrade work on the reactor includes installing an integrated digital control system for plant equipment and replacement of turbines that power pumps that provide water to the reactor vessel.

Since its last refueling outage in 2009, Unit 2 has safely and reliably generated about 19,355,000MWh of electricity, which is enough to power about 1 million homes.

The Susquehanna plant is owned jointly by PPL Susquehanna and Allegheny Electric Cooperative and is operated by PPL Susquehanna.

Bill Would Let Texas Radioactive Dump Set Rates (AP)

By Sommer Ingram

Associated Press, April 6, 2011

AUSTIN, Texas (AP) – A state Senate committee approved a bill Tuesday that would allow the operator of a remote West Texas dump to determine how much to charge 36 states that want to dispose of low-level radioactive waste.

The committee voted to allow Dallas-based Waste Control Specialists to set disposal fees for 36 states not part of a compact between Texas and Vermont that allows waste burial at the Andrews County site.

Previously, environmental regulators were to determine the rates. Cyrus Reed of the Lone Star Chapter of the Sierra Club said allowing Waste Control Specialists to set the rates would be a "major policy shift."

The bill, authored by Sen. Ken Seliger, R-Amarillo, mandates that fees be approved by regulators and must be more than what generators in Texas and Vermont will pay.

"We've set down parameters for where that price needs to be," Seliger said.

Other states can pay \$30 million through 2018 to join the compact. States that want to join after 2018 will pay \$50 million. Generators from non-party states will pay a surcharge for their imported waste, which would inject much-needed revenue into the state's cash-strapped economy.

Supporters say the Andrews County site can be a secure solution to dump radioactive waste for states around the country looking for ways to get rid of their waste. In 2008, South Carolina severely limited who could send waste to its low-level nuclear dump, shutting down the last major facility that had been accepting the waste.

The Texas Low-Level Radioactive Commission approved rules in January to allow 36 states to export their radioactive waste to the Andrews County landfill.

Opponents of the legislation say it directly opposes the intent of the compact between Texas and Vermont: to minimize the states sending waste to Texas. They warn that Texas is unprepared to deal with the massive task of managing waste from other states.

"The facility should have an operating history of successfully disposing of waste from Texas and Vermont generators before opening the facility to generators from other states," said Bob Gregory, chairman and CEO of Austin-based Texas Disposal Systems.

The bill, which prohibits international waste, now goes to the Senate floor for consideration.
Associated Press writer Betsy Blaney in Lubbock contributed to this report.
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Senate Panel OKs Changes For Agency Overseeing Radioactive Waste (FTWRTHST)

By Anna M. Tinsley

Ft. Worth Star-Telegram, April 6, 2011

AUSTIN – A legislative plan geared to better oversee, and restrict, the commission that determines whether other states may send low-level radioactive waste to West Texas moved forward Tuesday.

The Senate Natural Resources Committee approved two bills affecting the Texas Low-Level Radioactive Waste Disposal Compact Commission and the site in Andrews County where contaminated waste – such as hospital equipment, beakers, soil and even gloves that have come in contact with radioactive material – will be shipped, crisscrossing Texas roads and railways.

Environmentalists have voiced concern for years about the safety of Texans, worrying about spills and contamination as materials make their way to and are stored at the Waste Control Specialists facility near the New Mexico state line in a sparsely populated area about 350 miles west of Fort Worth.

"We are setting ourselves up for a huge financial liability," said state Rep. Lon Burnam, D-Fort Worth, who has long sought more oversight of the commission.

Waste Control Specialists, owned by Dallas billionaire Harold Simmons, applied more than six years ago to dispose of such waste. State officials have agreed to let the company accept waste from Texas, Vermont and federal sources. The two bills affecting the commission and the storage site, by state Sen. Kel Seliger, R-Amarillo:

Would let the site accept waste from other states, but not from other countries; limit the amount that could be collected there; and create surcharges for the waste and for states wanting to join the compact that Texas and Vermont created allowing the two states to ship their waste to the site. States wanting to join the compact would pay fees ranging from \$40 million to \$60 million.

"We are excited to get this facility up and operating," said Rod Baltzer, president of Waste Control Specialists, who supported the bill.

But Tom "Smitty" Smith, director of Public Citizen's Texas Office, said the initial purpose of the compact was to minimize the number of states sending waste across the nation. "What happens if one of these things dumped over on the highway?" Smith asked. "This is seriously radioactive stuff."

Would make the commission its own entity, pulling it out from under the Texas Commission on Environmental Quality, and require it to report only to the Legislature.

Senate Committee Votes To Allow WCS To Set Prices For Disposal O (KWES)

KWES-TV Odessa (TX), April 6, 2011

A State Senate committee is paving the way for Waste Control Specialists to set prices on the disposal of low-level radioactive waste.

The Committee voted to allow Waste Control Specialists to set fees for the 36 states that are not a part of the compact.

Texas and Vermont are the only members that allow radioactive waste burial at the Andrews County Site.

Environmental regulators were originally supposed to determine the rate.

They'll still need to approve those prices.

The bill now goes to the Senate floor for consideration.

Duke CEO: We'll Build Nuclear Plant (CHAROBS)

Charlotte (NC) Observer, April 5, 2011

Duke Energy will stick to its plan to build a new nuclear plant despite the crisis in Japan, CEO Jim Rogers said this week.

"Do you think China is going to slow down on any of its 24 reactors (under construction), or India, or Abu Dhabi? No." Rogers said in a video interview Monday at Fortune's Brainstorm Green conference in California.

Rogers said more needs to be learned about the release of radiation from Japanese plants after last month's 9.0-magnitude earthquake and tsunami. Traces of radioactive isotopes have been detected in North Carolina.

Rogers cited the safety record of U.S. nuclear plants, which watchdog groups often criticize.

"We do need to pause, we need to learn the lessons, we need to implement them," he said. "But I think at the end of the day our industry's prepared to do that. More importantly, we need to start building new nuclear in this country because we're going to start retiring our nuclear plants as early as 2019."

Duke plans to build a two-reactor nuclear plant near Gaffney, S.C., about 50 miles southwest of Charlotte. Duke expects to get a federal construction and operating license for the \$11 billion Lee plant in 2013, and put it in operation in 2021.

The company appeared before the N.C. Utilities Commission four days after the disaster in Japan, asking for approval of its decision to spend up to \$459 million in pre-development costs on the Lee plant. The commission has not yet ruled.

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UCI's Nuclear Reactor Safe, But Subject To Review (OCR)

By Pat Brennan

Orange County Register, April 6, 2011

A small nuclear reactor used for research at UC Irvine is considered safe and adequately protected from potential terrorist threats, though it will be subject to the same Nuclear Regulatory Commission review as all other reactors in the nation, the commission says.

"In case of accidents, such as earthquakes, this has been analyzed fairly extensively," said George Miller, a UC Irvine chemistry professor in charge of the reactor. "Basically it would shake it up, but even if it were to lose all its water, the fuel temperatures would not reach any temperature where any kind of problem would happen in terms of rupture."

The 250-kilowatt thermal-power reactor, using "low-enriched" uranium for fuel, is far smaller than commercial nuclear power reactors, such as the two 1,100-megawatt electrical power reactors at the San Onofre nuclear plant south of San Clemente.

It passed its most recent NRC inspection in December, Miller said.

But the nuclear crisis in Japan prompted the NRC to re-examine all of the nation's reactors as a precautionary measure.

California's U.S. senators, Dianne Feinstein and Barbara Boxer, have raised questions about San Onofre's protections against tsunamis or large earthquakes, though plant officials say it is well protected.

And while UC Irvine's reactor is too low powered to deliver lethal radiation doses even in the case of an accident or a terrorist attack, it has its own campus critic: retired international business professor John Graham, who worries about a terrorist "dirty bomb" scenario.

Even if the results were not lethal, he said, the aims of terrorism could be accomplished.

"If they blew up any chemistry building, we'd have problems," Graham said. "The reactor is particularly appropriate because of people's fears. Terrorists understand that. If they're trying to make a big show, there's no better place to do that than UCI."

Graham parked a rental truck in front of the building housing the reactor in 2004 to make his point about terrorism. It remained there for two hours, he said, with no security response.

Such an attack, Miller said, "would blow up the building, but it wouldn't damage the reactor."

Campus officials later extended a loading dock, preventing trucks from being parked there; it was part of a recent seismic upgrade unrelated to Graham's concerns, Miller said.

UC Irvine Police Chief Paul Henisy said in a statement that there are "security measures in place to protect it from any terrorist activity."

Because the reactor is underground, any radiation from a nuclear accident would be directed upward in a cone shape, Miller said, and would not spread beyond the building above.

"As long as we evacuated the building, no one will be exposed at all," Miller said.

The reactor also is at the bottom of a pool of water 25 feet deep. In the unlikely event that all the water drained away, as occurred in Japan, the reactor would simply stop functioning, Miller said, rather than growing hot and melting.

Any spent fuel from the reactor would be taken to a waste disposal site, although there is no spent fuel yet, Miller said.

The UCI reactor is mainly used to produce materials with a small radioactive signature for tracking purposes, or to reveal the composition of a variety of objects. It is also used to train students in the operation and maintenance of nuclear reactors.

The reactor was most famously used to analyze bullet fragments from the assassination of President John F. Kennedy to determine whether they might have come from more than one bullet -- which would, in turn, suggest more than one assassin.

By observing radioactive signatures that resulted when the fragments were irradiated with neutrons inside the reactor, scientists could tell whether the pieces were likely to have come from a single bullet.

"We claimed there was no evidence other than all of the fragments belonging to a single bullet," Miller said.

The reactor also has been used to help analyze moon rocks collected by Apollo astronauts, to determine the chemical composition of meteorites, and to analyze tiny bits of sculpture, mosaics or photographs from the Getty Museum.

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Article

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"In case of accidents, such as earthquakes, this has been analyzed fairly extensively," said George Miller, a UC Irvine chemistry professor in charge of the reactor. "Basically it would shake it up, but even if it were to lose all its water, the fuel temperatures would not reach any temperature where any kind of problem would happen in terms of rupture."

The 250-kilowatt thermal-power reactor, using "low-enriched" uranium for fuel, is far smaller than commercial nuclear power reactors, such as the two 1,100-megawatt electrical power reactors at the San Onofre nuclear plant south of San Clemente.

As crews in Japan struggle with shutting down nuclear reactors affected by Friday's earthquake and tsunami, Southern California Edison officials say the nuclear plant in San Onofre is prepared to handle the area's seismic threats.

"A design (for a nuclear plant) is only approved by regulators if it's shown to match all the environmental challenges in that particular region," said Gil Alexander, a spokesman for Southern California Edison.

The 8.9-magnitude earthquake off the coast of Japan and the resulting tsunami have caused problems at six nuclear reactors there by preventing coolant from reaching the hot reactor cores, according to The Associated Press.

That leaves the question: How would San Onofre handle a large earthquake or tsunami generated closer to home?

When San Onofre was designed several decades ago, scientific studies showed that the largest tsunami likely to strike the San Onofre area would measure about 25 feet. The wall was built 30 feet high for extra protection, Alexander said.

As for earthquakes, the facility was built to survive a nearby earthquake with a magnitude 7.0, Alexander said.

During the plant's planning stages, "the best science suggested that the nearest earthquake fault, which is five miles from the plant, could produce an earthquake something less than a magnitude 7 in the plant vicinity," Alexander said.

He added that it wouldn't take a major event to trigger an emergency response.

"The plant is designed so that if ground-motion sensors on the plant property detect even slight movement, an automatic mechanism will shut the two reactors down," Alexander said, by inserting control rods into the reactor cores to slow and stop the nuclear process. If need be, those rods also can be lowered manually. A total shutdown would take several hours.

The San Onofre plant provides enough electricity to power 1.4 million homes in Southern California.

Alexander said the company holds full-scale drills – along with local, state and federal agencies – five or six times a year to prepare for earthquakes and similar disasters.

Nuclear Engineer Speaks To Exchange Club (LBI)

By Stephen Jeppson

Laguna Beach (CA) Independent, April 6, 2011

San Onofre nuclear engineer Steve Jeppson is the guest speaker Thursday, April 7, at the noon meeting of the Laguna Beach Exchange Club.

Jeppson will talk about the nuclear disaster resulting from the Sendai earthquake, safety at the San Onofre plant and will be accompanied by another staff member from the San Onofre facility.

The club meets at 12:15 p.m. at Watermarc Restaurant (upstairs), 448 S. Coast Highway. The cost for non-members is \$20 and includes an excellent lunch.

The schedule of other upcoming Exchange Club speakers can be found at LagunaBeachExchangeClub.org

Direct any questions to Katy Moss at 494-0703 or Jim Rue at 494-6684

Why Nuclear Power Must Go (INDYPEND)

By Chris Williams

The Independent, April 6, 2011

CREDIT: GBMartin From the very beginning, unlocking the power of the atom for "peaceful" energy production was about waging war to its logical endpoint: the power to destroy life on a planetary scale.

People around the world were aghast at the apocalyptic destruction wreaked on Japan during a few hellish minutes when the United States dropped the nuclear bombs codenamed Little Boy and Fatman on the cities of Hiroshima and Nagasaki in

August 1945. The immediate loss of life, in the tens of thousands, coupled with the invisible and long-term effects of radiation sickness and cancers, brought the world up against the sharp razor edge of the nuclear age.

Subsequently, during the Cold War, NATO's nuclear war policy was officially named MAD: Mutually Assured Destruction, a point parodied in the outstanding black comedy *Dr. Strangelove: Or How I Learned to Stop Worrying and Love the Bomb*.

If nuclear weapons were to have a future, perfecting them as the ultimate weapon of mass destruction needed a justification other than annihilating humans. Moreover, the plutonium typically used in fusion-based hydrogen bombs — hundreds and even thousands of times more destructive than an atom bomb — is not an element that occurs naturally on earth. It is a byproduct of fission, splitting uranium atoms to unleash and harness energy, that takes place inside nuclear reactors. Hence, without a nuclear power program, presented as the peaceful generation of unlimited, cheap and safe energy, it's not possible to realistically produce the required amount of plutonium for nuclear weapons.

The first nuclear plants in the United Kingdom commissioned in the 1950s, at Calder Hall and Chapelcross, were explicitly for the production of plutonium for Britain's nascent nuclear weapons program; generating electricity was a secondary consideration.

In 1954, Lewis Strauss, chairman of the U.S. Atomic Energy Commission, imagined a nuclear-powered paradise: "Our children will enjoy in their homes electrical energy too cheap to meter. ... It is not too much to expect that our children will know of great periodic regional famines in the world only as matters of history, will travel effortlessly over the seas and under them and through the air with a minimum of danger and at great speeds, and will experience a lifespan far longer than ours, as disease yields and man comes to understand what causes him to age."

HAMMER OF GOD

The interconnection between nuclear power and nuclear weapons is inescapable. Because nuclear weapons are designed to be the Hammer of God, the ultimate arbiter of power, any country that is under external threat will logically seek to develop nuclear weapons as a deterrent, which was their stated benefit and contribution to "world peace."

North Korea, following George Bush's post-Sept. 11 declaration that it was a member of the "Axis of Evil," concluded it needed to develop and test a nuclear weapon, which it realized with an underground nuclear detonation in October 2006. Iran, the second member of the reputed Axis (Saddam Hussein's Iraq having been the third), has been under intense U.S. pressure for nearly a decade to abandon its civil nuclear power program despite having the legal right to pursue such a course.

Interestingly, thinly veiled threats that the United States or Israel may bomb Iran's nuclear facilities are predicated on the links between military and civilian nuclear programs. This has been one of the main arguments of the anti-nuclear movement: that peaceful nuclear energy programs drive an ever-more terrifying arms race. Indeed, there are four nations with undeclared stockpiles of nuclear weapons developed from civil programs, and it is no coincidence that they are in some of the most militarized and dangerous areas of the world: Israel, Pakistan, India and North Korea.

THE NEXT FUKUSHIMA?

With the deepening calamity at the Fukushima Daiichi nuclear power plant in Japan, there has been a great deal of focus on the possibility of other nuclear power accidents around the world.

According to a new report by the Union of Concerned Scientists cited by the *Christian Science Monitor*: "Nuclear plants in the United States last year experienced at least 14 'near misses,' serious failures in which safety was jeopardized, at least in part, due to lapses in oversight and enforcement by U.S. nuclear safety regulators... While none of the safety problems harmed plant employees or the public, they occurred with alarming frequency — more than once a month — which is high for a mature industry."

In the United States, 23 of the 104 operational nuclear reactors are built on the same 1960s design by the same company, General Electric, as the reactors at Fukushima. They have been recognized to have serious design faults since the 1970s and have been regularly retrofitted (patched up) to address design vulnerabilities that are routinely discovered and that could lead to a core breach and the release of radioactive isotopes.

Many plants sit on geologically active faults, in coastal locations or close to large sources of fresh water. The 36-year-old Indian Point nuclear power plant, located 35 miles from midtown Manhattan, has a history of safety problems and sits on two fault lines. The U.S. government has warned its citizens to stay at least 50 miles away from Fukushima, while Japan has limited the evacuation and exclusion zone to 12 miles. If Indian Point were ground zero, creating a 50-mile buffer — which the chairman of the U.S. Nuclear Regulatory Commission recommended to Congress in case of an accident comparable to Fukushima — would mean evacuating and relocating some 20 million people. Undertaking such a plan has been called a "fantasy," and the agency in charge would be the Department of Homeland Security, which oversaw the government response to Hurricane Katrina's pummeling of the Gulf Coast in 2005.

California has a 99.7 percent chance of being hit with a magnitude 6.7 earthquake or greater within the next 30 years. Nuclear plants in California with the same design as Fukushima's are only built to withstand magnitude 7 to 7.5 quakes, while the one that hit Japan on March 11 was 9.0. We know a larger earthquake is possible because the 1906 earthquake that tore San Francisco apart measured 8.3. California would not be immune to a powerful tsunami such as the one responsible for the multiple meltdowns in Fukushima, and as crazy as it sounds, one nuclear power plant, the San Onofre facility located south of Los Angeles, is built right on the beach.

Instead of waiting for another devastating nuclear accident to occur in the United States rivaling the one at Three Mile Island in 1979, we need to push the government to abandon plans both to relicense old plants for another 20 years and build new ones.

CHAIN REACTION

Producing electricity by splitting apart uranium atoms is an inherently unstable process that can lead to a runaway nuclear reaction at any moment. The "controlled" chain reaction inside the core has to be relentlessly monitored to keep it within tolerable limits, particularly regarding pressure and temperature. Hence the need to keep the core cooled at all times and have control rods ready to drop into place at a moment's notice, multiple back-up systems and fail-safe devices, at least two containment vessels, an evacuation plan, measures to prevent radiation leaks, regular testing of workers and the surroundings and so on.

This instability at the heart of nuclear power, combined with long-lived and extremely toxic waste, leads to the second insurmountable issue: its expense.

BOONDOGGLE

The nuclear power industry knows it is an economic boondoggle, which is why it demands cast-iron guarantees of limited liability for accidents and huge government subsidies before considering construction of new plants. The Bush administration bestowed \$18.5 billion in loan guarantees on the industry, and the Obama administration doubled down with \$36 billion more.

Yet the nuclear industry is asking for \$100 billion more. It also requested an extension of tax credits without plant-size restrictions, an investment tax credit and a worker training and manufacturing tax credit, as well as reductions in tariffs on any imports of required materials and components.

Citibank, which has rarely met a risky investment it didn't like, issued a report in 2009 that found little reason to cheer the industry. Titled "New Nuclear: The Economics Say No," it noted, "the risks faced by developers [of new nuclear plants] ... are so large and variable that individually they could each bring even the largest utility company to its knees financially."

The Price-Anderson Nuclear Indemnities Act, first passed in 1957 and last renewed in 2005, restricts any costs payable by utility companies in the event of a nuclear accident to \$12.6 billion. Anything above that amount — which would be easily exceeded by any major accident — is covered by the public.

A comprehensive 2003 report by MIT, "The Future of Nuclear Power," outlined the huge obstacles to expanding nuclear power: "prospects for nuclear energy as an option are limited, the report finds, by four unresolved problems: high relative costs; perceived adverse safety, environmental, and health effects; potential security risks stemming from proliferation; and unresolved challenges in long-term management of nuclear wastes."

A 2009 updated report mentions that the current support program is "not yet effective and needs to be improved," referring to increased government subsidies. According to a report cited in *Scientific American*, the costs to the taxpayer of building 100 new nuclear power plants, over the lifetime of the plants, over and above costs associated with alternatives if they had been pursued, comes to a staggering \$1.9–4.1 trillion. As nuclear plants are notorious for cost overruns, the higher figure is much more likely.

The MIT report also undermines one common pro-nuclear power argument favored by environmentalists such as George Monbiot: "At least it's not coal." The study states, "if more is not done, nuclear power will diminish as a practical and timely option for deployment at a scale that would constitute a material contribution to climate change risk mitigation."

In short, without embarking on a frenzy of construction that surpasses the global programs of the 1970s and '80s, nuclear power cannot make a meaningful contribution to mitigating climate change. The International Atomic Energy Agency, whose mission is to promote nuclear power, is even more skeptical: "Nuclear power is not a near-term solution to the challenge of climate change. The need to immediately and dramatically reduce carbon emissions calls for approaches that can be implemented more quickly than building nuclear reactors."

BLOWING IN THE WIND

Wind farms take only 18 months to come on line; nuclear plants typically take in excess of 10 years. The last nuclear power plant to come on line in the United States, at Watts Bar in Tennessee, took 23 years to build and cost \$6.9 billion. Numerous studies ranging from ones in the *Wall Street Journal* to independent energy analysts have put the cost of nuclear power at 12 to

20 cents per kilowatt hour. In contrast, those same studies put the cost of renewable energy at an average of 6 cents for the same output.

Governments around the world are not fond of nuclear power for its supposed environmental benefits or for its reliability, safety or economic superiority. Ruling elites want more nuclear power because of its connection to nuclear weapons production, the desire for Great Power status and the quest for energy independence.

There are many other reasons to phase out nuclear power, such as the growing mountain of long-term waste: the U.S. government proposes to sequester waste for 1 million years — five times as long as homo sapiens have existed. Other drawbacks include the persistent and large cost overruns during construction, the astronomical expense of decommissioning of nuclear power plants, the heavily polluting and energy intensive mining and refining of nuclear fuel from uranium ore, the dangers of transporting nuclear fuel for reprocessing, the international trade in nuclear waste and the highly centralized nature of the power system which means, as Fukushima has demonstrated, if one facility goes down it takes out an enormous chunk of the electricity supply.

As nuclear plants have to be continuously operated as close to full capacity as possible to even come close to justifying their costs, they directly displace clean renewable sources of energy such as wind and solar. Like nuclear power, they are best suited for base-load supply, which means they supply the minimum power needed for a block of customers. In addition, if governments relicense nuclear plants for another 20 years and build new ones that operate for 60 years more, then there will be no “transition” to clean power until almost the end of this century.

It's also a myth that nuclear power cannot be replaced by truly green energy. Many scientific studies show that it is possible to construct wind, solar, geothermal and tidal sources of energy that don't generate radioactive waste, lead to resource wars, have low carbon footprints and don't require massive amounts of farmland, energy and water, unlike agro-fuels such as corn-based ethanol. Furthermore, the technology already exists to tap these genuine renewable sources for all of our electrical needs. To be fair, it would take 20 to 30 years of intensive manufacturing, engineering and construction to build the necessary generation, transmission, storage and distribution systems.

Ultimately, the problem is social and political, not a matter of science and technology. In that regard, it's not just Republicans, but Obama and the vast majority of Democrats who are in the pro-nuclear camp even in the face of catastrophe, and they steadfastly favor “clean” coal, more offshore oil drilling in the Gulf and the Arctic and increasing agro-fuel production. If we want a transition to a sane and clean energy policy, we will have to independently organize and fight for it.

Chris Williams is a professor of physics and chemistry at Pace University and author of *Ecology and Socialism: Solutions to Capitalist Ecological Crisis*.

Nuclear Power In The Dock (FORBES)

By Jerry Taylor Peter Van Doren

Forbes, April 6, 2011

Nuclear power quite simply doesn't make economic sense.

The unfolding nuclear emergency in Japan has prompted a reconsideration of nuclear power here in the United States. Surprisingly, the political faith in nuclear power appears to be relatively unshaken at the moment, with opinion leaders on both the left and right cautioning against overreaction and politicians in both parties swearing continued fealty to the federal campaign to jump-start new construction orders.

This is unfortunate—not necessarily because nuclear power plants are a catastrophic meltdown waiting to happen—but because nuclear power makes no sense from an economic perspective and the political campaign to ram these plants down the market's throat threatens catastrophic harm to both taxpayers and ratepayers.

The fact that nuclear power can't come within light-years of passing a market test is painfully obvious to all who wish to see. Consider the feds are presently telling banks that if they loan money to a utility company to build a nuclear power plant and the loan subsequently goes bad, the U.S. Treasury (that is, you) will compensate the bank for up to 90% of its losses. And yet the banks still refuse to loan. For principled supporters of a free market, that should be information enough about the merits of this commercial enterprise.

There are all sorts of reasons why banks are saying “no” to nuclear. Two in particular, however, stand out.

First, nuclear energy is not even remotely competitive in power markets with gas-fired or coal-fired electricity now or in the foreseeable future. Even the more optimistic projections of new nuclear power plant costs—such as those forwarded by MIT—find that nuclear's production costs over the lifetime of a new facility are about 30% above those for coal or natural gas-fired generators. So while we can only speculate about new plant construction costs (we haven't tried building one for more than 30

years) and estimates vary a great deal, all parties agree on one thing: Nuclear is substantially more expensive than conventional alternatives at present.

That's particularly the case when one figures in the revolution in natural gas extraction, which has significantly lowered the cost of gas-fired power. Exelon (EXC - news - people) CEO John Rowe recently told the press that natural gas would have to cost more than \$9 per million BTUs before nuclear power plants could compete—about double its current price and far north of the \$5.3 per million BTU price over the next 5 to 10 years that forecasters predict for the future. MIT's nuclear energy study, by comparison, projects a \$7 per million BTU natural gas price (which makes nuclear energy seem more competitive than it actually is), but of course, the MIT study was based on 2007 data that failed to fully reflect the revolutionary advances in hydraulic fracking.

It's worth noting, moreover, that nuclear's hefty price tag would be even heftier if government subsidies were to fall by the wayside. One economist calculates that existing nuclear subsidies are equal to one-third or more of the value of the power produced. Tufts economist Gilbert Metcalf estimates that nuclear power plant operators face a negative 49% tax rate. Hence, banks betting on nuclear power are also betting on the longevity of such breathtaking taxpayer largesse—a risky bet indeed.

Second, the risk of cost overruns and, thus, defaulted loans are higher than the politicians would have us believe. Most of the nuclear power plants built in this country have cost three times as much to build as utilities initially advertised at the onset of construction.

While the industry swears that this is a thing of the past, new power plants being built in Finland and France by Teollisuuden Voima and Electricite de France, respectively—the only nuclear power plants being built right now in free-market energy economies—are already coming far above their advertised cost. The Finnish plant—which was supposed to cost only 3 billion euros—is already 2.7 billion euros above cost and is four years behind schedule. The French plant fairing a bit better, only 1 billion euros over budget and two years behind schedule.

The fact that both of these projects deploy state-of-the-art reactors built by French nuclear giant Areva (ARVCF.PK - news - people)—arguably the most experienced nuclear power company in the world—speaks volumes. Accordingly, both the Congressional Budget Office and the Government Accountability Office expect about 50% of any future U.S. loans to default.

So why are utilities trying to build these things in the first place? Well, most aren't. Those few utilities that are interested in going ahead do business in states where construction costs are automatically plugged into the rate base. So in theory at least, risks would be transferred from the utility to the ratepayer with utilities at least guaranteed to break even. Even so, the increasing cost gap between nuclear and gas-fired power makes it unclear whether any of these generators will actually get built.

As Peter Bradford, a former member of the U.S. Nuclear Regulatory Commission and former chair of the New York and Maine utility regulatory commissions, puts it, "In truth, the nuclear renaissance has always consisted of the number of plants that government was willing to build." Regardless, federal attempts to jump-start the industry—as Herculean as they have been—haven't come even close to closing the competitive gap with gas-fired generation. Events unfolding in Japan are unlikely to change that. And for that, at least, we can all be thankful.

Taylor and Van Doren are senior fellows at the Cato Institute.

Screening The Day's Catch For Radiation (NYT)

By William Neuman And Florence Fabricant

New York Times, April 6, 2011

Eric Ripert, the chef of Le Bernardin, the high temple of seafood in Manhattan, bought a new kitchen gadget a few days ago: a radiation detector.

"I just want to make sure whatever we use is safe," said Mr. Ripert, whose staff is using the device to screen every item of food that enters the restaurant, regardless of its origin. He has also stopped buying fish from Japan, which means no high-quality, farm-raised hamachi and kampachi for raw seafood dishes.

"Nobody knows how the currents will carry the contaminated water," he said.

Despite assurances by health officials that radiation from the stricken Fukushima Daiichi nuclear power plant in Japan is unlikely to show up in the food supply, worries about contaminated foods are growing among consumers, businesses and governments across the globe.

On Tuesday, the Japanese government announced new radiation standards for fish after high levels of radioactive iodine and cesium were found in fish caught halfway between the reactor site and Tokyo. In response, the European Union said it would tighten its own radiation limits for Japanese food imports. India said it would ban all food from Japan for at least three months.

In the United States, where about 4 percent of food imports come from Japan, the Food and Drug Administration has restricted some foods from the country. And the agency is working with customs officials to screen incoming fish and other food for traces of radiation.

So far, that screening has identified seven items that required further testing to see if the radiation detected exceeded normal background levels, according to Siobhan Delancey, an F.D.A. spokeswoman. Those items included tea and flavoring compounds. She said three of the items had been cleared for delivery and four were awaiting test results.

Patricia A. Hansen, a senior scientist at the F.D.A., acknowledged that the radiation detection methods used to screen food imports were not sensitive enough to detect a single contaminated fish in a large shipment. But she said that small amounts of contamination did not represent a public health hazard. A person would have to consume large amounts of fish in excess of what are known as an "intervention level," or threshold level, of radiation for an extended period of time before it would be considered dangerous, she said.

"One fish that might be at an intervention level in a huge cargo container, we're not going to pick that up," she said. "But the important context is, is that one fish at the intervention level a public health concern? No, it is not."

Nicholas Fisher, a professor of marine sciences at the State University of New York at Stony Brook, said that, according to some radiation safety guidelines, people could safely eat 35 pounds of fish each year containing the level of cesium 137 detected in the Japanese fish.

"You're not going to die from eating it right away," he said, "but we're getting to levels where I would think twice about eating it." All the talk about radioactive food in Japan, which earlier banned milk and other farm products from areas near the crippled plant, has made some people uneasy, even thousands of miles away.

"When radioactive material started going into the ocean, that raised my concern greatly," Karen Werner, 68, said on Tuesday as she shopped for fish at 99 Ranch Market in Richmond, Calif. "Right now, I'm not too worried about it showing up in fish, but I'm keeping my eye on it."

Lee Nakamura, a partner who manages the fish counter at Tokyo Fish Market in Berkeley, Calif., estimated that one in five customers asked about possible radiation, but he had not yet seen an impact on sales. He said his Japanese suppliers had assured him that fish were being tested for possible radiation.

"Everything is under a microscope right now," Mr. Nakamura said. "I feel confident the fish is safe. Everyone in Japan and here is looking at it and double-checking it before it gets to us."

Several restaurant owners and fish importers said that while they continued to buy some fish from Japan, it came from areas far from the reactor site.

Still, Scott Rosenberg, an owner of Sushi Yasuda, a highly regarded sushi restaurant in Manhattan, said he planned to buy a radiation detector and would post a notice on the restaurant's Web site to let customers know about the testing. "We want to make sure there is no exposure," he said.

Other segments of the food industry are also grappling with how to respond to radiation concerns. Sensitive monitoring devices and tests have detected trace amounts of radioactive material from Japan in the air and water in many states. Tests in Arizona, California and Washington state have found minuscule amounts in milk, leading to concern among dairy farmers.

Everything detected has been well below levels considered dangerous, but food companies realize that consumers may still need to be reassured.

In California, Will Daniels, senior vice president for food safety at Earthbound Farm, a major producer of organic salad greens, said the company was prepared to test soil and greens for radiation if concerns persisted or fallout from Japan intensified.

"The likelihood of contamination on the West Coast is extremely low, so it's really important that we're monitoring appropriately and not creating panic," Mr. Daniels said. "But we certainly need to make sure we're doing the appropriate thing and are ready to respond."

Cliff Coles, a consultant who works with Earthbound and other produce companies and food ingredient importers on food safety issues, said he had ordered two radiation detectors and was planning to take them into fields where greens, tomatoes and peppers would be grown this spring. He said he would work with Earthbound's growers to make sure the fish emulsion fertilizer they use was tested for radiation.

"We're just trying to get our clients to be proactive and say that, while this may not be the end-all solution, let's take a look at what's going on around us before we get blindsided," Mr. Coles said.

Consumer worries about radiation have led to a big boom in sales of one food that often comes from Japan: seaweed.

Natural food stores and Asian markets on the West Coast said they had seen a run on seaweed ever since the nuclear reactors in Japan began leaking radiation. Some consumers view seaweed as a natural source of normal iodine, which can help protect the thyroid gland against exposure to radioactive iodine.

Timothy M. Zerkel, a manager at Central Co-op in Seattle, said sales of many types of seaweed were far above normal levels and the store's distributors had begun rationing shipments because they could not keep up with demand.

Scientists cautioned against eating large amounts of seaweed, however, saying that the levels of radioactive iodine reaching this country from Japan were much too low to worry about. And they said that some people could encounter health problems from consuming too much iodine.

In addition, scientists said that radioactive iodine could concentrate at high levels in seaweed. As more contaminated water from the Fukushima reactors enters the sea, health concerns could arise about new seaweed imports from Japan.

IN THE BLOGS

Republicans Open Inquiry On Yucca Mountain Shutdown (NYT)

By John Collins Rudolf

New York Times, April 6, 2011

Republican leaders have begun a formal inquiry into the Obama administration's decision to halt development of a nuclear waste repository at Yucca Mountain in Nevada.

United States Geological Survey Japan's crisis has revived interest in Yucca Mountain as a potential nuclear waste repository.

The investigation is led by Fred Upton, chairman of the House Energy and Commerce Committee, who on Thursday demanded documents and written answers from Energy Secretary Steven Chu and Gregory Jaczko, chairman of the Nuclear Regulatory Commission, detailing their agencies' decision-making process in moving to block construction of the controversial project.

The investigation was criticized by Representative Shelley Berkley, Democrat of Nevada, who took to the House floor on Friday to denounce the inquiry as a "political stunt."

Those pushing this review are lying about the dump's safety," The Hill quoted Ms. Berkley as saying. "They know Yucca Mountain is smack in the middle of an earthquake zone. There's volcanic activity. There's groundwater issues. Have we learned nothing about what's happening now in Japan?"

In a statement, Mr. Upton and Fred Shimkus, chairman of the newly formed Environment and Economy subcommittee, said there was "no scientific or technical basis" for the administration's move to withdraw a construction application for the Yucca project.

"Despite the scientific community's seal of approval, extensive bipartisan collaboration, as well as nearly three decades and billions of taxpayer dollars spent, this administration has recklessly sought to pull the plug on the Yucca repository without even the sensibility of offering a viable alternative," the congressmen said.

Yucca Mountain was identified by Congress as its first choice for a nuclear waste repository in the 1980s, but local opposition and questions over the site's suitability for long-term storage have long stalled its development.

As a nuclear crisis unfolds in Japan, where spent reactor fuel stored inside reactors appears to have overheated and leaked radioactive material, enthusiasm has grown in Congress for finding a long-term solution for the growing stockpiles of nuclear waste in the United States.

But the push to renew construction on Yucca Mountain has met with staunch resistance from the Obama administration, which proposed eliminating the Nuclear Regulatory Commission's funds for the project in its 2012 budget.

A spending bill approved by the House, meanwhile, would bar the nuclear commission from halting its licensing review for Yucca Mountain "without due cause" and block the agency from using budgeted funds to pay termination costs associated with shutting down the project.

Senator Harry Reid of Nevada slammed that proposal when it was passed by a House committee in February. "Let me be clear," he told The Las Vegas Sun. "Any attempt to restart the Yucca Mountain project will not happen on my watch as Senate majority leader."

"If House Republicans are genuinely interested in fiscal responsibility, they should stop trying to waste more taxpayer money on an irretrievably bad project," he said.

Energy Committee Leaders Probe Yucca Mountain Decision (POWGENWLD)

Power-Gen Worldwide, April 6, 2011

Energy and Commerce Committee Chairman Fred Upton, R-Mich., is leading the probe into the decision to stop the project. He and John Shimkus, R-Ill., chairman of the Environment and the Economy Subcommittee, sent letters March 31 to Energy Secretary Steven Chu and Nuclear Regulatory Commission Chairman Gregory Jaczko asking questions about the decision to halt the repository. The two House leaders said a review of the available evidence indicates that "there was no scientific or technical basis for withdrawing the application."

In their letters to Chu and Jaczko, Upton and Shimkus asked for replies to their questions within two weeks.

Last summer, 91 members of Congress asked the Department of Energy to halt all operations to dismantle the Yucca Mountain nuclear waste repository. In a July 6 letter to Energy Secretary Steven Chu, the group of House and Senate members said they were "deeply troubled" that DOE continued to move forward with terminating the project .

The Safest Form Of Power: Everything In Moderation (REU)

By Morven McCulloch

Reuters, April 6, 2011

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

More Citizen Involvement For US Nuclear Power Plant Siting, Design, & Upgrades (TREEHUG)

By John Laumer

Treehugger, April 6, 2011

It's been about 35 years since large numbers of US citizens immersed themselves in nuclear power plant design and location issues. (Most readers of this probably weren't even born until well after the US nuclear fleet was built.) That's about to change. The US Nuclear Regulatory Commission will report on lessons learned from the Japanese nuclear melt down(s) and it is reasonable to expect some mandatory changes growing out of that work. Pending proposals to re-license existing plants also are going to be looked at more closely. As a result, citizen involvement in nuclear decision making is certain to increase. One prospective citizen role would be to help shape emerging plant design standards. Activist groups, for example, could potentially challenge the U.S. Nuclear Regulatory Commission's Design Certification of the Westinghouse AP1000 reactor. If a challenge were taken it would be interesting to watch, as Westinghouse is principally owned by Toshiba, while Congress, lacking any nuclear power expertise among the members is likely to take a hands off approach to the NRC's deliberations for the time being have some wack-a-doodle House of Representatives hearing with think tank 'experts' on hand to confuse everyone.

But, that's OK...there are other ways citizens can have a say on design, safety procedures, and siting at the state and the local level: licensing; public hearings; cooling water withdrawal permits; zoning hearings; and so on.

From 'under water,' to 'radioactive' mortgages.

There's more at stake with coming decisions than personal health and safety. How many Tea-Party supporters can see nuclear power plant cooling towers out their suburban windows? Plenty, I bet. Wealthy traditional Republicans? A lot of them. Until now, I doubt they gave much thought to what might happen to their home's market value if they had to evacuate and have the place decontaminated after a nuclear plant incident.

More than dirty stinking environmentalist hippies against a free market.

Owners of aging nuclear plants, many of them surrounded now by suburban development, have been skating by on the 'hidden-in-plain-sight' factor and probably are none too excited about going to public hearings for NRC-mandated safety upgrades.

Cable TV's talking heads and Rush Limbaugh will not be able to spin the resulting uproar as an 'environmental socialist plot' (although they may try). Every imaginable interest group has skin in the nuclear safety game. Mutual funds, institutional pension investors, real estate developers, GE...the list goes on.

Political plate tectonics: once the NRC's safety cat is out of the bag and people in all walks of life have thought about how it may affect them, all the old political and social stereotypes about environmentalists which have been fueled by mainstream media and stuck in the mud environmental activists will be up in the air and new political alignments will result.

Where experts dare not tread alone.

Colin Macilwain, in Nature News, Concerns over nuclear energy are legitimate,, writes: Fukushima houses six reactors on one site, despite the fact that even the most basic analysis of failure modes and effects would come out resoundingly against such an arrangement. Not only are all the reactors exposed simultaneously to the same dangers -- whether flood, earthquake,

war or terrorist attack – but radiation release at one reactor or fuel tank could cripple recovery efforts at the others. Everyone in nuclear engineering knows this. Yet such co-siting is the central organizing principle of current nuclear-build plans in Britain, the United States and elsewhere, because the only communities that will accept new nuclear plants are those that already have them. Colin's last sentence is important. He is right to say that sprawl has corralled the nuclear beast and to infer that this will make it very hard to unleash it elsewhere, regardless of what the Obama Administration suggests as a matter of energy independence and climate protection.

The six-pack dilemma

I'd add to Colin's assessment that it's not only sprawl and fear that provide an incentive for utility owners to host multiple reactors on a single nuclear plant site. One plant with six generators - per the case in Japan - has many cost advantages over six widely dispersed units feeding the same grid. A six-pack plant takes a single land parcel, accesses one transmission line, needs one license, deals with one local government and one state, prepares one environmental impact statement and one evacuation plan, can share a single cooling water intake/discharge pipe and intake crib/diffuser for all six reactors, needs one safety department, has one safety program, prepares one annual report, and so on.

Compromise layout

If you put all six reactors spread out across one much larger parcel more land is needed and pipe runs have to be longer, fatter, and need larger pumps to move water: adding cost. More wires, possibly several control rooms, etc.

It's going to be tough, national decision process but we can't trust only the experts. US nuclear power had originally to compete mainly with coal-fired electricity. Now it competes against abundant cheap natural gas as well. Because of that added competition, and as long as Wall Street demands a return on investment from a nuclear-based utility, and while sprawl still exists, I can't believe that nuclear utilities will on their own move create a distributed generation business model (mini nucs or whatever).

The only way to make a redistributed nuclear industry happen would be for government to take a very strong hand with eminent domain and licensing: buy out suburban landscapes and turn them into clustered nuclear parks. Can you imagine the public row?

INTERNATIONAL NUCLEAR NEWS

Japan Nuclear Plant Plugs Highly Radioactive Leak (AP)

By Malcolm Foster And Ryan Nakashima

Associated Press, April 6, 2011

TOKYO – Workers at Japan's tsunami-damaged nuclear power plant on Wednesday finally stemmed a tide of radiation that was pouring into the Pacific and exacerbating concerns over the safety of seafood.

High levels of contamination have been measured at the shoreline of the Fukushima Dai-ichi complex in recent days, prompting the government to set limits for the first time on the amount of radiation permitted in fish.

While officials have said the crack in a maintenance pit plugged early Wednesday was the only one found, they have not explicitly ruled out that radioactive water is leaking into the sea from another point.

Authorities insisted the radioactive water would dissipate and posed no immediate threat to sea creatures or people who might eat them. Most experts agreed.

Still, Japanese officials adopted the new standards as a precaution. And the mere suggestion that seafood from the country that gave the world sushi could be at any risk stirred worries throughout the fishing industry.

"Even if the government says the fish is safe, people won't want to buy seafood from Fukushima," says Ichiro Yamagata, a fisherman who lived in the shadow of the power plant. "We probably can't fish there for several years."

Fukushima is not a major fishing region, and no fishing is allowed in the direct vicinity of the plant. But experts estimate the coastal areas hit by the massive wave last month account for about a fifth of Japan's annual catch.

Radiation concerns in the area intensified after the discovery over the weekend of the crack, which photos showed water pouring out of and splashing into the sea.

Since then, workers have raced to find a way to seal it, pouring in concrete and injecting a mixture of polymer, sawdust and shredded newspaper. Both failed.

But on Wednesday morning, Tokyo Electric Power Co. spokesman Naoki Tsunoda said the injection of 400 gallons (1,500 liters) of "water glass," or sodium silicate, and another agent near a seaside pit appeared to be successful.

It was a rare bit of good news for the utility that owns the crippled nuclear plant, located about 140 miles (220 kilometers) northeast of Tokyo. But highly contaminated water continues to pool around the complex. Tsunoda said officials were investigating whether the contaminated water is leaking from other places.

The new limits on radioactivity in fish were imposed after TEPCO announced water tested near the plant Saturday contained levels of radioactive iodine 7.5 million times the legal limit. That level had dropped to 5 million two days later.

Japan said some fish caught last week about 50 miles (80 kilometers) from the plant would have exceeded the new safety limits, which may change as circumstances do.

Fears of radiation contamination prompted India to announce Tuesday that it was halting food imports from Japan. Few countries have gone so far, but India's three-month ban reflected the unease created by the nuclear crisis among consumers. India said the ban would last three months or until the risk subsides. It planned to review the situation weekly.

Yamagata, whose home is within the 12-mile (20-kilometer) evacuation zone around the plant, is staying in a Tokyo soccer stadium with his wife and about 140 other refugees. He expects his fishing days are over.

After the magnitude-9.0 earthquake on March 11, he ran outside and watched the second floor of his house collapse, then fled with his family when tsunami warnings sounded.

Since then, he hasn't been allowed to return to check on the 5-ton boat he used to troll for flounder. He assumes it's gone, too. The tsunami killed up to 25,000 people and left tens of thousands homeless as it swamped about 250 miles (400 kilometers) of the northeastern coast and knocked out power to the nuclear plant.

Workers there have been desperately trying to cool down overheated reactors, but the effort has required spraying large amounts of water and allowing it to gush out wherever it can escape, sometimes into the sea.

Radioactivity will continue spewing into the air and water until cooling systems are restored.

The radiation standards for fish will be the same as for vegetables. After spinach and milk exceeded safety limits following the quake, health experts said people would still have to eat enormous quantities of tainted produce or dairy before getting even the amount of radiation contained in a CT scan.

Japan imports far more fish than it exports, but it sent the world \$2.3 billion worth of seafood last year.

Some people were undaunted. At Sushizanmai, a sushi bar just outside Tokyo's famed Tsukiji fish market, customers were still eating Japan's famed raw fish delicacies Tuesday night.

But chef Seiichiro Ogawa said the fuss over radiation could hurt business. His restaurant is trying to get more fish from the western part of Japan, which has not been affected by the nuclear crisis.

"Japanese customers are especially sensitive to this kind of thing, so I'm worried they'll stop eating sushi," said Ogawa, who has already seen his business drop 50 percent after foreigners stopped visiting the city after the quake. "We need this nuclear problem to be resolved."

TEPCO also said this week it is purposely dumping more than 3 million gallons of low-level radioactive water into the sea to make room in a storage tank for more highly contaminated water that it needs to remove before workers can restore important cooling systems.

That announcement angered Fukushima's federation of fisheries groups, which sent the company a letter of protest.

"Our prefecture's fishermen have lost their lives, fishing boats, piers and buildings due to the Great Eastern Japan Disaster," federation chairman Tetsu Nozaki said in the letter. "This low-level contaminated water has raised fears among fishermen that they will never be able to fish in our prefecture's waters again, and we absolutely want you to stop."

TEPCO's reputation has taken a serious hit in the crisis. On Tuesday, its stock dropped 80 yen - the maximum daily limit, or 18 percent - to just 362 yen (\$4.30), falling below its previous all-time closing low of 393 yen from December 1951. Since the quake, the share price has plunged 80 percent.

In what could be an effort to counter the bad publicity, Takashi Fujimoto, TEPCO's vice president, said it was offering 20 million yen (\$240,000) in "apology money" to each town or city affected by the mandatory evacuation zone around the plant.

That's likely to be little comfort to fisherman Yamagata and his wife, Chiharu, who are angry with TEPCO over the situation.

"All we heard was that the plants were safe, safe, safe," she said. "I feel like they were hiding things from us. Now that radiation is seeping out, it's too late."

Ichiro Yamagata, who is 50, said he would like to return to his home and his job, but he sees no way that could happen. Nearly 17,000 boats have already been reported damaged in three hardest-hit prefectures, and that's just a partial tally.

Some fishing boats that left the harbor immediately after the quake got far enough out to sea that they were safe from the tsunami, Yamagata said, but others were swept away.

For now, the Yamagatas are passing their days at the soccer stadium, sleeping on mats in large rooms sectioned off with blue, knee-high dividers. They have no possessions - Ichiro Yamagata doesn't even have his driver's license - and only enough cash in the bank to last six months.

"After that, I'm going to have to find some kind of work," he said. "But fishermen can't be salarymen. I can only do simple jobs."

Associated Press writers Yuri Kageyama and Noriko Kitano contributed to this report.

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Does Discount Grocer Aldi Have the Upper Hand in Urban Growth? Mallory Factor: Tom Reed (R-NY) Springtime For Bailouts But Economic Zombies Still Roam Muni Bond Bubble

Radiation 101: How Far Will Radioactive Water Leaking From Nuclear Plant Go? (CSM)

Christian Science Monitor, April 6, 2011

Seawater near the stricken Fukushima Daiichi nuclear complex is highly contaminated with radioactive iodine, plant operator Tokyo Electric Power Co. (TEPCO) reported Tuesday. But TEPCO also said workers are making headway in an attempt to seal a concrete pit they believe is leaking radioactive water into the Pacific Ocean. Skip to next paragraph

Ocean contamination has become a more critical issue in Japan in recent days as the extent of Fukushima's leakage has become clearer. The presence in seawater samples of highly radioactive substances such as iodine-131 and cesium-137 indicates that the radioactivity is flowing out of reactor units themselves, according to Japanese officials.

This situation led Japan on Tuesday to set first-ever radiation safety limits for fish. That level is equal to the maximum allowable radiation limit for vegetables, said Chief Cabinet Secretary Yukio Edano at a press conference.

"We will conduct strict monitoring and move forward after we understand the complete situation," said Mr. Edano.

However, TEPCO insists that the radioactivity detected so far presents little risk to human health. The half-life of iodine-131 is eight days, so it will decay quickly. The half-life of cesium-137 is much longer, at 30 years, but it will be quickly diluted in the vast Pacific Ocean, say TEPCO officials.

Where will the radioactive water go? Japan is fortunate in that ocean currents near Fukushima may well carry the radiation away from land and help the dilution process. The Kuroshio Current, the Japanese equivalent of the Gulf Stream, flows up Japan's east coast before veering off to the northeast in open waters.

This temperate current carries the water volume of 6,000 Danube Rivers and should quickly mix and dilute radioactive elements. The Japan Coast Guard keeps a close watch on the current and posts daily updates on its condition.

Japan's radioactive water problem has developed in large part due to the ad hoc methods workers have used to try to cool reactor fuel units and avoid the disaster of a complete meltdown of the reactors' cores.

With normal pumps broken and electricity unavailable in the weeks since an earthquake and tsunami shattered the plant, TEPCO has had to cool the site by pouring water on reactor units using hoses and temporary pumps from outside containment buildings. While much of this water has evaporated or remained within the buildings, much has also inevitably leaked away.

A hole in a pit beneath reactor Unit 2 has become a prime suspect in the search for the source of radioactive pollution. On Tuesday workers continued to inject a hardening agent, liquid glass, into gravel beneath the pit. That appears to be slowing the leak, according to photos released by TEPCO.

Seawater measurements taken in recent days show radioactive contamination at several million times the legal limit, said TEPCO on Tuesday. These readings were taken closer to the plant than previous measurements, however, so it was not clear whether they reflected an actual worsening of the situation.

The International Atomic Energy Agency reported Tuesday that its own measurements of radiation in seawater close to the discharge pipe that serves reactor units 1 through 4 showed a "decreasing trend" from April 1 to April 4.

These measurements were taken before TEPCO, with approval of the Japanese government, began releasing water with low levels of contamination directly into the ocean in order to clear tank storage space for reactor-unit wastewater with much higher radioactivity readings.

Japan Sets Radiation Standards For Fish (NYT)

By Andrew Pollack, Ken Belson And Kevin Drew

New York Times, April 6, 2011

TOKYO — Japan's government announced its first radiation safety standards for fish on Tuesday, hours after the operator of a crippled nuclear power plant said that seawater collected near the facility contained radiation several million times the legal limit.

The standards were announced after a sample of kounago fish, or sand lance, that was caught last Friday off the coast halfway between the plant and Tokyo was found to have high levels of radioactive iodine 131.

On Wednesday morning, the company that operates the plant announced a rare bit of good news, saying it had halted a leak from a maintenance pit, discovered over the weekend, that has dumped tons of highly radioactive water a day into the ocean. But even if the repairs to the damaged pit continue to hold back the water there, the company is still having trouble ridding the plant of tons of runoff and has been flushing thousands of tons of relatively low-level radioactive water into the Pacific.

Workers are dumping that water to make room in storage containers for increasing amounts of far more contaminated runoff. The water being released contains about 100 times the legal limit of radiation, said the Tokyo Electric Power Company, the plant's operator. The more contaminated water has about 10,000 times the legal limit.

The runoff resulted from workers' pouring massive amounts of water on reactors and spent fuel-rod pools to keep them from overheating after their normal cooling systems failed.

The small fish caught Friday — before the intentional dumping began — had 4,080 becquerels of iodine 131 per kilogram. The standards allow up to 2,000 becquerels of iodine 131 per kilogram, the same standard used for vegetables in Japan.

The fish also contained cesium 137, which decays much more slowly than iodine 131, at a level of 526 becquerels per kilogram.

"Clearly the fish are consuming highly radioactive food," said Paul G. Falkowski, a professor of marine, earth and planetary sciences at Rutgers University. But Professor Falkowski emphasized that even those levels were not likely to present health hazards in Japan or elsewhere, since fishing is restricted in Japan and these levels of radiation are not likely to travel far.

Still, experts on radiation in seafood said it was nearly impossible to get a full sense of the scope of the environmental and health risks until the Japanese released information on radiation levels in more species of fish and seaweed and in a greater number of locations.

Measurements in the seawater are often not a good indication of how much radiation may be entering the food chain, scientists say.

Fish and seaweed can concentrate radioactive elements as they grow, leading to levels that are higher, sometimes far higher, than in the surrounding water. Seaweed can concentrate iodine 131 10,000-fold over the surrounding water; fish concentrate cesium 137 modestly.

The announced standards for fish came hours after Tokyo Electric said it had found iodine 131 in seawater samples at 200,000 becquerels per cubic centimeter, or five million times the legal limit. The samples were collected Monday near the water intake of the No. 2 reactor of the Fukushima Daiichi Nuclear Power Station.

The samples also showed levels of cesium 137 to be 1.1 million times the legal limit, according to the Japanese public broadcaster NHK. Cesium remains in the environment for centuries, losing half its strength every 30 years.

The Monday sampling of seawater showed a drop in radioactive iodine levels since Saturday, when the company said the level of iodine 131 was 300,000 becquerels per cubic centimeter.

Meanwhile, the death toll from the March 11 9.0-magnitude earthquake and tsunami rose to 12,341 on Tuesday, the country's National Police Agency said. More than 15,000 people are missing, and more than 160,000 are staying in temporary shelters across the country, the agency said.

The crisis at the power station, now in its fourth week, has shaken public confidence in Tokyo Electric. Its share prices plunged to an all-time low on Tuesday over concern by investors about the financial burden of the work being carried out at Daiichi.

The company has found itself lurching from crisis to crisis since the plant's crucial cooling systems stopped working after the quake and tsunami. Even the welcome news about stopping the leak at the maintenance pit came after days of false starts, including attempts to plug a large crack in the pit with more than 120 pounds of sawdust, three garbage bags full of shredded newspaper and about nine pounds of a polymeric powder that absorbs water.

In the end, the company said it had succeeded in stopping the leak using sodium silicate, which acts as a cement.

A government panel suspended work on Tuesday on revising the country's policy platform on nuclear power, according to local news media reports, saying the crisis needed to be resolved before Japan could publicly assess its nuclear power policies.

The country's trade and industry minister, Banri Kaieda, said on Tuesday that 60,000 tons of radioactive water was thought to be flooding the basements of the plant's reactor buildings and underground tunnels, according to a report by the Kyodo news agency.

Radioactivity Found In Fish As Tepco Purges Nuclear Plant (BLOOM)

By Tsuyoshi Inajima And Kari Lundgren

Bloomberg News, April 6, 2011

Radioactivity in fish exceeding health guidelines was detected for the first time off northern Japan as Tokyo Electric Power Co. dumped tainted water into the ocean to gain control of its crippled nuclear plant.

Cesium radioactivity in sand-lance caught south of the Fukushima Dai-ichi plant was 526 becquerel per kilogram, compared with a health ministry standard of 500 becquerel, Makato Osodo, of the fishing policy division of the Ibaraki prefectural government, said in a telephone interview.

Fukushima Prefectural Federation of Fisheries Co-operative Associations asked the company, known as Tepco, to stop dumping radioactive water into the sea. Dumping began April 3 because radioactive water on site is hindering repair of cooling pumps. Discharges continued, Japan's Nuclear and Industrial Safety Agency said.

"Clearly, they haven't got the site under control," said Richard Wakeford, a visiting professor of epidemiology at the University of Manchester's Dalton Nuclear Institute in England. "They've got to make difficult decisions and one of those is you get rid of the mildly radioactive liquid to make way for the really contaminated liquid."

Fishing in Ibaraki Prefecture has been suspended since the March 11 earthquake and tsunami that damaged the plant, leading radioactivity to escape into water and air. The number of dead and missing following the earthquake and tsunami reached 27,688 as of 10 a.m. local time yesterday, according to the National Police Agency in Tokyo.

Exposure to Cesium-137, among the isotopes Tepco says were released from the plant, increases the risk of cancer, according to the U.S. Environmental Protection Agency. Japan has struggled to keep the radioactive fuel at the Fukushima reactors cool after equipment was damaged by the earthquake and tsunami, triggering the worst nuclear crisis since Chernobyl.

Tokyo Electric plunged the daily limit of 80 yen, or 18 percent, to close at 362 yen on the Tokyo Stock Exchange yesterday, the lowest since its listing in August 1951. The stock has dropped 83 percent since the day before the magnitude-9 earthquake.

The risk to people from the deliberate discharge at the Fukushima plant is low, according to the Vienna-based International Atomic Energy Agency.

The potential additional radiation dose to a person eating seaweed or seafood caught near the Fukushima plant every day for a year would be 0.6 millisievert, the agency 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.

With a radioactive half-life of 30 years, cesium can build up in the meat of marine predators as they eat smaller animals, said Karen Gaines, chairwoman of the biology department at the University of Eastern Illinois in Charleston.

"If they're going to restart fisheries and make people feel comfortable, they'll need real-time monitoring of the catch," said Gaines, who studies radioactive cesium in animals at the Savannah River Site in South Carolina, which made plutonium for U.S. nuclear weapons.

The cost of insuring Tokyo Electric's 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.

Tokyo Electric is paying 20 million yen (\$237,276) to each of 10 local governments affected by the disaster, Vice President Takashi Fujimoto said at a news conference. The utility may ask government assistance to pay compensation, Fujimoto said.

To handle the plant's radioactive material, Japan has asked Russia for a waste-treatment plant housed on a barge, Sergei Novikov, a spokesman for Rosatom Corp., said in Moscow.

There are about 60,000 tons of contaminated water in basements and trenches outside reactors No. 1, 2 and 3, said Takeo Iwamoto, a company spokesman. Tokyo Electric plans to pump half of that to a waste-treatment facility and the rest to tanks and floating storage vessels, he said.

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Japan Nuclear Crisis: Nuclear Plant Operator Reports Some Success On Plugging Leak (LAT)

By Kenji Hall And Julie Makinen

Los Angeles Times, April 6, 2011

Reporting from Tokyo—

The operator of Japan's stricken nuclear plant said Wednesday that it had apparently contained at least one leak that was allowing radiation to seep into the sea.

Tokyo Electric Power Co. had said Tuesday that it had found iodine-131 at 7.5 million times the legal limit in a seawater sample taken near the facility, and government officials instituted a health limit for radioactivity in fish. Other samples were found to contain radioactive cesium at 1.1 million times the legal limit.

The exact cause of the radiation was not immediately clear, though Tepco has said that highly contaminated water has been leaking from a pit near the No. 2 reactor. The utility had suspected that the leak was coming from a crack, but several attempts to seal the crack failed to stop the flow.

On Tuesday the company said the leak might instead be coming from a faulty joint where the pit meets a duct, allowing radioactive water to seep into a layer of gravel underneath. The utility injected "liquid glass" into the gravel, and on Wednesday officials were reporting that the leak had been contained.

Meanwhile, Tepco continued releasing what it described as water contaminated with low levels of radiation into the sea to make room in onsite storage tanks for more highly contaminated water. In all, the company said it planned to release 11,500 tons of the water, but by Tuesday morning it had released less than 25% of that amount.

Although the government authorized the release of the 11,500 tons and has said that any radiation would be quickly diluted as it dispersed in the ocean, fish with high readings of radioactive iodine are being found.

On Monday, officials detected more than 4,000 becquerels of iodine-131 per kilogram in a fish called a sand lance caught less than three miles offshore from the town of Kitaibaraki, about 50 miles south of the Fukushima Daiichi nuclear complex. The fish also contained 447 becquerels of cesium-137, which is considered more problematic than iodine-131 because it has a much longer half-life, which means it takes longer to decay.

On Tuesday, Chief Cabinet Secretary Yukio Edano said the government was imposing a standard of 2,000 becquerels of radioactive iodine per kilogram of fish, the same level it allows in vegetables. Previously, the government did not have a specific level for fish.

Fishing of sand lances has been suspended. Local fishermen demanded that Tepco compensate them for their losses.

Fishing has been banned near the nuclear plant, and the vast majority of fishing activity in the region has been halted because of damage to boats and ports by the March 11 earthquake and tsunami. Still, some fishermen are out making catches, only to find few buyers because of fears about radiation.

It was unclear what Tepco might offer the fishermen, but the company said Tuesday that it would be giving "condolence payments" totaling about \$2 million to residents who had to evacuate their homes because of radiation from the Fukushima plant. One town, however, refused the payment.

The company has yet to decide how it will compensate residents near the plant for damages, though financial analysts say the claims could be in the tens of billions of dollars. Tepco's executive vice president, Takashi Fujimoto, said the company's decision on damages hinges on how much of the burden the government will share.

Edano, the government spokesman, urged the company to accelerate its decisions on compensation.

For now, Fujimoto said, the company has offered \$240,000 to each of 10 villages, towns and cities within 12 miles of the plant, the area in which the government has ordered residents to evacuate.

"We hope they will find it of some use for now," he said.

Namie, a town of 20,600 about six miles north of the plant, refused the money. Town official Kosei Negishi said he and other government officials were working out of a makeshift office in Nihonmatsu, elsewhere in Fukushima prefecture, and that they faced more pressing issues.

"The coastal areas of Namie were hit hard by the earthquake and the tsunami, but because of the radiation and the evacuation order, we haven't had a chance to conduct a search for the 200 people who are missing," Negishi said. "Why would we use our resources to hand out less than 1,000 yen [\$12] to every resident?"

Tepco's Fujimoto acknowledged that there was a "gap" in the views of company and Namie officials.

Radioactive Water No Longer Leaking Into Sea, Nuclear Plant Operator Says (WP)

By Chico Harlan

Washington Post, April 6, 2011

Workers at the Fukushima Daiichi nuclear plant on Wednesday fixed a leak that was allowing radioactive water to spill into the sea, officials from the Tokyo Electric Power Co. said.

The apparent breakthrough capped a five-day struggle to plug a concrete pit with an eight-inch crack. Engineers had tried to fill the crack with concrete and polymer but were unsuccessful, and water — with a dosage rate several times the amount that nuclear plant workers can be exposed to in a year — continued to flow into the Pacific.

This time, Tepco said, the crack was treated with a sodium silicate. Tepco also said it will check the disaster-stricken facility for additional cracks.

It remains to be seen if the repair of the crack quickly improves radiation levels in the nearby water, particularly given that workers this week have been dumping some 11,500 tons of radioactive water into the sea. The five-day dumping operation is part of Tepco's plan to remove low-level radioactive water from the site — and in turn create more storage room for dangerously radioactive water that has accumulated in the plant.

The contaminated water has raised concerns for fishermen and restaurant owners who fear that radioactive elements could enter the food chain. Japan on Tuesday adopted new standards to measure for radioactivity in fish.

Japan Stops Radioactive Water Leak Into Ocean (USAT)

By Oren Dorell, Usa Today

USA Today, April 6, 2011

The utility that owns Japan's crippled nuclear reactor says that highly radioactive water has stopped leaking into the ocean.

Tokyo Electric Power Co. spokesman Naoki Tsunoda said today the company's attempt to stem the leak by injecting 1,500 liters (400 gallons) of "water glass," or sodium silicate, and another agent near a seaside pit where the water was leaking appeared to have been successful.

In the meantime, the Japanese government set radiation safety limits for fish for the first time Tuesday, after radiation levels in water just outside the damaged nuclear plant registered 7.5 million times higher than the legal limits on Saturday.

Radiation levels fell to 5 million times the limit on Monday. Monitors also found radiation levels about 10 miles from the plant were 130 to 140 times less concentrated than at the mouth of the discharge canal where it entered the ocean, according to TEPCO, which owns and operates the reactor.

"That means it's becoming more dilute," said Jere Jenkins, director of the Radiation Laboratory at Purdue University in Indiana. "You've got a source of contamination, but it's going into a very, very large sink with a lot of water in it" — the Pacific Ocean.

The new levels coupled with reports that radiation was building up in fish led the government to create an acceptable radiation standard for fish for the first time. Some fish caught Friday off Japan's coastal waters would have exceeded the new limit.

Japan's Chief Cabinet Secretary Yukio Edano said the government is setting the same radiation-safety limits for fish as it did for vegetables. "Even if the government says the fish is safe, people won't want to buy seafood from Fukushima," said Ichiro Yamagata, a fisherman who used to live near the nuclear plant. "We probably can't fish there for several years," he said.

The Fukushima plant was damaged March 11, when a 9.0-magnitude earthquake and subsequent tsunami knocked out power and backup diesel generators, shutting down cooling mechanisms and causing nuclear cores to overheat. Water poured in by the military, firefighters and plant workers to cool the cores and spent fuel ponds, however, collected in the plant.

TEPCO this week began dumping 11,500 tons of low-level radioactive water that has built up at the plant into the ocean.

The South Korean foreign ministry expressed concerns about the dumping through its embassy in Japan, according to The Korea Herald. Hong Kong and India have banned Japanese seafood.

Nuclear engineer Kenneth Solomon, who worked for years on nuclear safety and non-proliferation projects at the RAND Corp., said the South Koreans are too far away to be affected by tainted water from Fukushima, but that public fear of radiation may cause economic damage.

"The very fact of radiation in the environment is enough to drive the price of seafood down, because demand will go down. That's totally independent of what the true risk is," Solomon said.

Damon Moglen, director of Friends of the Earth's energy and climate program, said the Fukushima accident is already having an impact on fisheries.

"That's not a question of perception alone, it's a simple matter of acceptance of risk. Who takes responsibility for that stuff?" he said.

Zeke Grader, executive director of the Pacific Coast Federation of Fishermen's Associations, representing 1,200 West Coast fishing operations, said he's not worried about an impact on U.S. fisheries, "unless we see consumer concern."

Release Of Irradiated Water Is Stopped (WSJ)

By Mitsuru Obe

Wall Street Journal, April 6, 2011

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

Tepeco Stops Leak From No. 2 Reactor At Nuclear Station (BLOOM)

By Michio Nakayama, Tsuyoshi Inajima And Ichiro Suzuki

Bloomberg News, April 6, 2011

Tokyo Electric Power Co. said radioactive water stopped leaking into the sea at its stricken nuclear plant north of Tokyo that was damaged in the earthquake and tsunami on March 11.

"We observed the stoppage of the water spilling from the crack on the concrete lateral of the pit" near the No. 2 reactor at the Fukushima Dai-Ichi nuclear station at 5:38 a.m. today, Tepco, as the company is called, said in an English-language statement. The company will take further measures "in order to prevent further outflow of high-level radioactive materials to the ocean."

Engineers used sodium-silicate in its attempt to stop the leak, the company said. Radioactivity in fish exceeding health guidelines was detected for the first time off northern Japan yesterday as Tepco dumped tainted water into the ocean as part of attempts gain control of the crippled nuclear plant.

Fishing off the coast Ibaraki prefecture northeast of Tokyo and to the south of the damaged plant was suspended after the earthquake and tsunami. The Fukushima prefectural Federation of Fisheries Co-operative Associations asked the company to stop dumping radioactive water into the sea.

Cesium radioactivity in sand-lance caught south of the Fukushima Dai-Ichi plant was 526 becquerel per kilogram, compared with a health ministry standard of 500 becquerel, Makato Osodo, of the fishing policy division of the Ibaraki prefectural government, said in a telephone interview.

Exposure to Cesium-137, among the isotopes Tepco says were released from the plant, increases the risk of cancer, according to the U.S. Environmental Protection Agency. Japan has struggled to keep the radioactive fuel at the Fukushima reactors cool, triggering the worst nuclear crisis since Chernobyl.

Engineers started disposal of some contaminated water on April 3. The risk to people from the deliberate discharge at the Fukushima plant is low, according to the Vienna-based International Atomic Energy Agency.

The potential additional radiation dose to a person eating seaweed or seafood caught near the Fukushima plant every day for a year would be 0.6 millisievert, the agency said in a statement.

With a radioactive half-life of 30 years, cesium can build up in the flesh of marine predators as they eat smaller animals, said Karen Gaines, chairwoman of the biology department at the University of Eastern Illinois in Charleston.

"If they're going to restart fisheries and make people feel comfortable, they'll need real-time monitoring of the catch," said Gaines, who studies radioactive cesium in animals at the Savannah River Site in South Carolina, which made plutonium for U.S. nuclear weapons.

To handle the plant's radioactive material, Japan has asked Russia for a waste-treatment plant housed on a barge, Sergei Novikov, a spokesman for Rosatom Corp., said in Moscow.

There are about 60,000 tons of contaminated water in basements and trenches outside reactors No. 1, 2 and 3, said Takeo Iwamoto, a company spokesman. Tokyo Electric plans to pump half of that to a waste-treatment facility and the rest to tanks and floating storage vessels, he said.

The number of dead and missing following the earthquake and tsunami was at 27,688 as of 10 a.m. local time yesterday, according to the National Police Agency.

Tepco fell 11 percent to 322 yen on the Tokyo Stock Exchange as of 9:23 a.m. local time, heading for a record low. The stock has slumped 87 percent since the day before the magnitude-9 earthquake.

The cost of insuring Tepco's debt rose 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.

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Japan Stops Nuclear Plant Leak, Still Pumps Radioactive Water Into Sea (REU)

By Chizu Nomiyama And Yoko Nishikawa

Reuters, April 6, 2011

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

Tepeco Seals Leak From Fukushima Plant (FT)

By Jonathan Soble

Financial Times, April 5, 2011

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

Japan Stops Uncontrolled Leak From Nuclear Plant (AFP)

By Harumi Ozawa

AFP, April 6, 2011

TOKYO (AFP) – An accidental leak of highly radioactive water into the ocean from a Japanese nuclear plant was stopped Wednesday, boosting efforts to contain the worst nuclear accident since Chernobyl 25 years ago.

The leak was thought to be a source of spiking radiation levels in the sea, which prompted Japan to announce its first seafood radiation safety standards following the discovery of fish with elevated contamination.

To stop the long-running leak from the Fukushima plant on the Pacific coast, operator TEPCO had injected sodium silicate, a chemical agent known as "water glass", to solidify soil near a cracked pit where the water had been escaping.

The pit, which has a 20-centimetre crack in its wall, is linked to the plant's reactor No. 2, one of several that had their cooling systems disabled by a catastrophic earthquake-tsunami disaster on March 11.

"Workers confirmed at 5:38 am (2038 GMT Tuesday) that the water running out of a pit had stopped," Tokyo Electric Power Co. (TEPCO) said in a statement on Wednesday.

Several unsuccessful attempts had been made to try to plug pipes that run to the pit, using a polymer and even newspapers and sawdust, and an effort to seal the crack with cement had also failed to stop the leak.

Leaking water from the Fukushima plant has reached more than 1,000 millisieverts and is thought to be the source of radioactive iodine-131 readings in the sea that have hit more than 4,000 times the legal limit.

Amid increasing unease about water contamination, Japan has imposed a legal limit for radioactive iodine in fish and may widen tests to cover a larger area, after elevated levels were discovered in a fish caught off Ibaraki prefecture, south of the crippled plant.

The stopping of the leak is the first piece of major good news for several days in the battle to control the crisis at the Fukushima plant, where the natural disaster triggered explosions and radiation releases.

The contamination has forced the evacuation of tens of thousands of people within 20 kilometres (13 miles) of the plant, affected agriculture and fishing, and triggered health scares as far away as Tokyo.

India on Tuesday banned all food imports from Japan, the first country to impose a blanket block. Several countries including China, Singapore and the United States have barred food from some Japanese prefectures.

Fishing has been banned within 20 kilometres of the stricken plant, matching the radius of the evacuation zone on land.

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

TEPCO is dumping 11,500 tonnes, or more than four Olympic pools' worth, of the less radioactive water, raising concerns about marine life in the island nation, where seafood is a key source of protein.

As well as fish, iodine above legal limits has been detected in vegetables, dairy products and mushrooms, triggering shipping bans, but officials had said seafood was less at risk as ocean currents and tides dilute dangerous isotopes.

But the government in Seoul has questioned TEPCO's deliberate water dumping, saying the proximity of the two neighbours made the action "a pressing issue" for South Korea.

Shares in TEPCO – Japan's biggest power utility – tumbled anew Wednesday. They were down 16.85 percent in early trade after plunging to 362 yen Tuesday – their lowest ever close – amid concerns the firm will face huge compensation bills.

Some analysts estimate TEPCO could face claims of more than 10 trillion yen (\$120 billion).

The wider economic fallout from Japan's triple calamity – the massive earthquake, giant tsunami and the nuclear crisis – is likely to drive the country into recession in coming months, said a survey of economists.

The disaster, which has left more than 12,000 dead and over 15,000 missing, has also hit exports, business confidence and consumer spending, economists say.

The government is planning a first emergency budget of more than three trillion yen (\$35 billion), Kyodo news agency reported, quoting ruling party politicians saying total spending could top 10 trillion yen.

On Japan: Russia Sends Help, China Finds Radiation And India Bans Rice (FORBES)

By Kenneth Rapoza

Forbes, April 6, 2011

Japan continues to be a cause of concern among its big neighbors, Russia and China. But on Tuesday, India joined the fray and banned food imports over fears they may be contaminated by radiation from tsunami-hit reactors.

This week, Japan was back to seeking Russia's nuclear disaster expertise. The country suffered its own colossal nuclear meltdown with Chernobyl in April of 1986. Japan asked Russia this time to send help with liquid radioactive waste disposal at Tokyo Electric Power Company's Fukushima power plant.

Russia's nuclear power company, Rosatom, said it was sending a floating waste-disposal facility called Lily of the Valley (Landysh in Russian) to dispose of waste from Fukushima. The plant is currently housed on a barge in far east Russia, near Japan, and was actually financed by Japan in 1997-98.

As it stands, Fukushima will dump an estimated 11,500 tons of radioactive water into the ocean. The water contains some 100 times the legal limit of radiation. Tokyo Electric has been using colored powder to trace the source of highly radioactive water leaking into the ocean near Fukushima, which was damaged by an earthquake and tsunami last month.

Meanwhile, in China on Tuesday, more radioactive particles have been found in 17 provinces, up from 13 on Monday. They pose no threat to public health or to the environment, according to a daily statement issued by China's National Nuclear Emergency Coordination Committee.

India's Food Safety Authority said in a statement on Tuesday that all food coming from Japan will be suspended for three months, or longer. FSA said it was taking precautions similar to other nations, mainly the US, Europe and Australia.

The country is currently testing rice and soft drink imports for radiation, the Times of India reported. The market for Japanese food imports in India is pretty small, so unclear whether this means other countries will be called to supply India while Japan is off limits.

Though import of food products from Japan is estimated at a little over \$1 million during April-September 2010, the demand for fish and packed food products has picked up in recent years. Since October, the list of products that has entered the country from Japan included soybean curd, dried noodles, boiled mushrooms, radish paste, cooking sauces, roasted seaweed, flavouring extracts, tea bags, wheat flour, food additives and tofu. Now, these products would be off the shopping list. — The Times of India, April 5, 2011.

Use Of Radioactive Disposal Facility Weighed (JT)

Japan Times, April 6, 2011

The government is considering borrowing a Japan-funded radioactive waste disposal facility from Russia to help contain the crisis at the Fukushima No. 1 power plant, a nuclear safety agency official said Tuesday.

"We are checking whether it is technically possible to use the facility for this event, and whether the facility's machines are working smoothly," Hidehiko Nishiyama, a spokesman for the Nuclear and Industrial Safety Agency, told a news conference.

He said Japan has already been communicating with Russia over possible use of the floating facility, called Suzuran, which Japan gave to Russia in 2001 to help dispose of low-level radioactive waste from decommissioned submarines.

Japan offered the facility after Russia dumped radioactive waste into the Sea of Japan in 1993 in the process of dismantling its nuclear subs.

Dumping defended

The government defended on Tuesday dumping massive amounts of low-level radioactive water from the Fukushima nuclear plant, saying the action doesn't violate international laws, and pledged to fully inform the international community of steps to tackle the emergency.

Foreign Minister Takeaki Matsumoto said the government briefed the diplomatic corps in Tokyo on the start of the disposal hours before Tokyo Electric Power Co. began releasing the water into the Pacific Ocean on Monday evening.

Why Didn't Japan Tell Korea Of Nuclear Waste Plans? (CHOSUN)

Chosun Ilbo, April 6, 2011

The Japanese government neither consulted nor informed Korea about a plan to discharge some 10,000 tons of contaminated water from the Fukushima Daiichi nuclear power plant into the sea. Yet according to Japan's TBS Television on Tuesday, Tokyo discussed the matter with the United States in advance and they agreed that it is feasible to dump water tainted with low levels of radioactivity into the sea rather than storing it unless there are other options available.

Tokyo also told the International Atomic Energy Agency of the decision in conformity with the Convention on the Prevention of Marine Pollution, but it did not tell individual neighboring countries because the water was discharged on the Pacific side. That at least is the explanation offered by Japan's Chief Cabinet Secretary Yukio Edano in a press conference Tuesday after Tokyo's silence raised eyebrows in the region.

Japanese Foreign Minister Takeaki Matsumoto told reporters separately the dumping does not violate the 1986 Convention on Early Notification of a Nuclear Accident, which obligates nations to provide data such as the accident's time, location and radiation releases to affected states "when harmful trans-boundary radiation release is feared."

But Korea has already detected small levels of radiation linked to the stricken plant, and even Japan's own maritime pollution prevention act stipulates that Tokyo should consult with countries that could be affected when it decides to dump harmful materials into the sea. It is common sense for Tokyo to notify Seoul because seawater from the Pacific side is borne by currents to the East Sea.

Even in Japan itself some feel they could have been given more information. Japanese Minister of Agriculture, Forestry and Fisheries Michihiko Kano said it is "very regrettable that Tokyo Electric Power Company has released radioactive water into the sea without telling" the ministry. Fishermen in the nearby areas protested because they are worried about their catch.

"It stands to reason that Korea should be given more accurate information since it imports Japanese agricultural and fisheries products," a diplomatic source in Tokyo said. "It seems Japan is trying to downplay the scale of the disaster by keeping a lid on information."

Meanwhile, contamination was worsening Tuesday in the sea near the Fukushima plant, with iodine-131 detected in coastal waters at 7.5 million times above normal. Contamination fears have led to a sharp drop in seafood consumption in Japan.

Amid Nuclear Crisis, Japan's Tepco Planned New Reactors (WP)

By Andrew Higgins

Washington Post, April 6, 2011

FUKUSHIMA, JAPAN — Even as it struggled to contain the world's worst nuclear disaster in a quarter-century, Tokyo Electric Power Co. late last month quietly set out big plans for the future: It proposed building two new nuclear reactors at its radiation-spewing Fukushima Daiichi power plant.

Tokyo Electric, known as Tepco, informed Fukushima prefecture on March 26 of its desire to start building the reactors as early as next spring, local officials said. That was just two weeks after an explosion at the utility's tsunami-crippled complex set off a cascade of catastrophes.

The proposal was then included in a formal report submitted to authorities in Tokyo on March 31 as part of an annual process designed to assess Japan's future electricity supply.

"It was just unbelievable," said Yoichi Nozaki, director general of Fukushima's Planning and Coordination Department, which oversees energy matters here in the capital of the region most blighted by the biggest nuclear debacle since Chernobyl.

With its reputation and its finances already shredded by the events at Fukushima Daiichi, Tepco now has another fiasco to contain. Its proposal for new reactors, first reported Sunday in a Fukushima newspaper, has caused horrified dismay — and significant backpedaling by the utility.

"It was a mistake," Hiroshi Aizawa, a Tepco official in Fukushima, said Monday. He said the company had been too busy trying to get Fukushima Daiichi under control and avoiding power cuts to revise a plan that took shape before the March 11 earthquake and tsunami.

The disarray — on full view just as BP seeks to restart drilling in the Gulf of Mexico, the scene of a spectacular blowout last year on a rig leased by the oil giant — has sharpened a question that has dogged Tepco since the tsunami slammed into its Fukushima plant: Has the scale of the disaster triggered a managerial meltdown, or is the world's largest private electric utility simply sticking to the aloof, heedless habits of a corporate behemoth accustomed to getting its way?

"I don't know what they're doing," Nozaki, the Fukushima planning chief, said of Tepco's executives. "Ask them!"

'Totally unacceptable'

The idea of building two new reactors at a facility that is still leaking radiation into the air and sea "is of course totally unacceptable," Nozaki said. He now meets each morning with other senior officials to hear the latest figures on the radiation being spread by Tepco's crippled plant.

Tepco announced last week that four reactors at the center of the crisis at Fukushima Daiichi will never go back into service. At the same time, it submitted a report to the Ministry of Economy, Trade and Industry that included a proposed timetable for constructing and commissioning two reactors — No. 7 and No. 8 — at the same complex.

"We regret that we submitted the report as it was, considering the feelings of the local residents in Fukushima," said Hiro Hasegawa, a Tepco spokesman in Tokyo. He said the company will revise its plans as soon as it has had time to analyze the effects of the quake.

A Tepco vice president, meanwhile, went on television and declared the construction of the proposed reactors "impossible."

The company is in shambles, its share price and credit rating plunging, its leadership disabled by ill health. Its president, Masataka Shimizu, checked into hospital a week ago, and Tepco is now being steered by its chairman, whose own reputation was tarnished by an earlier, though far less serious, nuclear accident.

Tokyo Electric has dreamed for more than 15 years of adding two reactors to the six-reactor Fukushima Daiichi complex but has been repeatedly thwarted.

Nozaki said he knows that Tepco has long wanted to build the reactors but could "not understand how it could submit such a request in these circumstances." Talking about new reactors when "so many people are scared and in difficulty . . . is completely out of the question," he said.

Residents' rage

More than 80,000 people have fled their homes in the coastal areas of Fukushima prefecture for fear of contamination by Tepco's existing reactors. Farmers cannot sell their goods, and entire towns have been abandoned.

Aizawa, the Tepco official in Fukushima, said his office has been bombarded with calls from angry residents, particularly farmers. The company is now so reviled that it has covered up its name on some buildings to spare employees abuse. To try to soften the hostility, it is handing out gifts of \$240,000 to towns most at risk from contamination. At least one town, Namie, said "No, thanks."

Radiation levels in Fukushima are now declining somewhat, but Tepco's decision over the weekend to start dumping large quantities of radioactive water into the sea has added a new source of alarm in Japan and beyond.

When Tepco notified Fukushima's energy department of its new reactor plans on March 26, Nozaki immediately told Fukushima's governor, Yuhei Sato, who reacted with fury. "What is going on?" he fumed. Tepco then sent a team from Tokyo to discuss the matter, but it was told by prefectural officials "to sort out problems on the ground first and stop thinking about new reactors," Nozaki said.

The company pressed on, submitting its final report to Tokyo authorities. "Tokyo Electric may want to ignore the feelings of Fukushima residents, but this is definitely not acceptable," Nozaki said.

Sushi Science: Fear, Not Radiation, Seen As Risk (NPR)

By Jon Hamilton

NPR, April 6, 2011

Every day, hundreds of tons of fish and seaweed are bought and sold at Tokyo's seafood markets. The markets are still bustling, but prices have fallen sharply amid concerns that some products might be contaminated with radioactive material leaking from Japan's troubled Fukushima Dai-ichi nuclear plant. How likely is that?

NPR posed the question to Masashi Kusakabe, director of the Nakaminato Laboratory for Marine Radioecology not far from Tokyo. The research center is devoted to figuring out precisely what happens to radioactive material that gets into the ocean.

Kusakabe says what's been getting into the Pacific Ocean near Fukushima is mostly radioactive iodine. It dissolves in water, and experiments have shown that the iodine tends to concentrate in algae. Then it gets even more concentrated as it works its way up the food chain.

Kusakabe says that might sound bad, "but the iodine we're talking about now is iodine -131, which has a very short half-life at eight days."

Every eight days, half of the iodine goes away. So after a few weeks, there's not much iodine-131 left in a fish.

Kusakabe says radioactive cesium is a lot worse: Its half-life is measured in decades, not days. But so far, much less cesium has gotten into the ocean at Fukushima.

Also, the ocean is so vast that radioactive materials are heavily diluted by the time they travel even a few miles.

So the Japanese fish most likely to become contaminated are the ones that spend their entire lives right near the Fukushima power plant. And the government isn't letting fishing vessels anywhere near the place.

But what about the ocean-going fish that show up on sashimi platters — fish like salmon and tuna? Might they be contaminated by radioactive material from the power plant?

"I don't think so," he says, "because tuna move everywhere. They travel, you know, maybe hundreds of kilometers, so they never stay there."

A tuna might swim by the Fukushima plant. But it wouldn't hang around long enough to become seriously contaminated.

Kusakabe says the biggest threat to the Japanese fishing industry right now isn't radiation. It's fear.

"Most people now think, 'Oh, it's very dangerous to eat fish in Japan or fish around this coast.' But I think it's very safe. So now is your chance to eat fish, because it's cheap," he says.

Asked if he is still eating fish, Kusakabe replies, "Oh, of course. Why not?"

Kusakabe says once people realize that Japanese fish are safe, he expects the price of Pacific Bluefin to go back up.

U.K. Says Nuclear Plants Will Move Ahead During Study On Safety (BLOOM)

By Sally Bakewell

Bloomberg News, April 6, 2011

The U.K. government will allow work on building new nuclear power plants to progress as it conducts a study of the disaster at an atomic facility in Japan, the minister in charge of climate change said.

There will be no "material delay" in the U.K.'s plan to allow new nuclear generators at eight sites, Climate Change Minister Greg Barker said in an interview in New York. The report, he said, is due to be handed to ministers next month.

Barker's remarks were aimed at assuaging concerns that Britain's reactor-building program would be held up while the nuclear regulator studies the accident in Japan, caused when an earthquake and tsunami interrupted power to cooling pumps at a Tokyo Electric Power Co. facility. The U.K. estimates it needs investment of 200 billion pounds (\$320 billion) to replace aging generators including nuclear plants by 2010.

"We're not proposing to build in an earthquake zone, and we're not proposing to build somewhere prone to tsunamis, but we will be looking to see what can be taken from that terrible crisis," Barker, a Conservative member of Parliament in the coalition government, said.

E.ON AG (EOAN), EDF SA (EDF) and RWE AG (RWE) are among the companies bidding for work replacing Britain's aging atomic power stations. Germany halted nuclear stations and said it would review whether it should continue with building more, and China and India also are studying what they should change as a result of the accident in Japan.

Britain's Deputy Prime Minister Nick Clegg fanned concerns about a delay last week, when he told reporters that the new plants may never be built because of raising costs associated with new safety standards.

Energy Secretary Chris Huhne's last month asked Mike Weightman, the country's chief nuclear inspector, to determine what the U.K. can learn about the accident in Japan. Barker dismissed the idea that the report would make any conclusions that would hold up work.

"We aren't expecting any surprises and are equally determined to learn any lessons that are applicable in the U.K.," Barker said. "There's no change to our timetable."

It's too soon to tell if the incident at the Fukushima power plant will affect global emissions targets, he said. "But it will drive an even greater sense of the need to save energy to reduce dependency," he said. Energy efficiency will be the technology that receives the greatest boost from the disaster at Fukushima, he said.

"We don't see in the U.K. a need for any major departure from our strategy as a result of Fukushima. Safety remains our paramount concern but we see no reason today to divert from our published plans," he said.

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Fukushima Reviews To Cause 3-month Delay In UK Nuclear Program (PLATTS)

By David Stellfox

Platts.com, April 6, 2011

There will be a minimum three-month delay in new reactor construction in the UK as a result of plans for nuclear safety reviews in the wake of the nuclear accident at Tokyo Electric's Fukushima-1 nuclear power plant in Japan, UK officials said Tuesday.

The UK Health and Safety Executive said it will not publish its final conclusions on the safety of the Areva EPR and Westinghouse AP1000 reactor designs until after a nuclear safety review investigates the implications of the nuclear accident at Fukushima on the safety of UK reactors.

That review, being conducted by Chief Nuclear Inspector Mike Weightman, is not expected to be complete until September and the HSE had been planning to publish its conclusions under the generic design assessment, or GDA, program at the end of June. The GDA program is reviewing the safety of the reactor designs for construction in the UK.

In a statement Tuesday, HSE said that it would proceed to publish all the GDA safety issues on the two reactor designs that it had identified as of June 30, as well as the reactor vendors' resolution plans for those issues. But it said it would not issue its final conclusions in the form of design acceptance confirmations until after the completion of the Weightman report.

Among the GDA issues to be published at the end of June will be a requirement that the reactor vendors address any issues raised by the Weightman report.

GDA issues must be resolved before the agency will issue final design acceptance confirmations for the reactors, HSE said.

Nuclear safety-related construction of new reactors cannot proceed if there are any unresolved GDA issues, HSE has said.

UK Nuclear Plans On Hold After Fukushima (GUARD)

By Tim Flannery

The Guardian (UK), April 6, 2011

The government's plans to build a new programme of nuclear power stations in England will be delayed by at least three months so that lessons can be learned from the accident at Fukushima in Japan.

The Health and Safety Executive (HSE) and the Environment Agency (EA), which are jointly assessing the safety of proposed reactor designs, have said this year's deadline for completing the assessments will now not be met.

The two regulatory agencies said that they would not come to any conclusions in June as had been promised. Instead they will wait for a final report on the implications of Fukushima, by the chief nuclear inspector, Mike Weightman, due in September.

Weightman has been asked by the energy and climate change secretary, Chris Huhne, to examine the lessons that could be learned from the Japanese accident, triggered by an earthquake and a tsunami last month. Until now it had not been clear how this would impact on the "generic design assessment" of reactors which the HSE and EA have been working on since 2006.

In a joint statement, the two agencies said: "Safety and protection of people and the environment will always be our top priority. It is important that we take the necessary time needed to ensure that we learn any relevant lessons emerging from the events in Japan, and implement any improvements that might be required to the new reactor designs." New reactors cannot be built until the regulators are satisfied they are safe.

A spokesman for the Department of Energy and Climate Change said the Weightman's recommendations should be taken into account.

"It's too early to say exactly what impact this will have on the overall timeline. We're continuing with our facilitative actions to encourage investment to come forward as soon as possible," he said.

But this was in marked contrast to a statement by the climate change minister, Greg Barker. He was quoted by Bloomberg as saying that Fukushima would cause no "material delay" to Britain's nuclear power programme.

The French company that wants to build its EPR design of power station, EDF Energy, has been previously quoted as saying that any delays due to Fukushima would be "minimal". The US firm, Westinghouse, is bidding to build differently designed AP1000 reactors.

Last October the UK government gave the initial go-ahead for new nuclear stations at eight sites around the coast of England and Wales. Last week, the Guardian revealed that ministers were being taken to court over allegations that cancer risks had not been properly evaluated.

The Nuclear Industry Association, which represents UK nuclear companies, said that the regulators' announcement was "correct". A spokesman said: "We should take time to review and learn the lessons of the Japanese crisis, while at the same time recognising that new nuclear development is essential for the UK."

UK Nuclear Review To Delay Reactor Approvals (REU)

By Daniel Fineren

Reuters, April 6, 2011

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

Nuclear Safety Review Delays New Reactors (FT)

By Sylvia Pfeifer

Financial Times, April 6, 2011

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

Panel To Suspend Work To Revise Japan's Atomic Energy Platform (KYODO)

Kyodo, April 6, 2011

TOKYO (Kyodo)—The Japan Atomic Energy Commission said Tuesday it will suspend its work to revise the country's nuclear power platform in the wake of the ongoing nuclear crisis at the Fukushima Daiichi nuclear power station triggered by the massive March 11 earthquake and tsunami that struck northeastern Japan.

The government commission said it would "suspend the revision work for the time being," look into the causes of the crisis at the Fukushima plant and monitor discussions on the country's energy policy on a national level.

Commission chairman Shunsuke Kondo said the current crisis contradicts the conventional argument that nuclear power generation is safe. "We have to admit that there has been an error in the criteria of judgment in promoting the country's nuclear power policy," he said.

Kondo, professor emeritus at the University of Tokyo, also said the commission's significance might be questioned if investigations into the ongoing crisis find panel members responsible, adding it would be better not to take any action to revise the platform until the investigation finds "the answers."

Originally, the panel was scheduled to work out the new platform this year to replace the current one which was compiled in October 2005.

After its regular meeting Tuesday, the five-member commission expressed its view on the current nuclear crisis, saying it has shaken confidence in the country's efforts to ensure the safety of nuclear power.

The panel called for strengthening urgent safety measures over nuclear plants which are now in operation or are scheduled to go into operation soon and giving sufficient reports to local residents living near such plants.

Kondo said two of the six reactors at the Fukushima Daiichi nuclear power station cannot be said to be in a stable condition.

Japan's 2005 basic nuclear power platform, officially titled the Framework for Nuclear Energy Policy, calls for establishing a nuclear fuel cycle by reprocessing spent nuclear fuel, recycling plutonium for nuclear fuel, and using uranium-plutonium mixed oxide fuel at light-water reactors.

The current basic policy also aims to maintain the share of nuclear power generation at 30-40 percent of the country's entire power output in 2030 and beyond.

The country's top atomic energy panel, which revises the basic platform once every five years, launched its work to revise the 2005 platform last year.

The Japan Atomic Energy Commission was established in 1956 to promote the country's nuclear power development systematically. It ceded its authority on safety regulation to the Nuclear Safety Commission of Japan in 1978 after Japan's first nuclear-powered ship, the 8,242-ton Mutsu, developed a radiation leak during a test run in 1974.

Panel Suspends Work On Revising Nuclear Energy Guidelines (YOMIURI)

Yomiuri Shimbun, April 6, 2011

The government's nuclear energy commission announced Tuesday it would suspend its work to revise the nation's nuclear energy platform in the wake of accidents at the Fukushima No. 1 and No. 2 nuclear power plants.

The nation's policy of promoting nuclear power generation is facing a major shift, and the entire energy policy will likely be changed significantly.

The Japan Atomic Energy Commission of the Cabinet Office has been working on revising the current Framework for Nuclear Energy Policy, which was compiled in October 2005.

This is the first time work to revise the nuclear power promotion framework has been suspended. The policy stipulates the nation's long-term plans for nuclear energy.

The current framework calls nuclear power generation "a key source of electricity" and "important as a measure against global warming and as a contributor to a stable energy supply in Japan."

After the Tuesday meeting of the commission, the first since the Great East Japan Earthquake, the panel released a report on its views on the nuclear plant accidents.

The panel said the crisis has shaken confidence in the safety of nuclear power at home and abroad.

Japan should work urgently to bring the crisis at the Fukushima No. 1 plant under control by tapping foreign and domestic expertise, the report said.

The panel said work on revising the framework would be suspended indefinitely.

Unlike the No. 1 plant, all four reactors at the Fukushima No. 2 nuclear power plant were safely halted by March 15 after their cooling functions were lost due to the March 11 earthquake and tsunami.

The current framework stipulates the current level of nuclear power generation—30 percent to 40 percent of total domestic electricity generation—should be maintained or increased even after 2030.

The guidelines are usually revised every 10 years, but the current work began last year based on the Basic Energy Plan approved by the Cabinet in June. The revisions were to reflect changes in the international situation, including global warming countermeasures and the rise in crude oil prices.

Suspension of the revisions, the 11th since 1956, indicates a fundamental review of the nation's atomic energy policy is in the works.

"Nuclear policy can't ignore public opinion. In the wake of such serious accidents, it's appropriate to suspend revisions [to the framework]," said Yoichi Fujie, professor emeritus at Tokyo Institute of Technology. Fujie is a former chairman of the commission.

"By understanding the information about the current accidents, the program guidelines should provide reflections and lessons [for the future]," he said.

2 Saskatchewan First Nations Pass 1st Screening For Nuclear Waste Storage Site (CAP)

Canadian Press, April 6, 2011

LA RONGE, Sask. - Two First Nations in northern Saskatchewan have passed an initial site screening for hosting a potential nuclear waste storage facility.

The Nuclear Waste Management Organization says Pinehouse Lake and the English River seem to have the necessary geological features to make it happen.

Organization spokesman Mike Krizanc says these communities are still seven to 10 years away from having to make a decision about nuclear waste.

Kineepik Metis Local spokesman Vince Natomagan says early fears expressed at community meetings are slowly being replaced by a willingness to at least explore this possibility.

Natomagan says his community will take up to a year deciding whether it wants to enter the next phase in the site selection process, which is a two-to-three-year feasibility study.

Krizanc says an initial site screening for Creighton "which has also signalled some interest in nuclear waste storage" will get underway over the next few months.

Mango Farmers Invoke Japan To Fight Top India Nuclear Plant (BLOOM)

By Adi Narayan, Siddharth Philip And Archana Chaudhary

Bloomberg News, April 6, 2011

The temple for the Hindu monkey god Hanuman, near Jaitapur on the western coast of India, seems a long way from Japan's Fukushima Dai-Ichi, where the worst nuclear disaster since Chernobyl continues to unfold.

For the crowd gathering amid the scent of incense and prayer lamps, the crisis is looming on their doorstep. Less than three miles away, the Indian government plans to build what would be the world's largest nuclear-power plant and the villagers, fearing a repeat of the Japanese catastrophe, are here to protest.

Opposition to the development, to be built with Paris-based Areva SA (CEI), pits local fishermen and farmers, growers of the world's most expensive mangoes, against Prime Minister Manmohan Singh's government as India struggles to bridge a power shortfall to maintain the second-fastest rate of growth among major economies. The site would generate double the power produced at Fukushima, even as that crisis prompts nations such as Germany to scale back their nuclear plans.

"After Japan, our politicians should realize that nuclear plants are not safe," said Shobha Chavan, 40, a doctor and housewife in the nearby town of Ratnagiri. "In this region, earthquakes have happened. Businessmen and politicians want to build the plant because they want to build their bank balances."

Even before the 9-magnitude temblor struck Japan on March 11, sending a giant wave crashing into Fukushima, locals campaigned to stop the 9,900-megawatt development, arguing that hot water discharge posed a risk to fish stocks, while a security cordon would block access to the sea. The prawns, mackerels and king fish from the sea off Jaitapur are exported to markets from Europe to Thailand and Japan.

Now, protesters say Jaitapur could suffer the same fate as Fukushima, where Tokyo Electric Power Co. is struggling to contain radiation leaks after a partial meltdown. The planned complex sits in an area of seismic activity and state-owned Nuclear Power Corp. of India, India's monopoly atomic generator, is underplaying the risk, according to Janhit Seva Samiti, a movement comprising hundreds of locals opposed to the plans.

"Earlier, government officials used to say: 'Look at Japan. It has so many nuclear plants in earthquake-prone areas and there have been no accidents,'" said Praveen Gavankar, a 57-year-old Alphonso mango grower who is also one of the leaders of the movement. "Now we are saying: See, we told you it was dangerous."

The area around Jaitapur, 420 kilometers (262 miles) south of Mumbai, is ranked as level three in India's five-step scale of seismic risk, with five being the most severe, according to Nuclear Power Corp., or NPCIL. Konkan Bachao Samiti, another local

group opposing the project, provided Bloomberg News with data showing the site is in a level four area. The area around Jaitapur suffered 40 shocks of magnitude 4 or higher from 1996 to 2005, the data show.

A. Sundaramoorthy, director general of the Geological Survey of India in Kolkata, was not available for comment after five calls to his office.

A 1945 shock along the zone where the Arabian plate slides under the Eurasian plate sent a 2-meter (6.6-foot) high wave slamming into Mumbai, according to a December 2008 paper in the journal *Current Science*. The 800-kilometer fault, called the Makran subduction zone, could host "a very large earthquake, certainly as big as the one that occurred in Japan recently," said Phil Cummins, professor of geology at the Australian National University.

Still, there are no active fault lines within a 30-kilometer (18.6-mile) radius of the Jaitapur site, according to a government report last year. That's more than the 5-kilometer limit stipulated by India's Atomic Energy Regulatory Board. Furthermore, the site sits on average 24.5 meters above mean sea level, reducing the tsunami risk, NPCIL say.

The company also claims water discharged into the sea will be at most about 5 degrees Celsius warmer and confined to an area of 0.28 square kilometers. There have been no adverse effects on marine life at existing coastal nuclear power sites, according to NPCIL.

Nevertheless, the company will "revisit" its plans after it gets more information from Japan, according to Chairman Shreyans Kumar Jain.

Areva didn't immediately respond to requests to comment. The reactors at Fukushima Dai-ichi were built by General Electric Co. (GE), Toshiba Corp. (6502) and Hitachi Ltd. (6501)

The Jaitapur plant would be the first to be built in India after the U.S. helped lift a more than three-decade ban on the South Asian nation trading in atomic equipment and fuel in 2008. The project, consisting of six 1,650-megawatt Areva reactors, will be built in phases, with the first set of two reactors scheduled to be completed in 2018, NPCIL said last year.

The company has capacity of 4,780 megawatts, less than 3 percent of India's total. The government needs to boost electricity generation to plug a 10 percent peak shortfall and meet a target of providing power to all its 1.2 billion people. India's \$1.3 trillion economy may grow as much as 9.25 percent this financial year, the government forecast in February.

NPCIL bought 938 hectares of land from four villages for the project, about three times the size of New York's Central Park. Still, the diggers can't move in until compensation is agreed. Out of about 2,000 landowners offered money, just 154 accepted, according to Madhukar Gaiwad, the top administrative official of Ratnagiri district.

Protesters also say they are preparing a fresh legal challenge after a 2009 attempt to block the plan was dismissed by the Bombay High Court. If they can show the area is in a seismic zone and the project "would not serve the public purpose," they can ask the court to stall the project, said Narinder Singh Vashisht, a senior Delhi High Court lawyer who specializes in real estate law.

"They can take advantage of the fallout of the Fukushima disaster as well," he said.

Meanwhile, the protests continue. Colorful posters with images of mushroom clouds and warnings of catastrophes worse than those in Japan are plastered at intersections and on trees and shop fronts in the area. Security has been beefed up in the villages and police vans, each with 30 or so khaki-clad officers, are a common sight.

Two rallies near Jaitapur turned violent and 39 people were arrested, according to local inspector Dilip Boraste. All have since been released on bail, he said.

Protesters claim they are being targeted by the Maharashtra state government, headed by Chief Minister Prithviraj Chavan. Gangadhar Mahadeo, 41, a farmer who claims to own 170 acres of land including five which are being acquired by NPCIL, said he was arrested and put in jail for nine days for protesting. He's now on bail.

"I am ready to go to jail for a year if required but we won't allow the plant to come up here," he said.

Chavan didn't return a call made to his mobile phone. His personal assistant Satish Lalit said the chief minister was unavailable because he was attending the state assembly.

Uddhav Thackeray, leader of opposition party Shiv Sena, has declared his support for the protesters. He's scheduled to visit Jaitapur on April 9, Gavankar said.

Back at Hanuman's temple, the crowd listens to the latest news from Fukushima as Milind Desai, the village doctor, reads aloud from a newspaper. A group of policemen watches, one recording proceedings on a video camera.

Then, a group of young folk singers with hand-held drums, cymbals and tambourines and dressed in brightly colored traditional costumes get to their feet. They perform a song dedicated to stopping the nuclear plant.

"No one can predict an earthquake," says Desai. "Nature will do what it wants and the consequences will be the same for everyone."

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Indian Villagers Say Reactor Will Destroy Livelihoods (BLOOM)

Bloomberg News, April 6, 2011

April 6 (Bloomberg) – Fisherman Amjad Borkar and mango grower Praveen Gavankar talk about their opposition to a proposed nuclear power plant in Jaitapur on the western coast of India. In the wake of Japan's Fukushima disaster, local villagers fear the plant, to be built with France's Areva SA, will damage their health and their livelihoods. The opposition pits fishermen and farmers against Prime Minister Manmohan Singh's government, which is struggling to bridge a 10 percent peak power shortfall needed to maintain growth in one of the world's fastest growing economies.

Bulgaria, Russia Postpone Building Of Nuclear Plant For 3 Months To Analyze Plant Safety (AP)

Associated Press, April 6, 2011

SOFIA, Bulgaria (AP) - Bulgaria and Russia say they will postpone the building of a nuclear plant for three months while they analyze plant safety in the wake of the Fukushima nuclear disaster.

Bulgarian utility NEK and Russia's Atomstroyexport agreed Tuesday to put the Belene nuclear power project on hold until the end of June.

The two state companies have signed a memorandum of understanding that will effectively stop new construction and delay the ordering of new equipment for the two 1,000 megawatt reactors at the plant on the Danube River, NEK said in a statement.

The two sides have pledged to comply with all new safety requirements set by international nuclear experts. Construction of Bulgaria's second nuclear power plant has been repeatedly delayed due to a lack of funding.

Russia's Rosatom Denies Bulgaria Nuclear Plant Frozen (BLOOM)

By Elizabeth Konstantinova And Ilya Arkhipov

Bloomberg News, April 6, 2011

Bulgaria and Russia's state-owned Rosatom Corp. decided to freeze plans to build a nuclear power plant in the Balkan country so authorities can conduct an analysis on nuclear safety, Bulgaria's National Electricity Co. said today in a statement in Sofia.

"Rosatom has not taken a decision to freeze the Belena plant," Sergei Novikov, a spokesman in Moscow for Rosatom, said today in Moscow. "No such bilateral documents were signed."

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Barroso Says Remedial Action For Nuclear Plants 'Remains Open' (BLOOM)

By Jonathan Stearns

Bloomberg News, April 6, 2011

European Commission President Jose Barroso comments on planned Europe-wide safety checks on nuclear power plants following the atomic accident in Japan. Barroso spoke to the European Parliament today in Strasbourg, France.

The commission, the European Union's regulatory arm, is drawing up the details of checks on the EU's 143 nuclear plants. The "stress tests" are scheduled to start in the second half of the year.

"Should an installation fail the test, the question of remedial actions remains open."

"In case an upgrade is technically or economically not feasible, reactors will have to be shut down and decommissioned. However, it is possible to envisage situations where safety upgrades are economically meaningful and technically feasible."

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German Nuclear U-turn Links Power With Coal Prices (REU)

By Henning Gloystein

Reuters, April 6, 2011

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

Germany Told Wind Energy Can Replace Nuclear, Handelsblatt Says (BLOOM)

By Ragnhild Kjetland

Bloomberg News, April 6, 2011

Power generated from wind farms could supply more than 65 percent of Germany's energy needs in the long term, replacing nuclear power, according to Hermann Albers, the head of the German WindEnergy Association, Handelsblatt reported.

The wind energy industry will be capable of meeting 25 percent of the country's requirements by 2020, the newspaper cited Albers as saying.

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Spain And U.S. Near Accord On Atomic Cleanup (NYT)

By Raphael Minder

New York Times, April 6, 2011

PALOMARES, SPAIN — Forty-five years after narrowly avoiding nuclear obliteration in a U.S. Air Force accident, the villagers of Palomares, in southern Spain, have grown hopeful that the governments in Washington and Madrid will finally rid their land of contamination.

Their recent optimism has been fueled by Foreign Minister Trinidad Jiménez, who told the Spanish Senate in February, in what probably amounted to the clearest commitment by the Spanish government to date, that clearing Palomares was "a priority." Days later, Washington sent a team of experts to Palomares to help evaluate how to clean Western Europe's most radioactive site.

After that American visit, Glenn S. Podonsky, the chief health, safety and security officer in the U.S. Department of Energy, said, "The two governments are exploring the best options in dealing with the issue of the contaminated soil."

Washington has now invited a Spanish delegation to visit for the first time a U.S. rehabilitation site, although no date has yet been agreed.

While the situation in Spain is far different than the developments unfolding at the damaged nuclear plant in Japan, the case of Palomares helps illustrate the ways that radioactive debris can continue to tear at a community decades later.

About 5,000 barrels of contaminated earth were shipped from Palomares to South Carolina in the aftermath of the 1966 collision, when a U.S. bomber hit a refueling tanker in mid-air and dropped four hydrogen bombs, two of which released plutonium into the atmosphere, though no warheads detonated. Madrid insists that leftover plutonium will also need to be shipped to the United States because Spain still does not have any facility to store such soil.

But the clearance work at the time, undertaken under U.S. military supervision, has over the past five years been found by the Spanish authorities to have been insufficient and in some respects flawed, leaving a thorn in diplomatic relations between the two countries.

With indications that radioactivity levels around Palomares have risen over recent years, the renewed sense of urgency in part reflects an upgraded risk assessment following the completion of the first in-depth examination of the site by the Spanish nuclear research agency in 2008. The main scientific concern is that plutonium is being allowed to degenerate into other radioactive components like americium, which emits gamma rays that travel farther and are harder to block.

So far, however, regular health checks on residents of Palomares have shown no adverse side effects from the surrounding contamination.

Still, "the big problem is not what has happened so far but what can still happen here," said Jesús Caicedo, mayor of Cuevas del Almanzora, a neighboring town under whose political jurisdiction Palomares falls. "We cannot leave our children and the next generation exposed to a danger that everybody knows to be increasing."

The U.S. government provided some compensation for the Palomares region, including a gift of \$150,000 in 1968 to upgrade water facilities and the financing of the health checks for villagers. The Spanish authorities, paid landowners in return for expropriating land considered to be toxic. But financial compensation remains a burning issue, specifically over how much money the Spanish authorities paid to put land out of bounds.

Although Palomares is no longer the impoverished farming community that it was when the bombs fell, local property developers say other coastal areas developed faster during Spain's decade-long construction boom because they were not tainted by contamination.

Almanzora, a property developer, is seeking €9 million, or about \$12.7 million, in compensation from the Spanish authorities — instead of the €200,000 that it claims to have been offered. The reason, the company has said, is because land on

which it had been granted building permission for a housing and commercial center project was eventually declared out of bounds following a revised safety assessment.

Having bought the land in 1988, "we were then suddenly told that it was contaminated in 2007, which was right at the peak of the boom and when we were ready to go and start construction," said Fraser Prynne, planning director for Almanzora. The company has been active in the region for over 25 years, and its projects there include a luxury golf resort overlooking the Palomares area.

One of the mistakes made during the initial cleaning efforts was the burning of contaminated tomato crops, which helped spread the contamination, said Mr. Prynne, who added that this fact came to light only in 2007 when U.S. documentation about Palomares was declassified. "We, at the time, did not dream of contamination being sent so far from the bomb sites by smoke," Mr. Prynne said. "No one knew."

The Spanish authorities say the original clearance work was insufficient, but do not claim foul play.

"We have to believe that the Americans did the best that they knew and could, but we're talking about the year 1966, when there was no regulation anywhere in the world on radioactive protection," said Teresa Mendizábal, an adviser at Ciemat, Spain's nuclear agency.

After a survey completed in 2008, the contaminated land is divided into three main sections, covering a total of about 40 hectares, or 99 acres, some of which almost touch private homes, as well as fields and greenhouses.

The steepest section of scrubland, moreover, was cordoned off rather than fenced off, allowing a shepherd and his herd of goats to cross last month. Such a crossing, witnessed by this newspaper's photographer, had "never occurred before," the nuclear agency said. It subsequently filed a police complaint against the shepherd.

Still, some locals worry that the revived political debate over Palomares could in the short term prove counterproductive, reminding outsiders of the contamination risk at a time when Palomares is already struggling because of Spain's broader economic downturn. Until the 1980s, the local tomato, lettuce and watermelon production did not carry any Palomares label.

Bartolomé Pérez, a 71-year-old retired fisherman, said: "We somehow didn't get killed that day and have managed to get on with the problems of living here since, so let sleeping dogs lie."

Mr Pérez was coming back to shore when the collision occurred on the morning of Jan. 17, 1966. He then joined a search party and eventually found "a head, an arm and a leg."

Of the 11 crew members on the two U.S. planes, 7 were killed.

"There was just no way to know who these guys were," Mr Pérez said, "or to realize that it was totally reckless to pick up body parts without wearing gloves and a mask."

Mr. Caicedo, the Cuevas mayor, was among children who scrambled across the fields to collect aircraft seats and other debris. "People here were so poor that many didn't even have chairs in their home, so of course they took whatever they could," he said.

Assuming that Washington and Madrid complete a political agreement before year-end on clearing Palomares, as predicted by local officials, Ms. Mendizábal, the Ciemat adviser, estimated that three more years might be needed to complete the work, starting with the construction of an industrial plant in which the soil could be treated ahead of shipment.

But however long the additional wait, the people of Palomares sound determined to put an end to what the local mayor, Juan José Pérez, called "a treatment worthy of second-class citizens."

"If these bombs had fallen near Madrid or in fact any place slightly more relevant and less isolated than Palomares," he said, "I can guarantee you that this problem would have long been solved."

Iran Makes Latin American Inroads Beyond Venezuela (AP)

By Donna Cassata, Associated Press

Associated Press, April 6, 2011

WASHINGTON – Iran has expanded its ties in Latin American beyond its close relationship with Venezuela, a top U.S. commander said Tuesday as he described a troubling development that the United States is watching closely.

Gen. Douglas Fraser, the head of the U.S. Southern Command, said Iran has nearly doubled the number of embassies in the region, from six in 2005 to 10 in 2010 while also building cultural centers in 17 countries. Last year, Iran also has hosted heads of state from three countries — Bolivia, Guyana and Venezuela.

"Iran continues expanding regional ties to support its own diplomatic goal of reducing the impact of international sanctions connected with its nuclear program," Fraser told the Senate Armed Services Committee. Washington fears that Iran is trying to develop nuclear weapons.

Fraser described a close relationship between Venezuelan President Hugo Chavez and Iran's President Mahmoud Ahmadinejad. They've had at least nine visits during Chavez's 12 years in office. Fraser said the alliance is still largely for diplomatic and commercial purposes, but said there were still too many unknowns.

"There are flights between Iran and Venezuela on a weekly basis, and visas are not required for entrance into Venezuela or Bolivia or Nicaragua. So we don't have a lot of visibility in who's visiting and who isn't, and that's really where I see the concerns," he said. "I don't have connections with those organizations that Iran has supported in other parts of the world, Hezbollah. But we're still skeptical and watching that on a routine basis."

Fraser said the ties between the two countries are based on several shared interests, such as access to military and petroleum technologies and avoiding international isolation.

On a separate issue, Fraser said Venezuela has purchased \$8 billion to \$12 billion worth of weapons from Russia, China and Spain, including automatic weapons. The U.S. is concerned the weapons could end up in the hands of illegal groups.



NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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NRC NEWS

U.S. Sees Array Of New Threats At Japan's Nuclear Plant (NYT)

By James Glanz And William J. Broad

New York Times, April 6, 2011

United States government engineers sent to help with the crisis in Japan are warning that the troubled nuclear plant there is facing a wide array of fresh threats that could persist indefinitely, and that in some cases are expected to increase as a result of the very measures being taken to keep the plant stable, according to a confidential assessment prepared by the Nuclear Regulatory Commission.

Among the new threats that were cited in the assessment, dated March 26, are the mounting stresses placed on the containment structures as they fill with radioactive cooling water, making them more vulnerable to rupture in one of the aftershocks rattling the site after the earthquake and tsunami of March 11. The document also cites the possibility of explosions inside the containment structures due to the release of hydrogen and oxygen from seawater pumped into the reactors, and offers new details on how semimolten fuel rods and salt buildup are impeding the flow of fresh water meant to cool the nuclear cores.

In recent days, workers have grappled with several side effects of the emergency measures taken to keep nuclear fuel at the plant from overheating, including leaks of radioactive water at the site and radiation burns to workers who step into the water. The assessment, as well as interviews with officials familiar with it, points to a new panoply of complex challenges that water creates for the safety of workers and the recovery and long-term stability of the reactors.

While the assessment does not speculate on the likelihood of new explosions or damage from an aftershock, either could lead to a breach of the containment structures in one or more of the crippled reactors, the last barriers that prevent a much more serious release of radiation from the nuclear core. If the fuel continues to heat and melt because of ineffective cooling, some nuclear experts say, that could also leave a radioactive mass that could stay molten for an extended period.

The document, which was obtained by The New York Times, provides a more detailed technical assessment than Japanese officials have provided of the conundrum facing the Japanese as they struggle to prevent more fuel melting at the Fukushima Daiichi plant. But it appears to rely largely on data shared with American experts by the Japanese.

Among other problems, the document raises new questions about whether pouring water on nuclear fuel in the absence of functioning cooling systems can be sustained indefinitely. Experts have said the Japanese need to continue to keep the fuel cool for many months until the plant can be stabilized, but there is growing awareness that the risks of pumping water on the fuel present a whole new category of challenges that the nuclear industry is only beginning to comprehend.

The document also suggests that fragments or particles of nuclear fuel from spent fuel pools above the reactors were blown "up to one mile from the units," and that pieces of highly radioactive material fell between two units and had to be "bulldozed over," presumably to protect workers at the site. The ejection of nuclear material, which may have occurred during one of the earlier hydrogen explosions, may indicate more extensive damage to the extremely radioactive pools than previously disclosed.

David A. Lochbaum, a nuclear engineer who worked on the kinds of General Electric reactors used in Japan and now directs the nuclear safety project at the Union of Concerned Scientists, said that the welter of problems revealed in the document at three separate reactors made a successful outcome even more uncertain.

"I thought they were, not out of the woods, but at least at the edge of the woods," said Mr. Lochbaum, who was not involved in preparing the document. "This paints a very different picture, and suggests that things are a lot worse. They could still have more damage in a big way if some of these things don't work out for them."

The steps recommended by the nuclear commission include injecting nitrogen, an inert gas, into the containment structures in an attempt to purge them of hydrogen and oxygen, which could combine to produce explosions. The document also recommends that engineers continue adding boron to cooling water to help prevent the cores from restarting the nuclear reaction, a process known as criticality.

Even so, the engineers who prepared the document do not believe that a resumption of criticality is an immediate likelihood, Neil Wilmshurst, vice president of the nuclear sector at the Electric Power Research Institute, said when contacted about the document. "I have seen no data to suggest that there is criticality ongoing," said Mr. Wilmshurst, who was involved in the assessment.

The document was prepared for the commission's Reactor Safety Team, which is assisting the Japanese government and the Tokyo Electric Power Company, which owns the plant. It says it is based on the "most recent available data" from numerous Japanese and American organizations, including the electric power company, the Japan Atomic Industrial Forum, the United States Department of Energy, General Electric and the Electric Power Research Institute, an independent, nonprofit group.

The document contains detailed assessments of each of the plant's six reactors along with recommendations for action. Nuclear experts familiar with the assessment said that it was regularly updated but that over all, the March 26 version closely reflected current thinking.

The assessment provides graphic new detail on the conditions of the damaged cores in reactors 1, 2 and 3. Because slumping fuel and salt from seawater that had been used as a coolant is probably blocking circulation pathways, the water flow in No. 1 "is severely restricted and likely blocked." Inside the core itself, "there is likely no water level," the assessment says, adding that as a result, "it is difficult to determine how much cooling is getting to the fuel." Similar problems exist in No. 2 and No. 3, although the blockage is probably less severe, the assessment says.

Some of the salt may have been washed away in the past week with the switch from seawater to fresh water cooling, nuclear experts said.

A rise in the water level of the containment structures has often been depicted as a possible way to immerse and cool the fuel. The assessment, however, warns that "when flooding containment, consider the implications of water weight on seismic capability of containment."

Experts in nuclear plant design say that this warning refers to the enormous stress put on the containment structures by the rising water. The more water in the structures, the more easily a large aftershock could rupture one of them.

Margaret Harding, a former reactor designer for General Electric, warned of aftershocks and said, "If I were in the Japanese's shoes, I'd be very reluctant to have tons and tons of water sitting in a containment whose structural integrity hasn't been checked since the earthquake."

The N.R.C. document also expressed concern about the potential for a “hazardous atmosphere” in the concrete-and-steel containment structures because of the release of hydrogen and oxygen from the seawater in a highly radioactive environment.

Hydrogen explosions in the first few days of the disaster heavily damaged several reactor buildings and in one case may have damaged a containment structure. That hydrogen was produced by a mechanism involving the metal cladding of the nuclear fuel. The document urged that Japanese operators restore the ability to purge the structures of these gases and fill them with stable nitrogen gas, a capability lost after the quake and tsunami.

Nuclear experts say that radiation from the core of a reactor can split water molecules in two, releasing hydrogen. Mr. Wilmshurst said that since the March 26 document, engineers had calculated that the amount of hydrogen produced would be small. But Jay A. LaVerne, a physicist at Notre Dame, said that at least near the fuel rods, some hydrogen would in fact be produced, and could react with oxygen. “If so,” Mr. LaVerne said in an interview, “you have an explosive mixture being formed near the fuel rods.”

Nuclear engineers have warned in recent days that the pools outside the containment buildings that hold spent fuel rods could pose an even greater danger than the melted reactor cores. The pools, which sit atop the reactor buildings and are meant to keep spent fuel submerged in water, have lost their cooling systems.

The N.R.C. report suggests that the fuel pool of the No. 4 reactor suffered a hydrogen explosion early in the Japanese crisis and could have shed much radioactive material into the environment, what it calls “a major source term release.”

Experts worry about the fuel pools because explosions have torn away their roofs and exposed their radioactive contents. By contrast, reactors have strong containment vessels that stand a better chance of bottling up radiation from a meltdown of the fuel in the reactor core.

“Even the best juggler in the world can get too many balls up in the air,” Mr. Lochbaum said of the multiplicity of problems at the plant. “They’ve got a lot of nasty things to negotiate in the future, and one missed step could make the situation much, much worse.”

Why Fukushima Won't Kill Nuclear Power (WSJ)

Today’s most advanced designs move toward the goal of ‘walk-away safety’—reactors that shut down and cool themselves without electricity or any human intervention.

By Richard K. Lester

Wall Street Journal, April 6, 2011

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

ANALYSIS-New Atomic Risk Strategy Needed After Fukushima (REU)

By Alister Doyle

Reuters, April 6, 2011

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

Japanese Radioactive Releases Are No Threat To American Health, Federal Officials Say (WP)

By David Brown

Washington Post, April 6, 2011

Americans have no reason to fear any health effects from the nuclear power plant accident in Japan, should take no protective measures and should avoid no foods, federal health officials said Tuesday.

In a display of solidarity, eight representatives of the Centers for Disease Control and Prevention, the Food and Drug Administration and the Environmental Protection Agency delivered the slightly complicated message that while no amount of radiation is absolutely safe, the amount released by the damaged reactors is so small that the chance it will cause disease is nil.

“Due to distance and dispersion to the U.S., we do not expect levels [of radiactivity] to reach us that would cause a public health effect,” Thomas Frieden, director of the CDC, told reporters in a telephone news conference.

He said, however, that radioactive iodine has been detected in the United States and “we would be surprised if we did not detect very low levels” of radioactive cesium and strontium — two other released contaminants — in coming days. The anticipated detections say more about the sensitivity of the machinery than about the levels found, he said.

“It’s not as if there is none in the environment before this. Now, extraordinarily small amounts are being added,” Frieden said.

On Tuesday, Japan placed radiation safety standards on fish for the first time. According to press reports, samples of a fish called a sand lance caught in Japanese waters last week had elevated levels of iodine-131, which loses half its radioactivity every eight days.

The CDC director said the agency has heard that numerous poison control centers around the country have gotten calls from people who took potassium iodide, a pill that blocks the thyroid gland from absorbing radioactive iodine. He did not provide details about the calls but said: "I want to be unambiguous. There is no reason for anyone in the United States to take potassium iodide at the present time."

There are no other medicines that protect against radiation exposure, and the public should be wary of substances advertised as able to do so, the experts said.

"There's absolutely nothing approved that might be called a silver bullet," said Patricia Hansen, an FDA scientist.

William Jones of the agency's office of food safety said there "isn't any concern of contamination of seafood" consumed in the United States because of the "extreme dilution factor" of the radioactive water currently being released into the ocean from the Japanese plant.

All shipping containers entering the United States, including ones containing food products, are screened for radioactivity, said Siobhan DeLancey, an FDA spokeswoman. If elevated levels are found, the contents can be sampled and further checked by hand.

The agency has banned imports of Japanese leafy vegetables and some head vegetables (such as cauliflower) from Fukushima prefecture, where the plant is located; milk from two prefectures; and specified fresh food from four prefectures. It is in the process of testing seven food imports that fall into the broad categories of artificial flavorings, dry tea and starches, DeLancey said.

Radioactivity In Rain Is Well Below Danger Level, Officials Say (BEAVCT)

By Patrick O'Shea

Beaver County (PA) Times, April 6, 2011

SHIPPINGPORT - Radioactive rain was collected in Beaver County recently, but the readings were not as high as those reported in eastern Pennsylvania and Ohio, and were well below levels considered hazardous by the federal government.

Tests conducted on rainwater collected in puddles at the Beaver Valley Nuclear Power Station on March 26 detected 14.8 picocuries per liter of radioiodine-131, a byproduct of nuclear fission, according to Todd Schneider, spokesman for FirstEnergy Corp., operator of the Shippingport plant. The sample was taken before significant rainfall and snow hit the area over the last week.

Schneider said the levels reported are still well below the federal Environmental Protection Agency's safety limit of 20,000 picocuries per liter for rainwater.

Radioiodine has been reported in the atmosphere throughout the United States since Japan's Fukushima nuclear plant began releasing radiation after a March 11 earthquake and tsunami.

Pennsylvania first reported levels of radiation in rainwater on March 25 with readings of 41 picocuries per liter in Harrisburg and 90 to 100 picocuries per liter at the Three Mile Island and Limerick nuclear plants.

Schneider said FirstEnergy first noticed the radioactive rain at its Perry Nuclear Power Plant in North Perry, Ohio, near Cleveland. Readings of 46.8 picocuries per liter of radioiodine were reported March 25. Radioactive precipitation also has been reported in Massachusetts, Connecticut and Minnesota.

When officials discovered the radioactive rain at the Perry nuclear plant, they ordered samples taken at FirstEnergy's two other area plants - Beaver Valley and Davis-Besse Nuclear Power Plant near Toledo, Ohio - Schneider said.

When the samples were taken, very little precipitation had fallen since the Japan disaster. But since last Thursday, the area has had at least small amounts of rain and snow every day.

It is unclear whether the additional precipitation has pushed more radiation to the ground or diluted the existing radiation levels, because the state and federal governments have yet to release any updated testing results on drinking water and milk monitoring.

But U.S. officials have continued to say they have not seen enough radiation anywhere to impact residents' health and safety.

Trace Amounts Of Radiation From Japan Found In Minn. (MINDLY)

Minnesota Daily, April 6, 2011

Ongoing radiation monitoring performed by the Minnesota Department of Health has found trace amounts of radiation that likely came from Japan, according to an MDH report.

Discovered from samples taken in St. Paul, the radiation from Japan is "thousands of times less than normal background radiation and well below levels that would be of health concern," according to the report.

Radiation levels measured on March 29 clocked in at .011 millirem per year.

"The exposure level at which we would begin to have concerns for human health is 10,000 millirem," Sherrie Flaherty, radiation control supervisor for MDH, said in the report.

MDH performs radiation monitoring weekly in St. Paul, and once every two weeks at each of Minnesota's two nuclear power plants: Monticello Nuclear Power Generating Plant outside of Monticello and Prairie Island Nuclear Generating Plant outside of Red Wing. Both plants are owned and operated by Xcel Energy.

The 9.0 magnitude earthquake and subsequent tsunami that struck Japan's east coast March 11 severely damaged several reactors in the Fukushima Daiichi nuclear power plant. Radiation has been leaking from the plant over the past several weeks.

Escaped radiation from Japan was detected in Hawaii on March 22, according to the Environmental Protection Agency's monitoring.

MDH officials said they will continue to monitor radiation levels throughout Minnesota, but expect the increase to disappear in four to six weeks.

NRC Focused On VY Safety, Not Shutdown (BRATBORO)

By Josh Stilts

Brattleboro Reformer (VT), April 6, 2011

BRATTLEBORO – Last week the Nuclear Regulatory Commission addressed the concerns of the Safe and Green Campaign regarding the Vermont Yankee nuclear power plant.

In a letter sent to Robert Bady, Vermont coordinator of the campaign, Eric Leeds, director of the office of nuclear reactor regulation, wrote that the NRC is not researching the plant's decommissioning.

"When the decommissioning of VY does occur, the radiological health and safety of workers and members of the public will be subject to NRC requirements, and the NRC will exercise ongoing oversight of decommissioning activities to monitor compliance with its requirement," Leeds wrote.

On March 21, the NRC issued a renewed license to the Vermont Yankee nuclear power plant in Vernon.

"While radiological health and safety aspects of decommissioning are subject to NRC requirements, some of the concerns expressed in the enclosed letters regarding closure and decommissioning of VY go beyond radiological health and safety," he wrote. "For example, the NRC does not have the authority to require that VY workers be given preference for decommissioning jobs or be given particular severance packages."

Last fall members of the Safe and Green Campaign presented letters to neighboring town officials of Vermont Yankee, Entergy, which owns and operates the plant, the Vermont Legislature and the Public Service Board.

In the letter, it asks for the shutdown of the plant, that employees be given the first opportunity for any decommissioning jobs and that town officials in Massachusetts, New Hampshire and Vermont that are near the plant, be able to have a say in its shutdown.

Officials at VY have not informed the NRC that they intend to close prior to the expiration of its renewed license in March 2032, the letter states.

"The NRC will continue to ensure VY is meeting the appropriate public health and safety standards regardless of the reactor's ultimate operating status," the letter states.

Bady said the problem is financial, however.

"The NRC tries to maintain the safety of the nuclear reactor while also maintaining the profitability of the nuclear industry," Bady said. "The profitability shouldn't be the NRC's concern. If the NRC put safety before profit, they wouldn't allow a spent fuel pool to be stored seven feet above ground."

He added that through activism, he hopes to effect a change in the NRC that safety be on equal footing of profits.

"The NRC is not focusing on the decommissioning of the plant at this time but rather on its continued safe operation," Neil Sheehan, spokesman for NRC said.

Members of the Brattleboro Selectboard are scheduled to discuss the Safe and Green letter of concern tonight during their meeting.

VT Emergency Management Stages Drill (WPTZ)

By Jackie Bender

WPTZ-TV Burlington, VT, April 6, 2011

VERNON, Vt. --

Officials at Vermont Yankee are telling people to stay calm if they see workers near the nuclear plant in Tyvek suits. It's all a part of their preparations for an evaluation by the federal government and evaluation that happens every 6 years.

"This is a lead up exercise to what will be a FEMA evaluated Vermont Yankee exercise May 3rd and 4th," explained VT Emergency Management official Peter Coffey.

For practice, the workers measure the spread of radiation in the air if there was an accident at Vermont Yankee.

From those samples, they can determine how far the plume has extended, and what areas would need to be evacuated.

Meanwhile, at their staging area in Dummerston, workers were practicing coordinating those evacuations.

"We would stage busses, ambulances, that sort of thing here if they needed to do precautionary transfers to move people out of the emergency planning zone," said Coffey

Anti-nuclear Groups Hold Post-Yankee Discussion (WCAXTV)

WCAX-TV Burlington, VT, April 6, 2011

With Vermont Yankee set to close in 2012, there will be a discussion Tuesday night about life after the nuclear plant shuts down.

Three officials from anti-nuclear groups will discuss transition, clean up, long-term waste storage and what role residents can play. An update on Japan's nuclear crisis will also be offered.

The forum starts at 7 p.m. at the Rutland Free Library, 10 Court St., Rutland, Vt. A question-and-answer session will follow the panel discussion.

Vermont House Advances Energy Bill; 55-cent Charge On Electric Bills Draws Heated Debate (AP)

By Dave Gram

Associated Press, April 6, 2011

MONTPELIER, Vt. (AP) - The Vermont House gave preliminary approval Tuesday to legislation that would help Vermont electric consumers generate their own power and deduct it from their electric bill, but not before bitter debate erupted over a 55-cent charge on monthly electric bills designed to promote renewable energy.

Initial action came on a 99-39 vote after Rep. Paul Poirier said he would offer an amendment before the bill comes up for final passage to exempt low-income people from the 55-cent charge.

The charge, which would raise an estimated \$2.4 million, is intended to replace a portion of the roughly \$6 million the Vermont Yankee nuclear plant contributes each year to the Clean Energy Development Fund, which provides grants to support renewable energy projects in the state. The agreement under which Vermont Yankee makes those payments expires in March 2012, along with its state operating permit.

Lawmakers came up with the flat charge of 55 cents per electric meter per year.

Poirier, a Democrat-turned-independent from Barre, appeared before a meeting of Democratic House members on Tuesday and described an amendment that he said would exempt people making up to 185 percent of the federal poverty level — an amount equal to \$40,700 for a family of four — and raise the charge on those making more than that to 65 cents a month.

Poirier has been sharply critical of his former Democratic colleagues this year over their reluctance to raise taxes to avoid cuts in human services programs. Tensions rose again Tuesday as Poirier focused his ire on one lawmaker, Rep. Tony Klein, chairman of the House Natural Resources and Energy Committee and a key architect of the energy bill.

During an exchange in the Democratic caucus, Poirier asked Klein if he was supporting the amendment Poirier intended to offer and Klein said no.

"Why'd you call me last night and tell me you were?" Poirier asked.

Klein tried to answer him but Poirier cut him off. "Tony, Tony, Tony," Poirier said. "You lied last year on the floor and you're lying again."

"That's very inappropriate," Klein said. "He only hears what he wants to hear," he added as Poirier exited the room. He added that he expects an apology from Poirier.

Poirier did not immediately return a call seeking comment later. Klein said he believed the earlier incident Poirier referred to related to House debate on a bill related to the Vermont Yankee decommissioning fund.

The bill, on which final action is expected Wednesday, would double the size of a "net-metering" system property owners would be able to use. With net-metering, customers can make their own electricity, share it with their utility and subtract the amount of power the utility takes from their monthly electric bill.

Plan To Tack Surcharge On Vt. Electric Bills Draws Fire (WCAXTV)

By Anson Tebbetts

WCAX-TV Burlington, VT, April 6, 2011

There is a program called the Clean Energy Fund. It contains millions of dollars. The fund helps finance renewable energy projects like solar and wind through grants and tax credits. Vermont's nuclear power plant, Vermont Yankee, puts about \$6 million into the fund each year. But with Vermont Yankee scheduled to close next year, the Legislature needs to find a way to keep the program going. And the popularity of the program already has lawmakers trying to find dollars. Under a comprehensive energy bill that's making its way through the Legislature there is a proposal to attach a fee to utility bills.

"This is a policy statement as much as anything else we want to create incentives to. We want to incent the development of the solar industry," said Rep. Adam Greshin, I-Warren.

Under the bill, the state would place a 55-cent fee each month on utility bills to support renewable energy projects, like solar. Some were critical for starting the fee now even though Vermont Yankee is still paying in, and some are also concerned Vermonters will be asked to pay more if the nuclear plant stops financing the program.

"It may be a small amount now but it could potentially grow and grow and grow just like Efficiency Vermont has," said Rep. Heidi Scheuermann, R-Stowe.

Efficiency Vermont is another program financed through a fee on utility bills. And some argued this new fee should be voluntary, criticizing the authors of the bill for asking the public to pay for a \$2.3 million program at a time when the economy is still trying to recover.

"I support the purposes of the clean energy development fund but during a recession it is not a good idea to raise broad base taxes, even if the exact tax for each person would not be large. It is still not a good idea," said Rep. Cynthia Browning, D-Arlington.

The bill was given preliminary approval. But more amendments could come Wednesday including one that could waive the 55-cent fee for low-income Vermonters.

Prior to the debate on the floor there was a sharp exchange where one member accused another of lying. The Democrats were discussing the energy bill in their weekly caucus.

Rep. Paul Poirier, I-Barre City, asked lawmakers to exempt low-income Vermonters from a fee to help finance the renewable energy program. At the end of the presentation he asked Rep. Tony Klein of East Montpelier if he would support his amendment. Klein said no. That prompted Poirier to say, that's not what you said last night and then he called Klein "a liar" and stormed out of the room.

Klein demanded an apology and the Democratic leader asked for civility from members.

NRC: Japan Is No Reason To De-license Oyster Creek (AP)

By Wayne Parry

Associated Press, April 6, 2011

The U.S. Nuclear Regulatory Commission says nothing it has learned from the Japanese nuclear disaster warrants revoking the license of the nation's oldest nuclear power plant.

The agency filed its response Tuesday to a federal appeals court that had asked if the Japanese crisis should lead to a re-thinking of the Oyster Creek Nuclear Generating Station's current 20-year license that was awarded two years ago.

The agency says that while it is studying the ongoing crisis in Japan, it remains confident of the safety of U.S. nuclear plants.

"Licensed nuclear power reactors in the United States are currently safe and may continue to operate under NRC's comprehensive scheme of safety regulations and inspections, pending development of any new safety measures that emerge," the agency wrote.

A coalition of anti-nuclear groups is challenging Oyster Creek's 2009 license renewal. It asked the appeals court to reconsider whether Oyster Creek's license should have been renewed, citing concerns about its age and wear and tear on the plant, which went online in 1969.

The New Jersey Sierra Club says the NRC has not learned anything from the Japanese disaster.

"NRC stands for No Regulatory Commission," said Jeff Tittel, the group's director. "The agency is a cheerleader for industry and looks the other way it comes to relicensing, especially around issues of public safety.

"The NRC should be saying license renewals across the country should be on hold while we reevaluate the safety of these facilities," said Tittel. "This brief shows the NRC will not learn any lessons from Japan, just as they did not learn any lessons from Three Mile Island or Chernobyl. Given what we are learning about Japan, it does not make any sense and could be outright dangerous to keep Oyster Creek open."

The NRC noted in its response that it adopted new standards and practices following Three Mile Island, and the Sept. 11, 2001, terrorist attacks.

"As with the post-TMI and post-9/11 regulatory enhancements, any lessons learned from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation," the agency wrote. "No safety, technical, or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review."

Oyster Creek's license allows it to operate until 2029. But its owners, Chicago-based Exelon Corp., struck a deal with New Jersey in December to shut Oyster Creek 10 years early, in 2019. In return, the state dropped its insistence that Oyster Creek build costly cooling towers to drastically reduce the number of fish and small aquatic creatures the plant's operations kill each year.

NRC: Expanded Review Of Oyster Creek Not Needed (ASBPP)

By Kirk Moore

Asbury Park Press, April 6, 2011

The nuclear disaster in Japan does not warrant expanding judicial review of the Oyster Creek nuclear power plant's operating license beyond the issues of "aging management" already presented by challengers, lawyers for the U.S. Nuclear Regulatory Commission told a federal appeals court in papers filed Monday.

Judges with the Third Circuit Court of Appeals in Philadelphia asked the NRC for its opinion on whether events at the Fukushima Daiichi nuclear complex — with General Electric Mark I boiling water reactors similar in basic design to Oyster Creek — should have any bearing on the NRC's design to issue a 20-year operating license extension in 2009.

The agency's response "acknowledges the need to monitor and learn from the events at the Fukushima Daiichi nuclear power plant to ensure safety at U.S. reactors," said Neil Sheehan, an NRC spokesman.

In its reply, the NRC assures the court the agency is paying close attention to findings coming out of Japan and will apply any short-term safety upgrades immediately — and use longer-term analysis to develop safety upgrades as it did for the nuclear industry after the 1979 Three Mile Island reactor accident in Pennsylvania and the 2001 terrorist attacks.

"As with the post-TMI and post-9/11 regulatory enhancements, any 'lessons learned' from the Fukushima Daiichi event will be applied generically to all reactors, including Oyster Creek, as appropriate to their location, design, construction, and operation," the brief says.

"No safety, technical or policy justification exists to single out particular reactors for different treatment just because of their place in the licensing queue or status on judicial review."

The agency has not altered its usual licensing procedures following the Japan earthquake and tsunami, the brief notes: "For instance, NRC issued a renewed license for the Vermont Yankee Nuclear Power Plant quite recently — on March 21, 2011 — despite the events at Fukushima Daiichi. This decision reflects NRC's confidence in the robust and redundant safety design and construction of currently operating U.S. nuclear reactors."

The New Jersey Environmental Federation and allied groups brought the case to appeals court, arguing the NRC did not give adequate consideration to aging issues such as corrosion in the Oyster Creek reactor's containment vessel. The agency countered that an extensive record in the license-renewal process shows that it did its job properly.

Those appellants have until April 18 to file their responses to the NRC's brief, said Jeff Tittel of the Sierra Club.

"The NRC doesn't seem to have learned anything from Japan," Tittel said of the brief. He contends Oyster Creek's aging components — the plant opened in 1969 — call for reconsideration of what a moderate East Coast earthquake might do. The state Geological Survey says quakes of strength 5.0 on the Richter scale have been recorded in New Jersey, most recently in 1927 when downed chimneys and some structural damage was reported in Long Branch and Asbury Park.

The NRC license extension pushed Oyster Creek's operating potential out to 2029. But recently plant owners Exelon Corp. struck a deal with the Christie administration to close the plant by 2019 instead of being required to build cooling towers to reduce the daily draw of cooling water from Barnegat Bay.

Oyster Creek License Safe Despite Japan Disaster, Nuclear Regulatory Commission Tells Court (NSL)

By Eliot Caroom

Newark (NJ) Star-Ledger, April 6, 2011

The Nuclear Regulatory Commission told a federal court today that the meltdown of reactors in Japan of a similar design to Oyster Creek isn't cause to overturn the plant's license.

"The disaster at the Fukushima Daiichi reactors in Japan is, of course, tragic and serious, and has triggered a full lessons-learned inquiry at NRC that may well lead to new safety measures at American operating reactors," said a filing by the commission. "But the disaster is not a basis for judicial relief in this (Oyster Creek) case."

Environmentalists fighting for scrutiny of Oyster Creek, the oldest operating plant in the country, said today they weren't satisfied by that response.

"This is just another example of the NRC and Exelon refusing to listen to the valid concerns of environmentalists and concerned citizens," said Kevin Pflug, staff attorney for the Eastern Environmental Law Center, one of Oyster Creek's opponents, in court.

After Oyster Creek was approved for 20 more years of service in 2009, the center appealed on behalf of a coalition of five environmental organizations. It specifically complained about problems at the plant like a corroded steel containment unit that got thinner over time.

Since then the plant's owner, Exelon, agreed to close it in 2019 rather than install new cooling towers.

When the Japanese meltdowns occurred, the U.S. Third Circuit Court of Appeals in Philadelphia asked the NRC and Exelon to respond to the meltdown and explain what impact it should have on the Oyster Creek appeal.

The NRC's response today pointed to a "lessons learned" model for studying disasters that could affect nuclear security. Three Mile Island and 9/11 were cited as examples.

After Three Mile Island, the motion said, the NRC came up with a new rule for reactors. That rule wasn't put in place, but other licensing rules were enacted and, a decade later, the commission's staff reported that the lessons learned had been implemented.

But the Eastern Environmental Law Center's Pflug said that's not enough.

"That whole 'lessons learned' approach is a wait-and-see approach, and that can take years," Pflug said. "The problem with that approach is, with Sept. 11 the NRC proposed a whole host of new regulations and industry really pushed back against it. Obviously we wouldn't want to see that happen here."

The "lessons learned" process for the Japanese crisis will be both short-term and long-term, NRC spokeswoman Diane Screnci said today.

She said the first process would conclude within three months, and a longer one would take stock of the Japanese nuclear saga as it unfolds over years.

"If we determine that changes are appropriate, those will be applied across the industry, not just one plant or plants in license renewals," Screnci said.

The court is awaiting a response from the New Jersey Environmental Federation and the Eastern Environmental Law Center due April 18.

Opinion: Lessons For Us From The Nuclear Crisis In Japan (BERGR)

By Jeff Tittel

Bergen (NJ) Record, April 6, 2011

Jeff Tittel is director the New Jersey Sierra Club.

AS OUR HEARTS and prayers go out to the Japanese people, we need to look at what lessons we can learn from this unfolding disaster at the Fukushima Daiichi nuclear facility.

Whatever mankind can do, nature can destroy. There is a certain arrogance of humans when we think we can engineer and conquer nature. The lessons of Katrina and Chernobyl prove that time and time again the question isn't "Can it happen here?" the question is "Should these facilities be constructed?"

This disaster deserves an important public policy discussion that examines if this type of energy is really in the best interest of public health and safety and our environment.

What type of natural disasters can impact America's nuclear power plants? Sometimes it's just a mistake in design or human error. But if a problem with nuclear power does occur, the consequences can be devastating and long-lasting.

The design of Oyster Creek is the same as the Fukushima Daiichi Unit 1, a GE Mark I boiling water reactor. We know the Fukushima plant was designed to withstand a magnitude 7.2 earthquake, but we do not know what earthquake design standard, if any, was used at Oyster Creek.

According to the U.S. Geological Survey, Toms River has experienced earthquakes of a magnitude 5.0 or greater in the last 150 years. The highest intensity earthquake ever observed in New Jersey occurred on June 1, 1927, in the Asbury Park area, less than 35 miles away from Oyster Creek.

Three shocks were felt along the coast from Sandy Hook to Toms River.

Greater risk

Even a moderate earthquake at Oyster Creek could impact the dry well or the spent fuel rod storage system. The Japanese reactor had a cement dome over the containment vessel and Oyster Creek does not, possibly making it more at risk if a build-up of hydrogen occurs.

Excavation during an emergency at Oyster Creek would be difficult as Ocean County's population doubles on a summer weekend. There is close to 1 million people in a 13-mile radius of the power plant. It is hard enough to get home from a day at the beach, let alone when you have to evacuate people during an emergency.

Salem is in a less populated area but can be impacted by storm surges and flooding.

The plant is currently applying for relicensing. That process must ensure the facility is safe and can handle worst-case scenarios, natural or man-made, before any licenses are issued. At the very least, the plant must install a closed-loop system with cooling towers. The current water intake system, pulling from the Delaware River, could result in more problems during emergency.

Especially troubling at the Japan facility is that four reactors are onsite, magnifying the problem significantly. A fourth reactor is being proposed at the Salem plant, which adds to potential problems at the site.

This disaster reminds us of the dangers nuclear power can pose and challenges the notion that nuclear is a necessary component in our clean energy future. New Jersey's solar energy portfolio, with the second greatest number of installations in the country, continues to grow and our state has taken the first steps in leading the nation on off-shore wind development.

Energy commitments

New Jersey is on track to meet the renewable energy and energy-efficiency commitments outlined in our Energy Master Plan. Over time, New Jersey can continue to phase out the dirtiest and most dangerous energy sources and instead promote energy security and good jobs, and stimulate our economy through renewable energy.

The nuclear scientist Ed Teller said, "People believe they can make nuclear power fool-proof. The problem is, there are too many fools proving it's not fool-proof."

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Salem is in a less populated area but can be impacted by storm surges and flooding.

The plant is currently applying for relicensing. That process must ensure the facility is safe and can handle worst-case scenarios, natural or man-made, before any licenses are issued. At the very least, the plant must install a closed-loop system with cooling towers. The current water intake system, pulling from the Delaware River, could result in more problems during emergency.

Especially troubling at the Japan facility is that four reactors are onsite, magnifying the problem significantly. A fourth reactor is being proposed at the Salem plant, which adds to potential problems at the site.

This disaster reminds us of the dangers nuclear power can pose and challenges the notion that nuclear is a necessary component in our clean energy future. New Jersey's solar energy portfolio, with the second greatest number of installations in the country, continues to grow and our state has taken the first steps in leading the nation on off-shore wind development.

Energy commitments

New Jersey is on track to meet the renewable energy and energy-efficiency commitments outlined in our Energy Master Plan. Over time, New Jersey can continue to phase out the dirtiest and most dangerous energy sources and instead promote energy security and good jobs, and stimulate our economy through renewable energy.

The nuclear scientist Ed Teller said, "People believe they can make nuclear power fool-proof. The problem is, there are too many fools proving it's not fool-proof."

Let's Hope Oyster Creek's Critics Are Wrong (BRPAT)

By Patricia A. Miller

Brick (NJ) Patch, April 6, 2011

Journalists strive for objectivity. It's been a priority for me ever since I started as a stringer for the Asbury Park Press back in 1984, and it always will be.

I try to be as objective as possible about Oyster Creek. I live about nine miles from the oldest nuclear plant in the country. But I've covered it for way too long not to have some concerns.

Let's put aside the unplanned scrams, tritium leaks, malfunctioning generators, fish kills, the radiation detection device on top of the stack that didn't work for four years, the threat of terrorist attacks and the stored spent fuel rods that aren't going anywhere for now.

Let's focus on one topic — evacuation.

When Gov. Chris Christie announced recently that the state will be taking a closer look at safety and emergency preparedness plans at the four nuclear plants in New Jersey, I wasn't reassured.

And state Department of Environmental Protection Commissioner Robert Martin was positively cheery in his assessment of the state Office of Emergency Management's existing plans for a nuclear emergency.

"We already have an excellent response system in place, one that is continuously updated as we gather new science and facts," Martin said. "We also have excellent cooperation from the owners of nuclear facilities in our state. But you can never be too prepared. If there are lessons for New Jersey from what is happening in Japan, we should draw from that information."

Well, apparently Bob hasn't been on Route 9 in the last several decades. Perhaps he's never been stuck on traffic-choked Route 9 during a minor car accident or road improvement work.

Because that's all it takes to bring cars on two-lane Route 9 in southern Ocean County to a standstill. Route 9 here is like a transportation time capsule. Any minute now you expect to see a 1950s Studebaker chugging along the highway.

Route 9 from Bayville on down to Manahawkin hasn't changed one iota from the roadway it was back in the 1930s and 1940s. The late George Moore — who founded Moore's Farm Market in Bayville back in 1952 — once told me that you could lie down on Route 9 after 8 p.m. and not worry about getting hit by a car. Those days are over.

Because in the event of a nuclear emergency, Route 9 would be packed with frantic residents looking for a way out. Jammed with parents trying to get to their children, if schools were open.

And that's the problem. If there was an emergency at Oyster Creek that mandated evacuation in the 10-mile radius around the plant, there would be no way out.

I have my handy-dandy booklet "Community Emergency Planning Information for Oyster Creek Nuclear Generating Station" at the ready. It's provided free, courtesy of the state's Office of Emergency Management to residents who live within the

10-mile Emergency Planning Zone (EPZ in state speak). It's chock full of useful tips about what to do if there's a serious emergency at Oyster Creek.

A three-minute steady siren will be our first hint that something is amiss. Then residents will have to determine if they should shelter-in-place or get the heck out of Dodge.

If you are advised to leave, you must then determine where your Emergency Response Planning Area (ERPA in state speak) is. If you have no friends or relatives outside the 10-mile radius, you head off to your designated "Congregate Care Shelter" or "Reception Center."

There are six centers in Ocean County — Pinelands Regional High School in Tuckerton, Brick Township High School, Christa McAuliffe Middle School in Jackson, the Whiting Fire Company in Manchester Township, Lakewood Middle School and Manchester High School.

The problem would be in getting to those shelters. And it's not just the people living on the mainland that would be affected. Long Beach Island, Island Beach State Park and the South Seaside Park section of Berkeley Township are included in the 10-mile radius.

Residents in those areas would have to rely on Route 35, the Long Beach Island Causeway and Route 72. An evacuation would be further hampered if it happened during the summer, when the populations in the affected areas skyrocket.

Exelon, the plant's owner, also mails out instructions to residents. Nuclear reactors cannot produce a nuclear explosion, and nuclear power plants are built to prevent the release of radiation, the instructional booklet states.

"A serious incident, however, could allow some radiation to escape, most likely as a cloud or plume of radioactive steam that would be carried away from the plant by the wind," it reads. "The degree of risk to the public would depend on the size of the plume, the direction and speed of the wind, and other factors."

The booklet also provides classifications of accidents that could occur at the plant. They run the gamut from an unusual event — a "potential degradation of safety" or security threat with no radioactive release — to a full-blown general emergency.

That's the biggie. A general emergency would involve "substantial core degradation or melting with the potential for loss of containment integrity or security events that result in actual loss of physical control of the facility."

And Exelon has a few more words of advice for us..

"Remain calm," the booklet states. "Do not rush."

I hope Oyster Creek's many critics over the years are wrong. Because if they are right, we all lose.

Now, where did I put those potassium iodide pills?

Lawmakers Want Larger Evacuation Zone At NY Nukes (AP)

Associated Press, April 6, 2011

WHITE PLAINS, N.Y. (AP) — Several local lawmakers are suggesting that everyone within 50 miles of the Indian Point nuclear plants be evacuated in case of a serious nuclear accident. That would include most of New York City's 8 million residents.

Federal regulators said the existing 10-mile rule is sufficient.

Six Westchester County lawmakers proposed a resolution that would be forwarded to a long list of officials including President Barack Obama. They noted that the Nuclear Regulatory Commission recommended that U.S. citizens stay at least 50 miles away from the plant in Japan that was damaged by an earthquake and tsunami.

However, the NRC said Tuesday that the 50-mile advisory was issued based on limited data and conservative assumptions. It said the 10-mile zone around U.S. reactors is based on extensive planning studies.

No Need To Expand Indian Point Evacuation Zone, NRC Says (KINGSTON)

Kingston (NY) Daily Freeman, April 6, 2011

BUCHANAN — The Nuclear Regulatory Commission said on Tuesday that it sees "no basis at this point" for expanding the size of the evacuation zone around the Indian Point nuclear power plant in Westchester County or any other nuclear site in the country.

In light of the current nuclear crisis in Japan, the Westchester Board of Legislators has been preparing a resolution calling on the federal agency to expand Indian Point's evacuation area, formally known as an Emergency Planning Zone, from the current 10-mile radius to a 50-mile radius.

Westchester's proposed evacuation area would include all of New York City, the northern border of which is just 25 miles south of Indian Point, and would get within 10 miles of Kingston, which is about 60 miles north of the plant.

The Nuclear Regulatory Commission said it will not change the 10-mile zone but noted a wider evacuation area could be mandated if a situation warrants it. Also, commission spokesman Neil Sheehan said the radius could be studied further.

Indian Point's 10-mile evacuation zone has been in place since the 1970s and was the result of extensive emergency planning studies performed by a federal task force, the nuclear agency said. That group concluded a 10-mile radius evacuation zone would assure that "prompt and effective actions can be taken to protect the public in the event of an accident" at the plant.

The study was based on research showing "the most significant impacts of an accident would be expected in the immediate vicinity of a plant, and therefore, any initial protective actions, such as evacuations or sheltering in place, should be focused there."

The desire among Westchester leaders to widen Indian Point's evacuation zone is based, in part, on the Nuclear Regulator Commission's suggestion that all Americans within 50 miles of Japan's crippled the Fukushima Dai-ichi nuclear plant evacuate. That plant, however, has three hobbled reactors, while there is only one reactor at Indian Point.

Also, the federal agency noted it had to issue its Japan advisory based on "limited data and conservative assumptions."

NRC Backs Indian Point Safety Zone (MTWNHER)

10-mile evacuation radius OK, commission says - despite Japan

By Adam Bosch

Middletown (NY) Times Herald-Record, April 6, 2011

BUCHANAN — Ten miles is fine.

That's what federal regulators said Tuesday about the Emergency Planning Zone around the Indian Point nuclear plant — a 10-mile radius established in the 1970s that includes parts of southeastern Orange County.

Environment groups and elected officials have called for extending the zone in light of the nuclear disaster in Japan. Experts from the United States said Japan should have evacuated residents in a 50-mile radius.

Federal officials said a bigger safety zone isn't needed around Indian Point. The Nuclear Regulatory Commission said the 10-mile zone would evacuate those who faced the most significant threat in a nuclear accident.

The commission said those outside the zone were not expected to confront dangerous levels of radiation "under most accident scenarios."

Supporters of a wider emergency zone said the commission's reasoning is flawed. They want a zone that covers all accident scenarios at Indian Point, not just most of them.

Deborah Brancato, staff attorney at the watchdog group Riverkeeper, said the Japanese disaster already has showed radiation can travel farther than 10 miles by air.

"It just shows they're not looking at a worst-case scenario," Brancato said of the commission's statement. "The worst-case scenario is no longer a theoretical — it's a reality."

The 10-mile zone covers more than 414,000 people in Orange, Putnam, Rockland and Westchester counties. A 50-mile radius such as endorsed for Japan would encompass roughly 20 million people, including most of New York City, Long Island and parts of Connecticut and New Jersey.

Westchester Legislators Want 50-mile Indian Point Evacuation Zone (WESTJN)

By Greg Clary

Westchester Journal News, April 6, 2011

WHITE PLAINS — Some Westchester lawmakers want their counterparts in Congress to push for enlarging the 10-mile evacuation zone around Indian Point to 50 miles, a move County Executive Rob Astorino says is premature.

If the request becomes law, it would force emergency officials from the nuclear plant and surrounding communities to include the New York City metro area in all of its planning.

"Wake up New York. Wake up Connecticut. Wake up New Jersey," said Legislator Michael Kaplowitz, D-Somers. "Based on what's happened in Japan, we are now on notice that if something untoward happens at Indian Point...up to 50 miles or 20 million Americans could be affected."

Kaplowitz, who chairs the Westchester County Board of Legislators Committee on Environment & Energy, announced that lawmakers will work to put the new legislation up for a local vote to strengthen their efforts to get Congress to force the Nuclear Regulatory Commission and the Federal Emergency Management Agency to expand the zone.

If Congress won't make the change for the whole country, Kaplowitz said, then it should create a "New York exemption" for Indian Point.

Astorino spokesman Ned McCormack said the Westchester leader wants more answers before lobbying for a bigger zone.

"Safety is always the paramount concern at Indian Point," McCormack said after a meeting with New York Mayor Michael Bloomberg on issues including Indian Point. "Any discussions calling for a 50-mile evacuation zone at this point are premature. Now is the time to gather information so that any decisions made are based on the best facts available and not emotion."

Officials from Entergy Nuclear, owners of Indian Point, said Kaplowitz is really pushing against nuclear energy.

"This is simply a ploy by a long-time anti-nuclear activist to exploit the tragedy in Japan to further his own agenda of closing an important part of N.Y. state's energy infrastructure," said Entergy spokesman Jerry Nappi. "If there develops a consensus among scientists and other experts, and our federal regulator required a change to our existing emergency planning programs, we would of course implement it."

NRC officials have said clearly that they will do whatever Congress tells them. They don't agree, however, that the 10-mile zone should be increased.

"The NRC sees no basis at this point for expanding the 10-mile-radius Emergency Planning Zone (EPZ) around U.S. nuclear power plants," said agency spokesman Neil Sheehan. "That does not mean the protective actions could not expand beyond the 10-mile radius. Indeed, U.S. nuclear power plants are required to consider and drill for the possibility of radiation releases that could have impacts up to 50 miles away."

Rep. Nita Lowey, D-Harrison, said late yesterday she supports the expansion, has raised it with FEMA and the NRC, and would be taking the 50-mile radius map with her to a Homeland Security subcommittee hearing today as a visual aide.

"In Japan, NRC was quick to recommend evacuation of Americans within 50 miles of the nuclear facility," Lowey said. "We should be prepared to apply the same standard at Indian Point."

Sheehan said the Japan advisory was made using limited data and conservative assumptions.

Proposal To Extend Indian Point Evacuation Plan After Japan Scare (WABC)

By Scott Curkin

WABC-TV New York City, April 6, 2011

WESTCHESTER COUNTY (WABC) – In the aftermath of the nuclear power plant crisis in Japan, some legislators in Westchester county want plans drawn up for a bigger evacuation zone around Indian Point if something should go wrong.

They want to draw up plans for a 50 mile evacuation which would include New York City, Long Island and parts of New Jersey.

Current plans cover a ten mile area.

They're sounding the alarm figuratively in the event these sirens literally go off during an emergency.

Current federal guidelines require evacuation plans for a 10-mile radius around nuclear reactors: At Indian Point that area includes four counties in New York and a population of 480,000.

Expanding the zone to 50-miles would encompass parts of four states and 20 million people.

Lawmakers say they find it odd Americans in Japan were warned to move 50 miles from the crippled Fukushima Daiichi plant by the same U.S. regulators who set the 10 mile limit here.

In a statement the NRC claims a federal task force concluded a 10-mile-radius emergency planning zone would assure that "prompt and effective actions can be taken to protect the public in the event of an accident" at a plant.

The NRC says the area could always be expanded if warranted. An Indian Point spokesman says the proposed legislation is politically motivated.

Emergency Services Commissioner Battles Westchester County Board Over Indian Point Evacuation Plan (CBSNY)

CBS New York, April 6, 2011

BUCHANAN, NY (CBSNewYork) - To some, having school kids brought to one location and their parents evacuate to another might not seem like a good evacuation plan for the Indian Point nuclear power plant.

WCBS 880's Catherine Cioffi: Emergency Commissioner Says They'll Follow The NRC's Lead

But Westchester County emergency services commissioner Tony Sutton says the evacuation plan is sound.

"You can never have a plan that's gonna cover every single scenario, but by the planning process, you develop the ability to address contingencies and to develop on them on the fly," says Sutton. "I know lots of people want to see action and deliberate action, but it's very early in this event."

"Our primary responsibility is to protect the health and safety of the citizens of our county and that's what we do every day," said Sutton. "But I can tell you right now that the plan works the way we have it."

That's a statement some county lawmakers just aren't comfortable with.

As for expanding the evacuation zone beyond ten miles, Sutton testified before the county Board of Legislators that they'll do whatever the Nuclear Regulatory Commission asks of them.

WCBS 880's Catherine Cioffi: 20 Million People Live Within 50 Miles

On Tuesday, some Westchester County lawmakers called for the Indian Point emergency evacuation zone to be expanded from ten miles around the plant to 50 miles around the plant.

The Indian Point evacuation map is seen at the Westchester County Board of Legislators - White Plains, NY - Apr 5, 2011 - Photo: Catherine Cioffi / WCBS 880

"Given the population size and density, it is absolutely critical that there be a fifty mile zone," says County Legislator Mike Kaplowitz, who adds that the 20 million people who live in the 50-mile radius around the plant need to be protected. "If there is a risk and public safety potentially being imperiled, our job is to do something about it."

Meanwhile, NRC officials say they see no basis for the expansion.

Questions Raised About Nuclear Safety (KVNO)

By Ben Bohall

KVNO-FM Omaha, April 5, 2011

Omaha, NE – The aftermath of Japan's recent nuclear crisis has left many in the United States questioning the overall safety of nuclear power plants across the country, including here in the heartland.

On March 17th, President Barack Obama made the announcement that in light of the recent radiation leaks at the Fukushima Nuclear Power Plant in Japan, the Nuclear Regulatory Committee would conduct a comprehensive review on the safety of nuclear plants throughout the United States.

That review led to a hearing on March 29th before the Senate Energy Committee on nuclear safety and how to prevent an incident similar to Fukushima's. Several expert panelists testified at the meeting, including David Lauchbaum, the Director of Nuclear Power Projects with the Union of Concerned Scientists. Lauchbaum voiced concerns about the similarities between many nuclear power plants within the U.S. and Fukushima.

"There are lessons that can and should be applied to lessen the vulnerabilities of U.S. reactors," said Lauchbaum. "I cannot emphasize enough that the lessons from Japan apply to all U.S. reactors, not just the boiling water reactors like those affected at Fukushima. None are immune to station blackout problems, all should be made less vulnerable to those problems."

Duane Arnold Energy Center (Photo courtesy Wikimedia, Jssteinke)

One of those dangers, according to Lauchbaum, includes increases in potential power output increases at plants in the United States. The NRC has allowed stations to increase their output as long as they pass safety checks. One of the stations that recently requested to increase its power output is the Duane Arnold Energy Center in Palo, Iowa. The plant has a GE Mark 1 reactor, a very similar design to that of the Fukushima Daiichi 1 Unit. That unit exploded and released radiation from the plant on March 13th as a result of complications brought on by Japan's recent earthquake and tsunami.

Over time, Iowa's plant has increased its power output by 20 percent – a 15 percent increase came in 2001 alone. Viktoria Mitlyng is the Senior Public Affairs Officer for the Duane Arnold Energy Center. She said the increase approval process through the NRC is actually a lengthy one.

"It has to undergo a rigorous review process," pointed out Mitlyng. "To the extent in which all of the necessary issues have been addressed, and the NRC is satisfied that the plant will continue to operate safely, permission is granted for a power upgrade."

Some groups like the Advisory Committee on Reactor Safeguards have voiced concerns at the ease in which the NRC grants permission to increase power. Questions have also been raised about financial motives possibly outweighing safety factors. But Mitlyng said modifications are put into place at the plants in order to accommodate the power increase in several forms.

"If you are increasing power by something like 15 to 20 percent, you are talking about increase in wear and tear on the equipment," said Mitlyng. "There's more vibration, more steam going through the pipes, the turbine is working harder, the cooling is working harder, backup safety systems need to be taken into account in case there is an unexpected dangerous condition. So, all of those conditions are taken into account."

Fort Calhoun's Nuclear Power plant in Nebraska is also currently planning a power increase, although its design is not the same as that of the GE Mark 1 reactor.

On April 28th, the Duane Arnold Energy Center will be holding its annual Plant Performance Assessment meeting. That meeting will be open to the public to give residents a chance to voice their concerns about the safety of nuclear power plants in their backyards.

Cracks In Progress' Nuclear Unit (ZER)

Zacks Equity Research, April 5, 2011

Progress Energy Inc.'s (NYSE: PGN - News) Florida subsidiary has informed state and federal regulators that its Crystal River Nuclear Plant will remain shut for repairs as they have discovered a new gap in the wall of the containment building last month. The company informed the Nuclear Regulatory Commission (NRC) and the Florida Public Service Commission (FPSC) that it will restart the plant only after complete review and repair of the defect.

Progress Energy said it is now conducting a thorough engineering analysis and review of the new separation, while also analyzing the options to bring the plant back to service. However, the company said that the exact time for reopening the plant cannot be ascertained at this time.

The new gap discovered in the wall of the nuclear plant's containment building, in mid March, forced the company to suspend the restoration work at the plant. Progress Energy said it was in the final stages of completing the complex task of tightening structural cables, which would have brought an end to the already in force 18-month plant outage. Before discovering this new gap, Progress had planned to begin the restart process in April.

Progress Energy said the plant was actually shut down for refueling and maintenance in September 2009. When the work of refueling and replacement of steam generators was in progress, in late 2009, the contractors discovered a fissure in the wall of the containment building, which was opened to facilitate the replacement of the steam generators.

This further extended the plant outage, which was originally scheduled for a three month outage. The repair effort has forced the utility to buy a replacement power to serve its 1.6 million Florida customers.

Progress Energy said it has spent about \$150 million on the repair work and about \$290 million on replacement power costs as of year-end 2010. Of this, the company said the insurance company has paid nearly \$64 million of the repair cost and about \$171 million of the replacement costs.

Located near Crystal River, Florida, the 860 MW Crystal River Nuclear Plant has been an important asset in providing carbon-free, reliable power for decades to Progress Energy's Florida customers. The plant has been operational since March 1977. Its current license expires in 2016. The company has filed for license renewal with the NRC in 2008, requesting an additional 20 years of operation.

Raleigh, North Carolina-based Progress Energy Inc. is an energy utility engaged in regulated electricity operations in the southeastern U.S. The company also has certain non-regulated businesses. Progress Energy is a holding company, comprising two electric utilities, serving 3.1 million customers in North Carolina, South Carolina and Florida. The company primarily competes with NextEra Energy Inc. (NYSE: NEE - News) and Southern Company (NYSE: SO - News).

Progress Energy Inc. currently retains a Zacks #3 Rank (short-term Hold rating). This supports our Neutral recommendation on the stock.

Crystal River Nuclear Plant To Remain Shut Down (ORS)

Orlando Sentinel, April 6, 2011

Crystal River nuclear plant to remain shut down

The ongoing saga of repairs at Progress Energy's nuclear power plant in Crystal River will continue as the company plans to further analyze damage to the reactor's containment structure. The plant was shut down for regular maintenance in September 2009 and some cracks in the containment wall were found. Several target dates to reopen the plant have come and gone with the latest being an announcement Monday that further work was needed. The North Carolina

The ongoing saga of repairs at Progress Energy's nuclear power plant in Crystal River will continue as the company plans to further analyze damage to the reactor's containment structure.

The plant was shut down for regular maintenance in September 2009 and some cracks in the containment wall were found. Several target dates to reopen the plant have come and gone with the latest being an announcement Monday that further work was needed. The North Carolina-based company's news release gave no new target date for the plant, about 80 miles from Orlando, to come back on line.

Last week I wrote about how Progress Energy was under increased pressure on its nuclear projects as a result of the crisis in Japan and a waning financial appetite for the power source in the United States over the last few years.

The problems at Crystal River, which were detected when the plant was already taken down for routine maintenance, are proving to be expensive.

The latest release from the company shows just how much it is costing. The total so far is \$440 million, with \$290 million of that amount resulting from the need to buy power to serve customers from more expensive sources while the nuclear reactor is

idle. The company's insurance has covered \$181 million of the total, leaving it to continue to be a drain on the company's finances. Progress Energy plans to be acquired by Duke Energy, also of North Carolina, by the end of the year.

Utility Shuts Troubled Fla. Plant For Inspections (GWIRE)

By Hannah Northey

Greenwire, April 6, 2011

Progress Energy Florida is shuttering its 860-megawatt Crystal River nuclear plant for inspections following the discovery of two gaps in the plant's concrete containment building.

Progress notified the Nuclear Regulatory Commission yesterday that the pressurized water reactor will be out of service while the company conducts an engineering analysis. The reactor and four adjacent coal units generate 3,151 megawatts about 80 miles north of Tampa.

"Options to return the plant to service will be analyzed after the report is complete," Progress said in a statement.

Progress shut down the reactor in 2009 for refueling and to replace the facility's giant steam generators, a process that the company expected to take three months, spokeswoman Jessica Lambert said.

The first gap in the containment wall was discovered in 2009 when Progress replaced steam generators inside the large concrete building that houses the entire reactor system.

The company cut the 42-inch containment wall to remove the generators and noticed the gap. The wall contains steel cables and provides extra protection from any internal pressure.

Last month, NRC canceled a meeting to restart the reactor after finding a second gap in the containment wall (E&ENews PM, March 18).

Progress said it is continuing to coordinate repairs and restart plants with NRC and that the plant is currently in "shut down" condition.

As of last December, the company had spent \$150 million on repairing the wall and an additional \$290 million to replace power the reactor would have produced. Progress has received \$181 million in insurance to cover the expenses and is continuing to file additional claims, Lambert said.

Regulators say it is too early to determine whether the shutdown will affect the company's relicensing application. Progress submitted a relicensing application in December 2008 to operate the plant for an additional 20 years; the current application expires in 2016.

Progress Energy May Leave Fla. Reactor Shut Down (CLTBIZJ)

By John Downey

Charlotte (NC) Business Journal, April 6, 2011

Progress Energy Florida has announced it is conducting a thorough engineering analysis and review at its Crystal River nuclear plant that could result in closing down the 860-megawatt facility.

"We are looking at all options," says Progress spokeswoman Jessica Lambert.

The plant has not operated since September 2009, when Progress started work on replacing steam generators in the plant. That work caused damage to the containment building several weeks later. The company has missed several targets for completing repairs and restarting the plant.

Until March, Progress had hoped to restart the plant this month. Then the company discovered there was evidence of further separation in the walls for the containment building. No threat

That discovery led to Progress' decision for a complete review of the plant's condition. Lambert says the company will conduct an engineering study, a cost-benefit analysis and also review the situation from a legal, financial and regulatory perspective.

Progress stresses that the plant has been shut down since before the damage occurred. The company says the plant is safe and there is no threat to the public.

Through the end of last year, Progress had spent \$150 million on repairing the plant and \$290 million more to buy power to replace what the plant would have generated.

The company has insurance against property damage and the cost of buying replacement power, above what it would have cost to generate it. To date, the insurer has paid \$181 million, with \$117 million covering the cost of replacement power and \$64 million on repairs. 'Systematic review'

"The Crystal River Nuclear Plant has been an important asset in providing carbon-free, reliable power for decades to our customers," Vincent Dolan, president and chief executive of Progress Energy Florida, says in a written statement. "We are doing a careful and systematic review of the new (containment building problems) and the options to return the plant to service."

Progress operates utilities in the Carolinas and Florida. It is based in Raleigh.

Charlotte-based Duke Energy proposes to buy Progress for \$13.8 billion in a stock swap that Duke hopes to complete by the end of the year. 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.](#)

Nuclear Power Meeting Draws Dozens (KWQCTV)

[KWQC-TV Davenport, IA](#), April 6, 2011

In the wake of Japan's nuclear crisis there is concern about nuclear plants in the U.S. and even the Exelon plant in Cordova. Organizers of a meeting Tuesday to discuss the safety at the Cordova nuclear plant expected more interest because of that, and they got it. Dozens showed up at the open house style meeting with questions and concerns.

It's supposed to be an opportunity for the public to hear about the Exelon plant's safety record for the past year. The meeting happens annually but in the past, no one from the community really came. "We believe there is some additional interest in peoples minds based on circumstances in Japan," said Bill Stoermer, Communications Manager for Exelon's Quad Cities Generating Station.

Representatives with the Nuclear Regulatory Commission were there to answer questions on the plants in both Japan and Cordova. "The age of the plant is a good one. What they have to say about that and how much longer it's going to last," said Cordova resident Morrie McLaughlin. Both units began operation in 1973. The current operating license expires in 2032.

Irvin Huebner wanted to know about security and procedures in case of a meltdown because, he too, lives just miles away in LeClaire. "We're within the circle, don't know how far, but we're within it. It doesn't ever bother me but it's good to know," said Huebner.

"How they do their cooling, how they do get rid of all the radiation, and how important it is their regulation," was what Peter Becktel of Clinton was wondering. There are multiple backup systems for cooling and the structure is built to withstand the highest natural phenomenon in this area, plus more. But could what happened in Japan happen here? NRC officials say, because of regulations, it's extremely unlikely. However, if there were to be a huge explosion or accident like in Japan, it is possible.

The NRC also had information on the Exelon plant's yearly review. It determined that overall, the Quad Cities station operated safely in 2010. It was ranked in the top of five performance columns. "There are about 2,000 hours of inspection per plant, per year. Our inspectors are looking at various safety systems, structures and programs," said NRC spokesperson Viktoria Mitlyng, "There have not been major findings, major issues, no cultural cross-cutting issues. The plant has been performing safely." There are two, full-time inspectors who work as the NRC's eyes and ears at the Cordova plant everyday.

In Wake Of Japan, Cordova Nuclear Forum Attracts Curious (QUADCITY)

By Thomas Geyer

[Quad-City Times](#), April 6, 2011

CORDOVA, Ill. - As Dwayne Luebbe of Davenport walked around the Cordova Civic Center, he carefully looked over the exhibits created by Exelon Corp. to show its nuclear power plant near the Mississippi River here.

About 30 people came to Tuesday's open house, hosted by the U.S. Nuclear Regulatory Commission.

"I'm sure many people are here with questions since that situation in Japan," Luebbe said, speaking of the March 11 earthquake and tsunami that severely damaged the Fukushima Dai-ichi nuclear power plant.

"I've learned some things," he said.

Luebbe, 76, said nuclear reactors are "the most economical way to get the power we need."

Nuclear also seems to be safe, he added. There simply was no way to predict the 9.0 earthquake coupled with a tsunami that struck Japan.

Bill Stoermer, communications manager for Exelon's Quad-Cities Generating Station, explained that the earthquake did not damage the Fukushima plant.

"The power plant did what it was supposed to do," he said. "It was the tsunami that went beyond the plant's design capacity."

Viktoria Mitlyng, senior public affairs officer for the Nuclear Regulatory Commission, said inspectors at the Cordova facility always learn something from the experiences of other nuclear plants around the globe.

"There are two resident inspectors at the plant," said Mitlyng, who was born and raised with 60 miles of the nuclear plant that exploded April 26, 1986, in Chernobyl, Russia. "Their job is to be invasive, annoying, to poke and prod and ask questions."

She said Exelon's Cordova facility has an excellent history and rating for safety and security in its daily operation.

Mark Ring, an inspector with the Nuclear Regulator Commission, said there are things the U.S. is learning from Japan's disaster.

That is why inspectors always are asking, "If this thing happens, what are you going to do," he said. "In the wake of 9/11, security also was changed. People had thought of new ways to damage things. We have to think of the unexpected."

Mitlyng said there also are redundant systems at nuclear power plants that provide multiple levels of protection. If one system fails for any reason, another takes over in its place.

Two students from Ashford University in Clinton, Iowa, attended the open house.

Peter Bechtel, 22, of Toronto, Ontario, Canada, a sports and recreation management major, came to get credit for his environmental chemistry class. His friend and fellow student, Andy Kavanagh, 20, of Dublin, Ireland, also a sports and recreation management major, tagged along. Both are soccer players.

"I don't know that we have any nuclear power plants around Toronto," Bechtel said.

Like many people, he said he never thought of nuclear power plants until the Japan disaster.

Kavanagh said he does not know of any nuclear plants in Ireland. "But there are some in England, so if something happened, we'd still get some effects," he said.

Neither of the students seemed concerned about any dangers.

"I feel that unless something like Japan happens, nuclear power plants are hush-hush," Bechtel said.

Exelon, NRC Calm Nuclear Concerns (WQAD)

WQAD Davenport (IA), April 6, 2011

CORDOVA, IL—

As we watch the Fukushima nuclear disaster overseas, all eyes are on our nuclear facilities here in the U.S.

Tuesday, the Nuclear Regulatory Commission gave concerned residents an assessment of the Cordova plant.

The purpose of the town hall was to give people an idea of what happens at nuclear power facilities and what kind of oversight is involved.

They did that by providing brochures and graphical displays.

A lot of people showed up, they say, because of what happened in Japan.

"Just hope and pray they make it safe," said Mary McCarthy, who lives near the plant.

According to the U.S. Nuclear Regulatory Commission, the Exelon Nuclear plant in Cordova is safe.

"I think people should feel safe because the plant is operating safely and as a regulator, their safety is our number one priority.

It's our mission," said Viktoria Mitlyng, Sr. Public Affairs Officer with the U.S. Nuclear Regulatory Commission.

Part of making it safe, according to Mitlyng, is having a system of redundancy in place.

"If one system fails, you have another one," she said. "There are multiple levels of protection, so you don't get to the kind of accident you have in Japan."

The NRC thinks it's highly unlikely, something like Japan's accident, will happen here.

"It's just not really feasible geographically around the QC."

There's actually only been one level 5 nuclear accident in this country- Three Mile Island.

It happened in Pennsylvania in 1979.

Exelon now operates one of two reactors there.

The company didn't operate the reactor at the time of the accident, but has taken away invaluable lessons from that disaster.

"A lot of the modifications today are a result of lessons learned at Three Mile Island," said Bill Stoermer, Communications Manager with Exelon.

PSC Stalls Key Money Decision On Ga. Nuclear Plant (AP)

By Ray Henry

Associated Press, April 6, 2011

ATLANTA (AP) – The state's top utility regulators indefinitely postponed a big financial decision Tuesday that could have trimmed Georgia Power's earnings if costs escalate on what may become the country's first brand-new nuclear plant in a generation.

Instead of deciding the long-delayed issue, the elected members of the Public Service Commission voted unanimously to allow another delay so the Atlanta-based Southern Co. can file its own risk-sharing plan and offer more testimony on accounting rules. The issue has dragged on for more than two years without resolution.

PSC Chairman Stan Wise, who introduced the motion to take more testimony, said there is no rush.

"We're on time, we're on budget," Wise said, referencing the latest reports from the construction site. "There's absolutely no reason we can't put this off for another month or so."

Wise said he wants to make a final decision in a matter of months, but he conceded the process may take longer. A lengthy delay could push the commission's decision closer to the start of major construction at Plant Vogtle, which could begin after the U.S. Nuclear Regulatory Commission decides whether to license the plant, possibly later this year.

It remains unclear whether an ongoing crisis at the Fukushima Dai-ichi nuclear plant in Japan could affect the project's schedule. A March 11 earthquake and tsunami apparently disabled the plant's cooling systems, leading to radioactive releases. Federal safety regulators are reviewing whether U.S. nuclear plants need changes in the aftermath of the disaster in Japan.

The first two reactors at Plant Vogtle demonstrate how costs can skyrocket while building nuclear power plants. Georgia Power originally estimated the project would cost \$660 million. But the final bill reached nearly \$9 billion by the time the reactors started producing commercial power in 1987 and 1989. Utility customers paid for the bulk of those costs.

Citing that experience, PSC staff members have proposed a carrot-and-stick plan giving Georgia Power a financial incentive to keep costs under control. Under the plan, if construction bills on the new reactors exceed \$6.4 billion, then regulators would trim the money Georgia Power can make off the new reactors. If the project costs less than \$5.8 billion, the company could earn more money off its new reactors.

The utility would not be held responsible if NRC safety regulators change the rules for building nuclear plants, resulting in higher costs. Safety changes required after the 1979 accident at the Three Mile Island nuclear plant in Pennsylvania raised the cost of construction throughout the industry.

This debate has simmered for more than two years without a decision.

PSC staffers proposed a similar concept before the elected commissioners allowed Georgia Power to pursue the Plant Vogtle expansion on March 17, 2009. In its order, the commissioners directed their staff and the utility to draft a risk-sharing plan and report back within 180 days. An agreement was never struck.

Last year, the Southern Alliance For Clean Energy, a project critic, accused Georgia Power of negotiating in bad faith and urged the commission to impose a risk-sharing deal to protect customers. In response, the commission told Georgia Power to keep negotiating. It instructed its staff and the company to file separate plans by December if they could not reach a deal.

Once again, neither side could agree.

Georgia Power did not file its own risk-sharing proposal in December. Since then, the company said it's been unable to negotiate a compromise. It calls the current plan illegal and said it would unfairly penalize the utility for construction problems that are beyond its control. The firm also raised last-minute objections, saying that accounting rules would force the company to take a write-off if the proposal passed.

Although the company had not raised that argument in previous testimony, the commissioners decided to explore it.

"We're comfortable with the commission's decision," Georgia Power spokesman Jeff Wilson said. "Their decision to make sure they understand all the implications of this proposal is certainly prudent."

The commission's vote to reexamine the case may not bode well for consumers, said Clare McGuire, director of the consumer energy program at Georgia Watch, which supported the risk-sharing proposal.

"It seems to be sort of a do-over for Georgia Power," she said.

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PSC Delays Vote Again On Nuke Risk-sharing (AJC)

By Margaret Newkirk

Atlanta Journal-Constitution, April 6, 2011

For the fourth time in two years, the state Public Service Commission delayed a decision Tuesday on a proposal to trim Georgia Power profits if its Plant Vogtle nuclear expansion goes too far over budget.

The measure's supporters questioned whether regulators really are in control of the issue.

Commissioner Stan Wise, who proposed the latest delay, said Georgia Power raised new accounting issues last week that will require the PSC to reopen hearings and examine new evidence on the cost-containment plan.

"It is important that we look at these issues," Wise said.

"Georgia Power is gaming this commission," said Stephen Smith, of the Southern Alliance for Clean Energy. "Its really challenging the fundamental premise of who's in charge here."

Angela Speir Phelps, who heads consumer group Georgia Watch, said the delay is "a second chance for the utility to raise new arguments."

Georgia Power spokesman Jeff Wilson said the company didn't raise the accounting issue earlier because it assumed the PSC staff would be aware of them.

At issue is how to deal with potential cost overruns as the heavy construction part of the \$14 billion project to build new reactors inches closer.

Georgia Power customers began paying financing costs for the project in January, and will pay for the construction itself after the reactors are finished in 2016 and 2017.

The PSC has certified \$6.1 billion as the utility's allowed costs for the project, with the rest of the money coming from electric co-ops and city-owned power companies.

The staff proposal would shave Georgia Power's allowed profit margin on the project if it runs more than \$300 million over budget, and boost its allowed profits if it beats budget by the same amount. The utility would lose \$300 million in profits on the reactors over a 30-year time period, for instance, if the project went \$900 million over budget.

The utility says the proposal is illegal and unnecessary and would punish shareholders for cost overruns outside its control.

The PSC delayed action in 2009 and asked its staff and Georgia Power to come up with a compromise last summer. Only the staff submitted a proposal, which was on the table Tuesday.

Last week the company said the proposal would require parent Southern Co. to report all profits lost over the reactor's life in one reporting quarter, skewing its financial results.

PSC Postpones Decision On Vogtle Risk-sharing (AUGC)

By Walter Jones

Augusta Chronicle, April 6, 2011

ATLANTA -- Georgia Power customers will have to wait to see if they'll be sharing the risk of construction costs overruns with the company's investors for two nuclear reactors at Plant Vogtle near Augusta after the Public Service Commission today postponed its decision.

The five commissioners unanimously supported scheduling a hearing at some future date that will allow experts to testify about the company's assertion that industry accounting guidelines limit the PSC's legal options.

At issue is a proposal by the PSC staff that the company not be allowed to make the same profit on construction costs that exceed by more than \$300 million the \$6.4 billion budget for the reactors. The commission already has authority to completely disallow charging customers for any unnecessary expenses.

The company argues that since Georgia law requires customers to pay all legitimate expenses, that includes financing costs. Having adequate profits to entice investors to use their money in financing the project is just as much a construction cost as the actual concrete and steel and therefore must be passed on to electricity customers, according to the company.

Commission Chairman Stan Wise recommended postponing Tuesday's scheduled vote on the staff's risk-sharing recommendation.

"Clearly, there is no urgency for us to act because we are on time and on budget," he said.

The commission has hired a consultant – at Georgia Power's expense – to stay on the construction site and monitor expenses. Also, the company submits monthly reports which the commission approves every six months. The first three of those semi-annual approvals have been granted, and the next is up for consideration this summer.

Commissioner Tim Echols voted with his colleagues on the delay and hearing but not before sounding skeptical about the benefits.

"The company seems to have made it very clear that they are not interested in negotiating," he said.

Since February, Georgia Power lawyers and members of the commission staff have been in talks about how to design a risk-sharing plan. The company never presented a proposal, instead taking a stance opposed to any risk sharing based on actual costs.

During a committee meeting last week, Georgia Power attorney Kevin Greene told the commissioners, "We just couldn't get there because we continue to maintain that a properly structured incentive plan should be directed toward the conduct of the company, not simply the results."

Georgia Regulators Question Vogtle Nuclear Reactor Cost Plan (POWGENWLD)

Power-Gen Worldwide, April 6, 2011

Georgia regulators ordered Southern Co. operating unit Georgia Power to show why its profit margin should not be reduced if the proposed addition of two nuclear reactors at its Plant Vogtle site goes over budget.

Regulators were to vote April 5 on a risk-sharing plan recommended by the agency's staff. According to the Atlanta Business Chronicle, the plan calls for trimming Georgia Power's profit margin on the project if construction costs rise \$300 million or more above the utility's planned \$6.1 billion investment. If the project comes in \$300 million or more under budget, Georgia Power would be allowed a higher profit margin.

But in a letter to the PSC dated March 29, an attorney representing Georgia Power argued the risk-sharing plan is illegal because it would penalize the utility for results beyond its control and disallow costs already approved by the commission as prudently incurred.

In a response dated March 30, regulatory commission staff lawyers argued that Georgia law provides "ample authority" for the commission to adopt a risk-sharing plan.

Regulators reportedly voted April 5 to order Georgia Power to defend its position and the staff to file a response to the utility's argument.

After the two sides have made their arguments, the regulators will hold a hearing and render a decision.

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PSC Delays Vote On Plant Vogtle (ATLBIZ)

By Dave Williams

Atlanta Business Chronicle, April 6, 2011

The Georgia Public Service Commission Tuesday ordered Georgia Power Co. to show why its profit margin should not be reduced if the expansion of nuclear Plant Vogtle goes over budget.

The PSC was due to vote on a risk-sharing plan recommended by the agency's staff that calls for trimming Georgia Power's profit margin on the project if construction costs rise \$300 million or more above the utility's planned \$6.1 billion investment. Likewise, if the project comes in \$300 million or more under budget, Georgia Power would be allowed a higher profit margin.

But in a letter to the PSC dated March 29, attorney Kevin Greene of Troutman Sanders LLP, representing Georgia Power, argued that the risk-sharing plan is illegal under state law because it would penalize the utility for results that are beyond its control and disallow substantial costs already approved by the commission as "prudently incurred."

In a response dated March 30, PSC staff lawyers argued that Georgia law provides "ample authority" for the commission to adopt a risk-sharing plan.

On Tuesday, commissioners voted unanimously for a motion proposed by PSC Chairman Stan Wise ordering Georgia Power to submit testimony defending its position and the PSC staff to then file a response to the utility's argument.

"This is a huge issue," Wise said. "The commission needs to fully explore what these issues are."

Under Wise's motion, after the two sides have made their arguments, the PSC will hold a hearing and render a decision.

The two additional reactor units at the plant near Augusta are due to be completed in 2016-17.

Georgia Power, a unit of Southern Co. (NYSE: SO) is building the \$14 billion Vogtle expansion in a partnership with Oglethorpe Power Corp., the Municipal Electric Authority of Georgia and Dalton Utilities.

Commissioners Delay Action On Risk Sharing Mechanism (PEACHTR)

Ratepayers Remain In Limbo On Cost Control Protection for Vogtle Construction

Peachtree Corners (GA) Weekly, April 6, 2011

ATLANTA, Ga., (April 5, 2011) – The Public Service Commission voted today to delay action on the adoption of a cost control plan for two new reactors at Plant Vogtle.

The five commissioners decided unanimously that a further hearing was necessary to explore accounting issues raised last week by Georgia Power's attorney in a letter to the Commission.

PSC Staff will make a recommendation regarding dates for the filing of testimony and a hearing date at the PSC's regularly scheduled Energy Committee meeting next Thursday, April 14th.

"This second round of hearings is simply a second chance for Georgia Power to raise new arguments. We hope this new hearing will result in fairness to all parties and a decision that protects ratepayers," said Georgia Watch Executive Director Angela Speir Phelps, herself a former Public Service Commissioner.

PSC Staff has urged commissioners to adopt a risk sharing mechanism (RSM) that encourages Georgia Power to finish the new units on time and under budget. The Staff RSM calls for a slightly lower profit margin for Georgia Power if construction costs rise above \$6.4 billion, or \$300 million over budget. It also calls for a slightly higher profit margin if construction is completed on time and under budget.

Georgia Watch supports the adoption of Staff's RSM as a way to better align the financial interests of ratepayers and Georgia Power shareholders.

Georgia Power has come out strongly against the plan, 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 at the PSC's March 31st Energy Committee meeting last week.

Plant Vogtle's first two units, which came online in the late 1980s, were originally budgeted at about \$1 billion. But regulatory hold-ups caused project costs to soar. The final bill ultimately clocked in at \$9 billion.

Georgia Power is now 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.

"Without a risk sharing mechanism, customers would be unfairly exposed to potentially ballooning costs. Ratepayers should not be solely responsible for cost overruns," said Georgia Watch Consumer Energy Program Director Clare McGuire.

Under Staff's RSM proposal, Georgia Power would still recover from ratepayers all cost overruns deemed prudent by the Commission. The only difference is how much profit Georgia Power would be allowed to collect on these overruns. Under Staff's proposal, if total construction costs for the two new reactors falls between \$5.8 billion and \$6.4 billion, Georgia Power would collect its normal allowed profit margin: 11.15 percent. If total construction costs increase 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. On the other hand, if Georgia Power finishes construction at a final cost below \$5.8 billion, its allowed profit margin would jump to more than 12 percent. The two new units – Vogtle units 3 and 4 – are scheduled for completion in 2016-17.

PSC Delays Vote On Nuclear Cost Check (GPB)

By Melissa Stiers

Georgia Public Broadcasting, April 6, 2011

ATLANTA —

State regulators have delayed vote on a plan to protect consumers from cost over-runs at Plant Vogtle.

The proposal would tie Georgia Power's profits to its ability to come in on time and at cost for its estimated 14 billion dollar nuclear expansion project.

The Public Service Commission unanimously decided to hear more testimony from its public advocacy staff that created the plan and the utility that opposes it.

The company says the plan is illegal and could harm its financial standing. PSC members want more details before making their decision.

Ga. Power Ought To Share Financial Risk In Nukes (AJC)

By Jay Bookman

Atlanta Journal-Constitution, April 6, 2011

Thanks to \$3.4 billion in federal loan guarantees, American taxpayers are on the hook for two new nuclear plants being built near Augusta by Georgia Power.

Thanks to a bill enacted two years ago by the Legislature, Georgia Power customers share in the financial risk, required to start paying for the nuclear plants long before they produce power.

In fact, about the only people not sharing in the risks of building two expensive reactors are the people who actually own Georgia Power. However, that may change, at least to a small degree, if the state Public Service Commission votes today to accept a proposed risk-sharing mechanism from its staff.

The proposal itself is rather simple and modest. In seeking the PSC's permission to build the two reactors, Georgia Power estimated that its share of the project would come to \$6.1 billion. Given the history of enormous cost overruns in the nuclear

industry, commissioners were understandably wary. However, company experts repeatedly reassured the PSC that Georgia Power and its partners would keep costs within that estimate, and in the early phases of construction they have done well in keeping that pledge.

Based on those assurances, PSC staff has proposed a way to encourage Georgia Power to continue to control costs. If the final cost of construction comes in between \$5.8 billion and \$6.4 billion — a \$300 million cushion on either side of the original estimate — nothing changes and the company collects its standard return on its investment.

However, if costs come in below \$5.8 billion, the company would be rewarded by earning a slightly higher profit on its investment, just as it would in a competitive industry. Conversely, if costs exceed \$6.4 billion, the company's return on its investment would be cut slightly.

For example, at an estimated cost of \$6.1 billion, Georgia Power shareholders could expect to make an estimated \$10 billion in profit over the lifetime of those plants. But under the risk-sharing mechanism, if costs somehow jumped to \$7 billion, ratepayers would take a hit but so would Georgia Power. Its long-term profit would fall to \$9.7 billion, a decline of \$300 million or 3 percent.

As PSC staff attorney Jeff Stair asked in a public hearing last week, "If the company is in fact so confident (of its cost estimate), why do they so oppose a mechanism that won't ever take effect unless its costs go above \$6.4 billion?"

Kevin Greene, an attorney for Georgia Power, told commissioners that the mechanism could penalize the utility for events that were outside of its control. The extraordinary cost overruns at the two existing Vogtle plants in the '80s, he reminded commissioners, occurred in large part because the federal government ordered extensive safety changes while construction was underway.

However, as Greene knows, the risk-sharing mechanism drafted by PSC staff is specifically designed to protect the company in such a situation. Under its proposal, any cost overruns that are caused by government-ordered safety changes could not be used to lower the company's return on its investment.

Greene also suggested that the risk-sharing mechanism would be illegal under state law, raising the specter of a legal fight should commissioners approve the idea. In his comments, he even seemed to imply indirectly that if necessary, the company might seek intervention from its friends in the state Legislature, as it has in the past when the PSC proved insufficiently obedient.

While Greene's legal claims seem unconvincing, a judge might come to a different conclusion. As a policy matter, however, the argument for at least some risk-sharing is overwhelming. After all, Georgia Power has asked its ratepayers to take on a financially risky investment in nuclear power, and it has used its considerable political clout to ensure that they do so.

It's only fair that they share a small part of that risk.

– Jay Bookman

Operators Say Failed Valve Not A Threat (FLOTD)

By Trevor Stokes

Florence (AL) Times Daily, April 6, 2011

Browns Ferry Nuclear Plant operators told federal regulators Monday that a valve in the cooling system failed because of a manufacturing deficiency and that the failed valve was never a safety threat.

The Nuclear Regulatory Commission that licenses U.S. nuclear plants slapped officials at Browns Ferry, operated by the Tennessee Valley Authority, with a safety warning Feb. 9.

The warning stemmed from a federal inspection that noted a potential problem with a degraded valve in a system used to cool one of the reactors. 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 was reported to the NRC.

More than two dozen officials from NRC and TVA met in Atlanta on Monday in a three-hour session. No regulatory actions were taken.

TVA officials purchased the valve as part of a component built by an outside company. The valve was screwed into place like a bolt where TVA officials said the weakness was found.

Rob Whalen, vice president of nuclear engineering at TVA, told regulators the valve had threads that were too small.

"Undersized threads are the root cause of problem," Whalen said.

In October, cooling was initiated at the plant, yet a cooling system failed to flow because the valve stuck, NRC officials cited.

TVA officials said they were not at fault with the valve and the degraded valve would have released water within seven minutes of activation.

Plant operators turned off the valve when they noticed 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 will determine the significance of the failure within 30 days, said NRC regional administrator Victor McCree. If the NRC decides 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."

Construction on the reactor started in 1967 and began operation in Aug. 1, 1974. On March 22, 1975, an electrical engineer started a fire accidentally that shut down the reactor. TVA board members agreed in 2002 to restart the reactor, a \$1.8 billion project completed in May 2007.

The Associated Press contributed to this report.

Federal Proposal Could Raise Cooling Towers At Salem Nuclear Site (NJSPOT)

Draft rule aims to reduce fish kills at factories and power plants across the country

By Tom Johnson

NJ Spotlight, April 6, 2011

A new rule proposed by federal environmental officials could re-ignite a two-decades-old fight over whether cooling towers should be installed at the Salem nuclear generating stations as a way of reducing massive fish kills at the plant.

The proposal, unveiled last week, aims to protect billions of fish and aquatic life drawn into cooling water systems at power plants and factories around the country. Several environmental groups, although unhappy with the full scope of the rule, seized upon it to call on the state to require PSEG Nuclear to install cooling towers at the two nuclear units in Lower Alloways Township.

"We are disappointed that the DEP draft rules is not as strong as it should be," said Jim Walsh, eastern region director for Food & Water Watch. "Nonetheless, we call on the Department of Environmental Protection to require closed-loop cooling systems at the Salem facility, a move that will not only protect our environment, but also support sustainable commercial and recreational fishing." *The Power Plant 500*

The proposed rule affects more than 500 power plants, as well as other industry sectors that draw large amounts of water for their operations, including chemical and petroleum facilities and paper manufacturers. The rule stops short of mandating cooling towers at existing power plants, but gives state authorities the flexibility to decide how to protect aquatic life on a case-by-case basis.

According to the Nuclear Energy Institute, the requirement to retrofit so-called once-through cooling systems could affect 62 of the 104 reactors in the United States. Cooling towers also figured into the fight to close Oyster Creek, with the Corzine administration ordering Exelon to install towers at the Lacey Township plant. But the company worked out a deal with the Christie administration to close within nine years without having to build the structures.

In New Jersey, PSEG owns several plants that could be affected by the rule, including its two coal-fired power plants in Mercer and Hudson counties. The two nuclear units at Salem, however, will draw the most scrutiny, in part, because environmentalists have been pushing for cooling towers there to reduce fish kills for more than 20 years.

At one point in the Florio administration, the Department of Environmental Protection (DEP) ordered the PSEG to build cooling towers, but that decision was later reversed and the company reduced fish kills by installing screens over the plant's intakes, which draw in three billion gallons of water from the Delaware River each day. PSEG also agreed to undertake a 32-square mile marshland restoration project to help restore fisheries.

Eric Svenson, vice president for environment, health and safety for PSEG, noted the proposed rule does not mandate cooling towers, but relies on the "best professional judgment" of the staffers overseeing permitting of the facility to use the best available technology.

"I don't think there is a scientific basis to put that type of technology on the units," Svenson said. "I don't think it's warranted. There are more cost-effective approaches." *Meeting the Standards*

PSEG, however, does have some concerns about the rule, particularly its requirement that existing power plants meet numeric mortality standards for reducing fish killed by screen intakes. "PSEG has serious concerns about whether these standards can be met reliably and economically," Svenson said.

The proposal allows flexibility in dealing with fish killed on the screen intakes, or impingement, by either demonstrating a reduction in fish mortality or by showing the intake structure meets specific design criteria. With regard to fish killed by being

sucked into the power plant, or entrainment, the Environmental Protection Agency (EPA) is proposing a more flexible standard, requiring a site-specific determination to be made based on local concerns.

Environmental groups say that framework allows the state to take aggressive steps to protect its water resources.

"While EPA's proposal gives states too much discretion, it does permit states power to do the right thing," said David Pringle, campaign director of the New Jersey Environmental Federation. "Now is the time for Gov. Christie to deliver on his promise to fix the failed cooling systems at Salem. It's clear the law requires cooling towers, not PSEG's failed mitigation that continues the fish slaughter."

Beyond the Salem reactors and the Hudson and Mercer coal plants, environmentalists said the rule proposal could affect the B.L. England coal-powered plant in Cape May.

Mass. Lawmakers To Hold Hearing On Nuclear Safety (AP)

Associated Press, April 6, 2011

BOSTON—Environmental activists and Massachusetts lawmakers are planning to converge on the Statehouse to address concerns about nuclear power plant safety following last month's disaster at a nuclear power complex in Japan.

Activists are holding a rally on Beacon Hill on Wednesday afternoon to urge that no new nuclear reactors be built, and no existing reactors relicensed, until meaningful protections are in place.

The rally is scheduled immediately before members of four legislative committees hold a joint public hearing on safety at nuclear plants in and around Massachusetts, including the Pilgrim nuclear station in Plymouth, Mass., and the Vermont Yankee plant in Vernon, Vt.

Officials from the Nuclear Regulatory Commission reassured Gov. Deval Patrick last week that regional nuclear power plants are safe even as they ordered new plant inspections.

Sen. Marc Pacheco Organizing Nuclear Oversight Hearing In Boston (TAUGAZ)

By Gerry Tuoti

Taunton (MA) Gazette, April 6, 2011

State Sen. Marc Pacheco, D-Taunton, is organizing a nuclear oversight hearing, which is scheduled to be held at 2:15 p.m. Wednesday at the State House.

Pacheco, who chairs the Committee on the Environment, Natural Resources and Agriculture, said several state officials and citizens groups are scheduled to testify.

Executives from Entergy, which owns and operates Pilgrim nuclear power and Vermont Yankee, is also scheduled to testify. Officials from New Era, which represents Seabrook power plant in New Hampshire and Yankee Atomic, are also expected to testify, as they oversee the storage of spent nuclear fuel at the decommissioned Yankee Rowe plant.

Davis Besse Drills For Nuclear Emergency (WTVG)

WTVG-TV Toledo (OH), April 5, 2011

The nuclear disaster in Japan is prompting many across our area to question security and safety procedures at the power plants in our area.

Ottawa County officials are running drills to prepare for an emergency at Davis Besse.

Within minutes of that call, representatives from multiple county and state agencies entered the Emergency Operations Center in Ottawa County.

Fred Petersen, director of Ottawa County EMA, says, "I think we have about 25 agencies, represented 50-60 people here just coordinating their response and following their plans and procedures for specified events that would happen at the plant."

All of the participating agencies have designated areas in the Emergency Control Center. There are some participating agencies you might not think of, like local school districts. Deputy director Mike Drusbacky of the Ottawa County EMA says, "We use bus drivers and buses to support our evacuation whether it's evacuating a school district or relocating or to help move the general public."

Today, there were no evacuations needed. There was no emergency at the Davis Besse nuclear power plant, but today's drill is helping prepare personnel for disasters of any kind. And all these representatives play a role and today was an opportunity to practice the procedures in place to keep the public safe.

Today's drill was a practice for a drill next month that will be evaluated by the federal emergency management agency.

Davis-Besse Runs Disaster Simulation (WUPW)

By Allison Brown

WUPW-TV Toledo (OH), April 6, 2011

OAK HARBOR, Ohio (WUPW) - Dozens of agencies worked together in Ottawa County Tuesday playing out potential emergency disasters at Davis-Besse Nuclear Power Station.

If there was a disaster at the power plant, resources would have been split up to cover several emergencies. That's because two actual fires broke out during the training simulation.

"You've got fire personnel responding to these areas and those fire personnel are players in our drill," said Ottawa County Sheriff Bob Bratton.

Those unexpected real scenerios were all part of the learning experience in Ottawa County as dozens of agencies huddled together in the EMA's executive room, delegating to crews out in the field during a potential disaster at Davis-Besse.

"They have an issue developed at the plant a scenerio where there is a failure of some sort today, it was an explosion on a diesel generator," said Ottawa County Commissioner Jim Sass, added. "It's for the benefit of the residents of the area as far as if we declare emergency evacuation, that type of thing. They need to be aware to when the sirens go off what they are for."

This type of training happens about every two years. The ongoing nuclear crisis in Japan from the March 11 9.0 earthquake and tsunami didn't really effect this event. Rather, it just raised awareness for people involved.

Sheriff Bratton believes that Oak Harbor, Carroll Township and other Ottawa County residents are more prepared for a disaster than those in Japan were, mainly because Tuesday's training is mandatory.

U.S. Nuclear Output Falls To Lowest In Year As PPL Shuts Plant (BLOOM)

By Colin McClelland

Bloomberg News, April 6, 2011

U.S. nuclear-power output fell to the lowest level in a year as PPL Corp. (PPL) shut the Susquehanna 2 reactor in Pennsylvania, the Nuclear Regulatory Commission said.

Power generation nationwide decreased by 655 megawatts, or 0.9 percent, from yesterday to 76,185 megawatts, or 75 percent of capacity, the smallest amount since April 5, 2010, according to a report today from the NRC and data compiled by Bloomberg. Twenty-four of the nation's 104 reactors were offline.

PPL closed the 1,140-megawatt Susquehanna 2 reactor after it was operating at 88 percent of capacity yesterday. Another unit at the site, the 1,149-megawatt Susquehanna 1, was operating at full capacity. The plant is located in Luzerne County, 50 miles (80 kilometers) northwest of Allentown.

Duke Energy Corp. (DUK) started the 1,100-megawatt McGuire 2 in North Carolina and boosted the reactor to 10 percent of capacity. Another unit at the site, the 1,100-megawatt McGuire 1, is operating at full power. The plant is located 15 miles north of Charlotte.

Progress Energy Inc. (PGN) said in a statement late yesterday it remained unclear when the 838-megawatt Crystal River reactor in Florida will start up as it conducts an engineering analysis of concrete damage, or "delamination," in the containment building.

"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 officer of Progress Energy Florida, said in the statement. "The company cannot estimate a return-to-service date."

The unit has been shut for repairs since September 2009. The utility said in August that the reactor would start in the fourth quarter of 2010, then in November delayed that until the first quarter of this year. The plant is located 70 miles north of Tampa, Florida.

The damage occurred during maintenance to replace steam generators, when crews created an opening in the structure that caused separation of a portion of the concrete at the periphery of the containment building.

Raleigh, North Carolina-based Progress spent about \$150 million on the repair and \$290 million on replacement power costs to Dec. 31, it said in yesterday's statement. Insurance covered \$181 million, the company said.

NextEra Energy Inc. (NEE) boosted the 839-megawatt Saint Lucie 1 reactor in Florida to 92 percent of capacity from 80 percent yesterday. Another reactor at the plant, the 839-megawatt Saint Lucie 2, was shut. The station is located about 45 miles north of Palm Beach.

Southern Co. (SO) increased output from the 1,109-megawatt Vogtle 1 reactor in Georgia to 87 percent of capacity from 80 percent yesterday. 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.

FirstEnergy Corp. (FE) increased output at the 1,235-megawatt Perry nuclear reactor in Ohio to 86 percent of capacity from 80 percent yesterday. 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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Unit 2 At Susquehanna Nuclear Plant Shuts Down For Planned Outage: PPL (EGYBUS)

Energy Business Review, April 6, 2011

Nuclear power generation company PPL said that the Unit 2 reactor at Susquehanna nuclear plant near Pennsylvania has been safely shut down to begin a planned refueling and maintenance outage.

The company said that the workers will replace about 40% of its uranium fuel and complete a number of equipment maintenance tasks and upgrades when the Unit 2 reactor is shut down.

The equipment maintenance to be performed will enhance reliability and help meet the demand for electricity to power the region's economy.

This year's upgrade work on the reactor includes installing an integrated digital control system for plant equipment and replacement of turbines that power pumps that provide water to the reactor vessel.

Since its last refueling outage in 2009, Unit 2 has safely and reliably generated about 19,355,000MWh of electricity, which is enough to power about 1 million homes.

The Susquehanna plant is owned jointly by PPL Susquehanna and Allegheny Electric Cooperative and is operated by PPL Susquehanna.

Bill Would Let Texas Radioactive Dump Set Rates (AP)

By Sommer Ingram

Associated Press, April 6, 2011

AUSTIN, Texas (AP) – A state Senate committee approved a bill Tuesday that would allow the operator of a remote West Texas dump to determine how much to charge 36 states that want to dispose of low-level radioactive waste.

The committee voted to allow Dallas-based Waste Control Specialists to set disposal fees for 36 states not part of a compact between Texas and Vermont that allows waste burial at the Andrews County site.

Previously, environmental regulators were to determine the rates. Cyrus Reed of the Lone Star Chapter of the Sierra Club said allowing Waste Control Specialists to set the rates would be a "major policy shift."

The bill, authored by Sen. Ken Seliger, R-Amarillo, mandates that fees be approved by regulators and must be more than what generators in Texas and Vermont will pay.

"We've set down parameters for where that price needs to be," Seliger said.

Other states can pay \$30 million through 2018 to join the compact. States that want to join after 2018 will pay \$50 million. Generators from non-party states will pay a surcharge for their imported waste, which would inject much-needed revenue into the state's cash-strapped economy.

Supporters say the Andrews County site can be a secure solution to dump radioactive waste for states around the country looking for ways to get rid of their waste. In 2008, South Carolina severely limited who could send waste to its low-level nuclear dump, shutting down the last major facility that had been accepting the waste.

The Texas Low-Level Radioactive Commission approved rules in January to allow 36 states to export their radioactive waste to the Andrews County landfill.

Opponents of the legislation say it directly opposes the intent of the compact between Texas and Vermont: to minimize the states sending waste to Texas. They warn that Texas is unprepared to deal with the massive task of managing waste from other states.

"The facility should have an operating history of successfully disposing of waste from Texas and Vermont generators before opening the facility to generators from other states," said Bob Gregory, chairman and CEO of Austin-based Texas Disposal Systems.

The bill, which prohibits international waste, now goes to the Senate floor for consideration.

Associated Press writer Betsy Blaney in Lubbock contributed to this report.

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Senate Panel OKs Changes For Agency Overseeing Radioactive Waste (FTWRTHST)

By Anna M. Tinsley

Ft. Worth Star-Telegram, April 6, 2011

AUSTIN – A legislative plan geared to better oversee, and restrict, the commission that determines whether other states may send low-level radioactive waste to West Texas moved forward Tuesday.

The Senate Natural Resources Committee approved two bills affecting the Texas Low-Level Radioactive Waste Disposal Compact Commission and the site in Andrews County where contaminated waste – such as hospital equipment, beakers, soil and even gloves that have come in contact with radioactive material – will be shipped, crisscrossing Texas roads and railways.

Environmentalists have voiced concern for years about the safety of Texans, worrying about spills and contamination as materials make their way to and are stored at the Waste Control Specialists facility near the New Mexico state line in a sparsely populated area about 350 miles west of Fort Worth.

"We are setting ourselves up for a huge financial liability," said state Rep. Lon Burnam, D-Fort Worth, who has long sought more oversight of the commission.

Waste Control Specialists, owned by Dallas billionaire Harold Simmons, applied more than six years ago to dispose of such waste. State officials have agreed to let the company accept waste from Texas, Vermont and federal sources. The two bills affecting the commission and the storage site, by state Sen. Kel Seliger, R-Amarillo:

Would let the site accept waste from other states, but not from other countries; limit the amount that could be collected there; and create surcharges for the waste and for states wanting to join the compact that Texas and Vermont created allowing the two states to ship their waste to the site. States wanting to join the compact would pay fees ranging from \$40 million to \$60 million.

"We are excited to get this facility up and operating," said Rod Baltzer, president of Waste Control Specialists, who supported the bill.

But Tom "Smitty" Smith, director of Public Citizen's Texas Office, said the initial purpose of the compact was to minimize the number of states sending waste across the nation. "What happens if one of these things dumped over on the highway?" Smith asked. "This is seriously radioactive stuff."

Would make the commission its own entity, pulling it out from under the Texas Commission on Environmental Quality, and require it to report only to the Legislature.

Senate Committee Votes To Allow WCS To Set Prices For Disposal O (KWES)

KWES-TV Odessa (TX), April 6, 2011

A State Senate committee is paving the way for Waste Control Specialists to set prices on the disposal of low-level radioactive waste.

The Committee voted to allow Waste Control Specialists to set fees for the 36 states that are not a part of the compact.

Texas and Vermont are the only members that allow radioactive waste burial at the Andrews County Site.

Environmental regulators were originally supposed to determine the rate.

They'll still need to approve those prices.

The bill now goes to the Senate floor for consideration.

Duke CEO: We'll Build Nuclear Plant (CHAROBS)

Charlotte (NC) Observer, April 5, 2011

Duke Energy will stick to its plan to build a new nuclear plant despite the crisis in Japan, CEO Jim Rogers said this week.

"Do you think China is going to slow down on any of its 24 reactors (under construction), or India, or Abu Dhabi? No." Rogers said in a video interview Monday at Fortune's Brainstorm Green conference in California.

Rogers said more needs to be learned about the release of radiation from Japanese plants after last month's 9.0-magnitude earthquake and tsunami. Traces of radioactive isotopes have been detected in North Carolina.

Rogers cited the safety record of U.S. nuclear plants, which watchdog groups often criticize.

"We do need to pause, we need to learn the lessons, we need to implement them," he said. "But I think at the end of the day our industry's prepared to do that. More importantly, we need to start building new nuclear in this country because we're going to start retiring our nuclear plants as early as 2019."

Duke plans to build a two-reactor nuclear plant near Gaffney, S.C., about 50 miles southwest of Charlotte. Duke expects to get a federal construction and operating license for the \$11 billion Lee plant in 2013, and put it in operation in 2021.

The company appeared before the N.C. Utilities Commission four days after the disaster in Japan, asking for approval of its decision to spend up to \$459 million in pre-development costs on the Lee plant. The commission has not yet ruled.

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UCI's Nuclear Reactor Safe, But Subject To Review (OCR)

By Pat Brennan

Orange County Register, April 6, 2011

A small nuclear reactor used for research at UC Irvine is considered safe and adequately protected from potential terrorist threats, though it will be subject to the same Nuclear Regulatory Commission review as all other reactors in the nation, the commission says.

"In case of accidents, such as earthquakes, this has been analyzed fairly extensively," said George Miller, a UC Irvine chemistry professor in charge of the reactor. "Basically it would shake it up, but even if it were to lose all its water, the fuel temperatures would not reach any temperature where any kind of problem would happen in terms of rupture."

The 250-kilowatt thermal-power reactor, using "low-enriched" uranium for fuel, is far smaller than commercial nuclear power reactors, such as the two 1,100-megawatt electrical power reactors at the San Onofre nuclear plant south of San Clemente.

It passed its most recent NRC inspection in December, Miller said.

But the nuclear crisis in Japan prompted the NRC to re-examine all of the nation's reactors as a precautionary measure.

California's U.S. senators, Dianne Feinstein and Barbara Boxer, have raised questions about San Onofre's protections against tsunamis or large earthquakes, though plant officials say it is well protected.

And while UC Irvine's reactor is too low powered to deliver lethal radiation doses even in the case of an accident or a terrorist attack, it has its own campus critic: retired international business professor John Graham, who worries about a terrorist "dirty bomb" scenario.

Even if the results were not lethal, he said, the aims of terrorism could be accomplished.

"If they blew up any chemistry building, we'd have problems," Graham said. "The reactor is particularly appropriate because of people's fears. Terrorists understand that. If they're trying to make a big show, there's no better place to do that than UCI."

Graham parked a rental truck in front of the building housing the reactor in 2004 to make his point about terrorism. It remained there for two hours, he said, with no security response.

Such an attack, Miller said, "would blow up the building, but it wouldn't damage the reactor."

Campus officials later extended a loading dock, preventing trucks from being parked there; it was part of a recent seismic upgrade unrelated to Graham's concerns, Miller said.

UC Irvine Police Chief Paul Henisy said in a statement that there are "security measures in place to protect it from any terrorist activity."

Because the reactor is underground, any radiation from a nuclear accident would be directed upward in a cone shape, Miller said, and would not spread beyond the building above.

"As long as we evacuated the building, no one will be exposed at all," Miller said.

The reactor also is at the bottom of a pool of water 25 feet deep. In the unlikely event that all the water drained away, as occurred in Japan, the reactor would simply stop functioning, Miller said, rather than growing hot and melting.

Any spent fuel from the reactor would be taken to a waste disposal site, although there is no spent fuel yet, Miller said.

The UCI reactor is mainly used to produce materials with a small radioactive signature for tracking purposes, or to reveal the composition of a variety of objects. It is also used to train students in the operation and maintenance of nuclear reactors.

The reactor was most famously used to analyze bullet fragments from the assassination of President John F. Kennedy to determine whether they might have come from more than one bullet – which would, in turn, suggest more than one assassin.

By observing radioactive signatures that resulted when the fragments were irradiated with neutrons inside the reactor, scientists could tell whether the pieces were likely to have come from a single bullet.

"We claimed there was no evidence other than all of the fragments belonging to a single bullet," Miller said.

The reactor also has been used to help analyze moon rocks collected by Apollo astronauts, to determine the chemical composition of meteorites, and to analyze tiny bits of sculpture, mosaics or photographs from the Getty Museum.

More from Science »

Article

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The 250-kilowatt thermal-power reactor, using "low-enriched" uranium for fuel, is far smaller than commercial nuclear power reactors, such as the two 1,100-megawatt electrical power reactors at the San Onofre nuclear plant south of San Clemente.

As crews in Japan struggle with shutting down nuclear reactors affected by Friday's earthquake and tsunami, Southern California Edison officials say the nuclear plant in San Onofre is prepared to handle the area's seismic threats.

"A design (for a nuclear plant) is only approved by regulators if it's shown to match all the environmental challenges in that particular region," said Gil Alexander, a spokesman for Southern California Edison.

The 8.9-magnitude earthquake off the coast of Japan and the resulting tsunami have caused problems at six nuclear reactors there by preventing coolant from reaching the hot reactor cores, according to The Associated Press.

That leaves the question: How would San Onofre handle a large earthquake or tsunami generated closer to home?

When San Onofre was designed several decades ago, scientific studies showed that the largest tsunami likely to strike the San Onofre area would measure about 25 feet. The wall was built 30 feet high for extra protection, Alexander said.

As for earthquakes, the facility was built to survive a nearby earthquake with a magnitude 7.0, Alexander said.

During the plant's planning stages, "the best science suggested that the nearest earthquake fault, which is five miles from the plant, could produce an earthquake something less than a magnitude 7 in the plant vicinity," Alexander said.

He added that it wouldn't take a major event to trigger an emergency response.

"The plant is designed so that if ground-motion sensors on the plant property detect even slight movement, an automatic mechanism will shut the two reactors down," Alexander said, by inserting control rods into the reactor cores to slow and stop the nuclear process. If need be, those rods also can be lowered manually. A total shutdown would take several hours.

The San Onofre plant provides enough electricity to power 1.4 million homes in Southern California.

Alexander said the company holds full-scale drills – along with local, state and federal agencies – five or six times a year to prepare for earthquakes and similar disasters.

Nuclear Engineer Speaks To Exchange Club (LBI)

By Stephen Jeppson

Laguna Beach (CA) Independent, April 6, 2011

San Onofre nuclear engineer Steve Jeppson is the guest speaker Thursday, April 7, at the noon meeting of the Laguna Beach Exchange Club.

Jeppson will talk about the nuclear disaster resulting from the Sendai earthquake, safety at the San Onofre plant and will be accompanied by another staff member from the San Onofre facility.

The club meets at 12:15 p.m. at Watermarc Restaurant (upstairs), 448 S. Coast Highway. The cost for non-members is \$20 and includes an excellent lunch.

The schedule of other upcoming Exchange Club speakers can be found at LagunaBeachExchangeClub.org

Direct any questions to Katy Moss at 494-0703 or Jim Rue at 494-6684

Why Nuclear Power Must Go (INDYPEND)

By Chris Williams

The Independent, April 6, 2011

CREDIT: GBMartin From the very beginning, unlocking the power of the atom for "peaceful" energy production was about waging war to its logical endpoint: the power to destroy life on a planetary scale.

People around the world were aghast at the apocalyptic destruction wreaked on Japan during a few hellish minutes when the United States dropped the nuclear bombs codenamed Little Boy and Fatman on the cities of Hiroshima and Nagasaki in August 1945. The immediate loss of life, in the tens of thousands, coupled with the invisible and long-term effects of radiation sickness and cancers, brought the world up against the sharp razor edge of the nuclear age.

Subsequently, during the Cold War, NATO's nuclear war policy was officially named MAD: Mutually Assured Destruction, a point parodied in the outstanding black comedy Dr. Strangelove: Or How I Learned to Stop Worrying and Love the Bomb.

If nuclear weapons were to have a future, perfecting them as the ultimate weapon of mass destruction needed a justification other than annihilating humans. Moreover, the plutonium typically used in fusion-based hydrogen bombs — hundreds and even thousands of times more destructive than an atom bomb — is not an element that occurs naturally on earth. It is a byproduct of fission, splitting uranium atoms to unleash and harness energy, that takes place inside nuclear reactors. Hence, without a nuclear power program, presented as the peaceful generation of unlimited, cheap and safe energy, it's not possible to realistically produce the required amount of plutonium for nuclear weapons.

The first nuclear plants in the United Kingdom commissioned in the 1950s, at Calder Hall and Chapelcross, were explicitly for the production of plutonium for Britain's nascent nuclear weapons program; generating electricity was a secondary consideration.

In 1954, Lewis Strauss, chairman of the U.S. Atomic Energy Commission, imagined a nuclear-powered paradise: "Our children will enjoy in their homes electrical energy too cheap to meter. ... It is not too much to expect that our children will know of great periodic regional famines in the world only as matters of history, will travel effortlessly over the seas and under them and through the air with a minimum of danger and at great speeds, and will experience a lifespan far longer than ours, as disease yields and man comes to understand what causes him to age."

HAMMER OF GOD

The interconnection between nuclear power and nuclear weapons is inescapable. Because nuclear weapons are designed to be the Hammer of God, the ultimate arbiter of power, any country that is under external threat will logically seek to develop nuclear weapons as a deterrent, which was their stated benefit and contribution to "world peace."

North Korea, following George Bush's post-Sept. 11 declaration that it was a member of the "Axis of Evil," concluded it needed to develop and test a nuclear weapon, which it realized with an underground nuclear detonation in October 2006. Iran, the second member of the reputed Axis (Saddam Hussein's Iraq having been the third), has been under intense U.S. pressure for nearly a decade to abandon its civil nuclear power program despite having the legal right to pursue such a course.

Interestingly, thinly veiled threats that the United States or Israel may bomb Iran's nuclear facilities are predicated on the links between military and civilian nuclear programs. This has been one of the main arguments of the anti-nuclear movement: that peaceful nuclear energy programs drive an ever-more terrifying arms race. Indeed, there are four nations with undeclared stockpiles of nuclear weapons developed from civil programs, and it is no coincidence that they are in some of the most militarized and dangerous areas of the world: Israel, Pakistan, India and North Korea.

THE NEXT FUKUSHIMA?

With the deepening calamity at the Fukushima Daiichi nuclear power plant in Japan, there has been a great deal of focus on the possibility of other nuclear power accidents around the world.

According to a new report by the Union of Concerned Scientists cited by the Christian Science Monitor: "Nuclear plants in the United States last year experienced at least 14 'near misses,' serious failures in which safety was jeopardized, at least in part, due to lapses in oversight and enforcement by U.S. nuclear safety regulators... While none of the safety problems harmed plant employees or the public, they occurred with alarming frequency — more than once a month — which is high for a mature industry."

In the United States, 23 of the 104 operational nuclear reactors are built on the same 1960s design by the same company, General Electric, as the reactors at Fukushima. They have been recognized to have serious design faults since the 1970s and have been regularly retrofitted (patched up) to address design vulnerabilities that are routinely discovered and that could lead to a core breach and the release of radioactive isotopes.

Many plants sit on geologically active faults, in coastal locations or close to large sources of fresh water. The 36-year-old Indian Point nuclear power plant, located 35 miles from midtown Manhattan, has a history of safety problems and sits on two fault lines. The U.S. government has warned its citizens to stay at least 50 miles away from Fukushima, while Japan has limited the evacuation and exclusion zone to 12 miles. If Indian Point were ground zero, creating a 50-mile buffer — which the chairman of the U.S. Nuclear Regulatory Commission recommended to Congress in case of an accident comparable to Fukushima — would mean evacuating and relocating some 20 million people. Undertaking such a plan has been called a "fantasy," and the agency in charge would be the Department of Homeland Security, which oversaw the government response to Hurricane Katrina's pummeling of the Gulf Coast in 2005.

California has a 99.7 percent chance of being hit with a magnitude 6.7 earthquake or greater within the next 30 years. Nuclear plants in California with the same design as Fukushima's are only built to withstand magnitude 7 to 7.5 quakes, while the one that hit Japan on March 11 was 9.0. We know a larger earthquake is possible because the 1906 earthquake that tore San Francisco apart measured 8.3. California would not be immune to a powerful tsunami such as the one responsible for the

multiple meltdowns in Fukushima, and as crazy as it sounds, one nuclear power plant, the San Onofre facility located south of Los Angeles, is built right on the beach.

Instead of waiting for another devastating nuclear accident to occur in the United States rivaling the one at Three Mile Island in 1979, we need to push the government to abandon plans both to relicense old plants for another 20 years and build new ones.

CHAIN REACTION

Producing electricity by splitting apart uranium atoms is an inherently unstable process that can lead to a runaway nuclear reaction at any moment. The “controlled” chain reaction inside the core has to be relentlessly monitored to keep it within tolerable limits, particularly regarding pressure and temperature. Hence the need to keep the core cooled at all times and have control rods ready to drop into place at a moment’s notice, multiple back-up systems and fail-safe devices, at least two containment vessels, an evacuation plan, measures to prevent radiation leaks, regular testing of workers and the surroundings and so on.

This instability at the heart of nuclear power, combined with long-lived and extremely toxic waste, leads to the second insurmountable issue: its expense.

BOONDOGGLE

The nuclear power industry knows it is an economic boondoggle, which is why it demands cast-iron guarantees of limited liability for accidents and huge government subsidies before considering construction of new plants. The Bush administration bestowed \$18.5 billion in loan guarantees on the industry, and the Obama administration doubled down with \$36 billion more.

Yet the nuclear industry is asking for \$100 billion more. It also requested an extension of tax credits without plant-size restrictions, an investment tax credit and a worker training and manufacturing tax credit, as well as reductions in tariffs on any imports of required materials and components.

Citibank, which has rarely met a risky investment it didn’t like, issued a report in 2009 that found little reason to cheer the industry. Titled “New Nuclear: The Economics Say No,” it noted, “the risks faced by developers [of new nuclear plants] ... are so large and variable that individually they could each bring even the largest utility company to its knees financially.”

The Price-Anderson Nuclear Indemnities Act, first passed in 1957 and last renewed in 2005, restricts any costs payable by utility companies in the event of a nuclear accident to \$12.6 billion. Anything above that amount — which would be easily exceeded by any major accident — is covered by the public.

A comprehensive 2003 report by MIT, “The Future of Nuclear Power,” outlined the huge obstacles to expanding nuclear power: “prospects for nuclear energy as an option are limited, the report finds, by four unresolved problems: high relative costs; perceived adverse safety, environmental, and health effects; potential security risks stemming from proliferation; and unresolved challenges in long-term management of nuclear wastes.”

A 2009 updated report mentions that the current support program is “not yet effective and needs to be improved,” referring to increased government subsidies. According to a report cited in *Scientific American*, the costs to the taxpayer of building 100 new nuclear power plants, over the lifetime of the plants, over and above costs associated with alternatives if they had been pursued, comes to a staggering \$1.9–4.1 trillion. As nuclear plants are notorious for cost overruns, the higher figure is much more likely.

The MIT report also undermines one common pro-nuclear power argument favored by environmentalists such as George Monbiot: “At least it’s not coal.” The study states, “if more is not done, nuclear power will diminish as a practical and timely option for deployment at a scale that would constitute a material contribution to climate change risk mitigation.”

In short, without embarking on a frenzy of construction that surpasses the global programs of the 1970s and ‘80s, nuclear power cannot make a meaningful contribution to mitigating climate change. The International Atomic Energy Agency, whose mission is to promote nuclear power, is even more skeptical: “Nuclear power is not a near-term solution to the challenge of climate change. The need to immediately and dramatically reduce carbon emissions calls for approaches that can be implemented more quickly than building nuclear reactors.”

BLOWING IN THE WIND

Wind farms take only 18 months to come on line; nuclear plants typically take in excess of 10 years. The last nuclear power plant to come on line in the United States, at Watts Bar in Tennessee, took 23 years to build and cost \$6.9 billion. Numerous studies ranging from ones in the *Wall Street Journal* to independent energy analysts have put the cost of nuclear power at 12 to 20 cents per kilowatt hour. In contrast, those same studies put the cost of renewable energy at an average of 6 cents for the same output.

Governments around the world are not fond of nuclear power for its supposed environmental benefits or for its reliability, safety or economic superiority. Ruling elites want more nuclear power because of its connection to nuclear weapons production, the desire for Great Power status and the quest for energy independence.

There are many other reasons to phase out nuclear power, such as the growing mountain of long-term waste: the U.S. government proposes to sequester waste for 1 million years — five times as long as homo sapiens have existed. Other drawbacks include the persistent and large cost overruns during construction, the astronomical expense of decommissioning of nuclear power plants, the heavily polluting and energy intensive mining and refining of nuclear fuel from uranium ore, the dangers of transporting nuclear fuel for reprocessing, the international trade in nuclear waste and the highly centralized nature of the power system which means, as Fukushima has demonstrated, if one facility goes down it takes out an enormous chunk of the electricity supply.

As nuclear plants have to be continuously operated as close to full capacity as possible to even come close to justifying their costs, they directly displace clean renewable sources of energy such as wind and solar. Like nuclear power, they are best suited for base-load supply, which means they supply the minimum power needed for a block of customers. In addition, if governments relicense nuclear plants for another 20 years and build new ones that operate for 60 years more, then there will be no “transition” to clean power until almost the end of this century.

It's also a myth that nuclear power cannot be replaced by truly green energy. Many scientific studies show that it is possible to construct wind, solar, geothermal and tidal sources of energy that don't generate radioactive waste, lead to resource wars, have low carbon footprints and don't require massive amounts of farmland, energy and water, unlike agro-fuels such as corn-based ethanol. Furthermore, the technology already exists to tap these genuine renewable sources for all of our electrical needs. To be fair, it would take 20 to 30 years of intensive manufacturing, engineering and construction to build the necessary generation, transmission, storage and distribution systems.

Ultimately, the problem is social and political, not a matter of science and technology. In that regard, it's not just Republicans, but Obama and the vast majority of Democrats who are in the pro-nuclear camp even in the face of catastrophe, and they steadfastly favor “clean” coal, more offshore oil drilling in the Gulf and the Arctic and increasing agro-fuel production. If we want a transition to a sane and clean energy policy, we will have to independently organize and fight for it.

Chris Williams is a professor of physics and chemistry at Pace University and author of *Ecology and Socialism: Solutions to Capitalist Ecological Crisis*.

Nuclear Power In The Dock (FORBES)

By Jerry Taylor Peter Van Doren

Forbes, April 6, 2011

Nuclear power quite simply doesn't make economic sense.

The unfolding nuclear emergency in Japan has prompted a reconsideration of nuclear power here in the United States. Surprisingly, the political faith in nuclear power appears to be relatively unshaken at the moment, with opinion leaders on both the left and right cautioning against overreaction and politicians in both parties swearing continued fealty to the federal campaign to jump-start new construction orders.

This is unfortunate—not necessarily because nuclear power plants are a catastrophic meltdown waiting to happen—but because nuclear power makes no sense from an economic perspective and the political campaign to ram these plants down the market's throat threatens catastrophic harm to both taxpayers and ratepayers.

The fact that nuclear power can't come within light-years of passing a market test is painfully obvious to all who wish to see. Consider the feds are presently telling banks that if they loan money to a utility company to build a nuclear power plant and the loan subsequently goes bad, the U.S. Treasury (that is, you) will compensate the bank for up to 90% of its losses. And yet the banks still refuse to loan. For principled supporters of a free market, that should be information enough about the merits of this commercial enterprise.

There are all sorts of reasons why banks are saying “no” to nuclear. Two in particular, however, stand out.

First, nuclear energy is not even remotely competitive in power markets with gas-fired or coal-fired electricity now or in the foreseeable future. Even the more optimistic projections of new nuclear power plant costs—such as those forwarded by MIT—find that nuclear's production costs over the lifetime of a new facility are about 30% above those for coal or natural gas-fired generators. So while we can only speculate about new plant construction costs (we haven't tried building one for more than 30 years) and estimates vary a great deal, all parties agree on one thing: Nuclear is substantially more expensive than conventional alternatives at present.

That's particularly the case when one figures in the revolution in natural gas extraction, which has significantly lowered the cost of gas-fired power. Exelon (EXC - news - people) CEO John Rowe recently told the press that natural gas would have to cost more than \$9 per million BTUs before nuclear power plants could compete—about double its current price and far north of the \$5.3 per million BTU price over the next 5 to 10 years that forecasters predict for the future. MIT's nuclear energy study, by

comparison, projects a \$7 per million BTU natural gas price (which makes nuclear energy seem more competitive than it actually is), but of course, the MIT study was based on 2007 data that failed to fully reflect the revolutionary advances in hydraulic fracking.

It's worth noting, moreover, that nuclear's hefty price tag would be even heftier if government subsidies were to fall by the wayside. One economist calculates that existing nuclear subsidies are equal to one-third or more of the value of the power produced. Tufts economist Gilbert Metcalf estimates that nuclear power plant operators face a negative 49% tax rate. Hence, banks betting on nuclear power are also betting on the longevity of such breathtaking taxpayer largesse—a risky bet indeed.

Second, the risk of cost overruns and, thus, defaulted loans are higher than the politicians would have us believe. Most of the nuclear power plants built in this country have cost three times as much to build as utilities initially advertised at the onset of construction.

While the industry swears that this is a thing of the past, new power plants being built in Finland and France by Teollisuuden Voima and Electricite de France, respectively—the only nuclear power plants being built right now in free-market energy economies—are already coming far above their advertised cost. The Finnish plant—which was supposed to cost only 3 billion euros—is already 2.7 billion euros above cost and is four years behind schedule. The French plant fairing a bit better, only 1 billion euros over budget and two years behind schedule.

The fact that both of these projects deploy state-of-the-art reactors built by French nuclear giant Areva (ARVCF.PK - news - people)—arguably the most experienced nuclear power company in the world—speaks volumes. Accordingly, both the Congressional Budget Office and the Government Accountability Office expect about 50% of any future U.S. loans to default.

So why are utilities trying to build these things in the first place? Well, most aren't. Those few utilities that are interested in going ahead do business in states where construction costs are automatically plugged into the rate base. So in theory at least, risks would be transferred from the utility to the ratepayer with utilities at least guaranteed to break even. Even so, the increasing cost gap between nuclear and gas-fired power makes it unclear whether any of these generators will actually get built.

As Peter Bradford, a former member of the U.S. Nuclear Regulatory Commission and former chair of the New York and Maine utility regulatory commissions, puts it, "In truth, the nuclear renaissance has always consisted of the number of plants that government was willing to build." Regardless, federal attempts to jump-start the industry—as Herculean as they have been—haven't come even close to closing the competitive gap with gas-fired generation. Events unfolding in Japan are unlikely to change that. And for that, at least, we can all be thankful.

Taylor and Van Doren are senior fellows at the Cato Institute.

Screening The Day's Catch For Radiation (NYT)

By William Neuman And Florence Fabricant

New York Times, April 6, 2011

Eric Ripert, the chef of Le Bernardin, the high temple of seafood in Manhattan, bought a new kitchen gadget a few days ago: a radiation detector.

"I just want to make sure whatever we use is safe," said Mr. Ripert, whose staff is using the device to screen every item of food that enters the restaurant, regardless of its origin. He has also stopped buying fish from Japan, which means no high-quality, farm-raised hamachi and kampachi for raw seafood dishes.

"Nobody knows how the currents will carry the contaminated water," he said.

Despite assurances by health officials that radiation from the stricken Fukushima Daiichi nuclear power plant in Japan is unlikely to show up in the food supply, worries about contaminated foods are growing among consumers, businesses and governments across the globe.

On Tuesday, the Japanese government announced new radiation standards for fish after high levels of radioactive iodine and cesium were found in fish caught halfway between the reactor site and Tokyo. In response, the European Union said it would tighten its own radiation limits for Japanese food imports. India said it would ban all food from Japan for at least three months.

In the United States, where about 4 percent of food imports come from Japan, the Food and Drug Administration has restricted some foods from the country. And the agency is working with customs officials to screen incoming fish and other food for traces of radiation.

So far, that screening has identified seven items that required further testing to see if the radiation detected exceeded normal background levels, according to Siobhan Delancey, an F.D.A. spokeswoman. Those items included tea and flavoring compounds. She said three of the items had been cleared for delivery and four were awaiting test results.

Patricia A. Hansen, a senior scientist at the F.D.A., acknowledged that the radiation detection methods used to screen food imports were not sensitive enough to detect a single contaminated fish in a large shipment. But she said that small amounts of

contamination did not represent a public health hazard. A person would have to consume large amounts of fish in excess of what are known as an "intervention level," or threshold level, of radiation for an extended period of time before it would be considered dangerous, she said.

"One fish that might be at an intervention level in a huge cargo container, we're not going to pick that up," she said. "But the important context is, is that one fish at the intervention level a public health concern? No, it is not."

Nicholas Fisher, a professor of marine sciences at the State University of New York at Stony Brook, said that, according to some radiation safety guidelines, people could safely eat 35 pounds of fish each year containing the level of cesium 137 detected in the Japanese fish.

"You're not going to die from eating it right away," he said, "but we're getting to levels where I would think twice about eating it." All the talk about radioactive food in Japan, which earlier banned milk and other farm products from areas near the crippled plant, has made some people uneasy, even thousands of miles away.

"When radioactive material started going into the ocean, that raised my concern greatly," Karen Werner, 68, said on Tuesday as she shopped for fish at 99 Ranch Market in Richmond, Calif. "Right now, I'm not too worried about it showing up in fish, but I'm keeping my eye on it."

Lee Nakamura, a partner who manages the fish counter at Tokyo Fish Market in Berkeley, Calif., estimated that one in five customers asked about possible radiation, but he had not yet seen an impact on sales. He said his Japanese suppliers had assured him that fish were being tested for possible radiation.

"Everything is under a microscope right now," Mr. Nakamura said. "I feel confident the fish is safe. Everyone in Japan and here is looking at it and double-checking it before it gets to us."

Several restaurant owners and fish importers said that while they continued to buy some fish from Japan, it came from areas far from the reactor site.

Still, Scott Rosenberg, an owner of Sushi Yasuda, a highly regarded sushi restaurant in Manhattan, said he planned to buy a radiation detector and would post a notice on the restaurant's Web site to let customers know about the testing. "We want to make sure there is no exposure," he said.

Other segments of the food industry are also grappling with how to respond to radiation concerns. Sensitive monitoring devices and tests have detected trace amounts of radioactive material from Japan in the air and water in many states. Tests in Arizona, California and Washington state have found minuscule amounts in milk, leading to concern among dairy farmers.

Everything detected has been well below levels considered dangerous, but food companies realize that consumers may still need to be reassured.

In California, Will Daniels, senior vice president for food safety at Earthbound Farm, a major producer of organic salad greens, said the company was prepared to test soil and greens for radiation if concerns persisted or fallout from Japan intensified.

"The likelihood of contamination on the West Coast is extremely low, so it's really important that we're monitoring appropriately and not creating panic," Mr. Daniels said. "But we certainly need to make sure we're doing the appropriate thing and are ready to respond."

Cliff Coles, a consultant who works with Earthbound and other produce companies and food ingredient importers on food safety issues, said he had ordered two radiation detectors and was planning to take them into fields where greens, tomatoes and peppers would be grown this spring. He said he would work with Earthbound's growers to make sure the fish emulsion fertilizer they use was tested for radiation.

"We're just trying to get our clients to be proactive and say that, while this may not be the end-all solution, let's take a look at what's going on around us before we get blindsided," Mr. Coles said.

Consumer worries about radiation have led to a big boom in sales of one food that often comes from Japan: seaweed.

Natural food stores and Asian markets on the West Coast said they had seen a run on seaweed ever since the nuclear reactors in Japan began leaking radiation. Some consumers view seaweed as a natural source of normal iodine, which can help protect the thyroid gland against exposure to radioactive iodine.

Timothy M. Zerkel, a manager at Central Co-op in Seattle, said sales of many types of seaweed were far above normal levels and the store's distributors had begun rationing shipments because they could not keep up with demand.

Scientists cautioned against eating large amounts of seaweed, however, saying that the levels of radioactive iodine reaching this country from Japan were much too low to worry about. And they said that some people could encounter health problems from consuming too much iodine.

In addition, scientists said that radioactive iodine could concentrate at high levels in seaweed. As more contaminated water from the Fukushima reactors enters the sea, health concerns could arise about new seaweed imports from Japan.

IN THE BLOGS

Republicans Open Inquiry On Yucca Mountain Shutdown (NYT)

By John Collins Rudolf

New York Times, April 6, 2011

Republican leaders have begun a formal inquiry into the Obama administration's decision to halt development of a nuclear waste repository at Yucca Mountain in Nevada.

United States Geological Survey Japan's crisis has revived interest in Yucca Mountain as a potential nuclear waste repository.

The investigation is led by Fred Upton, chairman of the House Energy and Commerce Committee, who on Thursday demanded documents and written answers from Energy Secretary Steven Chu and Gregory Jaczko, chairman of the Nuclear Regulatory Commission, detailing their agencies' decision-making process in moving to block construction of the controversial project.

The investigation was criticized by Representative Shelley Berkley, Democrat of Nevada, who took to the House floor on Friday to denounce the inquiry as a "political stunt."

Those pushing this review are lying about the dump's safety," The Hill quoted Ms. Berkley as saying. "They know Yucca Mountain is smack in the middle of an earthquake zone. There's volcanic activity. There's groundwater issues. Have we learned nothing about what's happening now in Japan?"

In a statement, Mr. Upton and Fred Shimkus, chairman of the newly formed Environment and Economy subcommittee, said there was "no scientific or technical basis" for the administration's move to withdraw a construction application for the Yucca project.

"Despite the scientific community's seal of approval, extensive bipartisan collaboration, as well as nearly three decades and billions of taxpayer dollars spent, this administration has recklessly sought to pull the plug on the Yucca repository without even the sensibility of offering a viable alternative," the congressmen said.

Yucca Mountain was identified by Congress as its first choice for a nuclear waste repository in the 1980s, but local opposition and questions over the site's suitability for long-term storage have long stalled its development.

As a nuclear crisis unfolds in Japan, where spent reactor fuel stored inside reactors appears to have overheated and leaked radioactive material, enthusiasm has grown in Congress for finding a long-term solution for the growing stockpiles of nuclear waste in the United States.

But the push to renew construction on Yucca Mountain has met with staunch resistance from the Obama administration, which proposed eliminating the Nuclear Regulatory Commission's funds for the project in its 2012 budget.

A spending bill approved by the House, meanwhile, would bar the nuclear commission from halting its licensing review for Yucca Mountain "without due cause" and block the agency from using budgeted funds to pay termination costs associated with shutting down the project.

Senator Harry Reid of Nevada slammed that proposal when it was passed by a House committee in February. "Let me be clear," he told The Las Vegas Sun. "Any attempt to restart the Yucca Mountain project will not happen on my watch as Senate majority leader."

"If House Republicans are genuinely interested in fiscal responsibility, they should stop trying to waste more taxpayer money on an irretrievably bad project," he said.

Energy Committee Leaders Probe Yucca Mountain Decision (POWGENWLD)

Power-Gen Worldwide, April 6, 2011

Energy and Commerce Committee Chairman Fred Upton, R-Mich., is leading the probe into the decision to stop the project. He and John Shimkus, R-Ill., chairman of the Environment and the Economy Subcommittee, sent letters March 31 to Energy Secretary Steven Chu and Nuclear Regulatory Commission Chairman Gregory Jaczko asking questions about the decision to halt the repository. The two House leaders said a review of the available evidence indicates that "there was no scientific or technical basis for withdrawing the application."

In their letters to Chu and Jaczko, Upton and Shimkus asked for replies to their questions within two weeks.

Last summer, 91 members of Congress asked the Department of Energy to halt all operations to dismantle the Yucca Mountain nuclear waste repository. In a July 6 letter to Energy Secretary Steven Chu, the group of House and Senate members said they were "deeply troubled" that DOE continued to move forward with terminating the project.

The Safest Form Of Power: Everything In Moderation (REU)

By Morven McCulloch

Reuters, April 6, 2011

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

More Citizen Involvement For US Nuclear Power Plant Siting, Design, & Upgrades (TREEHUG)

By John Laumer

Treehugger, April 6, 2011

It's been about 35 years since large numbers of US citizens immersed themselves in nuclear power plant design and location issues. (Most readers of this probably weren't even born until well after the US nuclear fleet was built.) That's about to change. The US Nuclear Regulatory Commission will report on lessons learned from the Japanese nuclear melt down(s) and it is reasonable to expect some mandatory changes growing out of that work. Pending proposals to re-license existing plants also are going to be looked at more closely. As a result, citizen involvement in nuclear decision making is certain to increase. One prospective citizen role would be to help shape emerging plant design standards. Activist groups, for example, could potentially challenge the U.S. Nuclear Regulatory Commission's Design Certification of the Westinghouse AP1000 reactor. If a challenge were taken it would be interesting to watch, as Westinghouse is principally owned by Toshiba, while Congress, lacking any nuclear power expertise among the members is likely to take a hands off approach to the NRC's deliberations for the time being have some wack-a-doodle House of Representatives hearing with think tank 'experts' on hand to confuse everyone.

But, that's OK...there are other ways citizens can have a say on design, safety procedures, and siting at the state and the local level: licensing; public hearings; cooling water withdrawal permits; zoning hearings; and so on.

From 'under water,' to 'radioactive' mortgages.

There's more at stake with coming decisions than personal health and safety. How many Tea-Party supporters can see nuclear power plant cooling towers out their suburban windows? Plenty, I bet. Wealthy traditional Republicans? A lot of them. Until now, I doubt they gave much thought to what might happen to their home's market value if they had to evacuate and have the place decontaminated after a nuclear plant incident.

More than dirty stinking environmentalist hippies against a free market.

Owners of aging nuclear plants, many of them surrounded now by suburban development, have been skating by on the 'hidden-in-plain-sight' factor and probably are none too excited about going to public hearings for NRC-mandated safety upgrades.

Cable TV's talking heads and Rush Limbaugh will not be able to spin the resulting uproar as an 'environmental socialist plot' (although they may try). Every imaginable interest group has skin in the nuclear safety game. Mutual funds, institutional pension investors, real estate developers, GE...the list goes on.

Political plate tectonics: once the NRC's safety cat is out of the bag and people in all walks of life have thought about how it may affect them, all the old political and social stereotypes about environmentalists which have been fueled by mainstream media and stuck in the mud environmental activists will be up in the air and new political alignments will result.

Where experts dare not tread alone.

Colin Macilwain, in Nature News, Concerns over nuclear energy are legitimate,, writes: Fukushima houses six reactors on one site, despite the fact that even the most basic analysis of failure modes and effects would come out resoundingly against such an arrangement. Not only are all the reactors exposed simultaneously to the same dangers – whether flood, earthquake, war or terrorist attack – but radiation release at one reactor or fuel tank could cripple recovery efforts at the others. Everyone in nuclear engineering knows this. Yet such co-siting is the central organizing principle of current nuclear-build plans in Britain, the United States and elsewhere, because the only communities that will accept new nuclear plants are those that already have them. Colin's last sentence is important. He is right to say that sprawl has corralled the nuclear beast and to infer that this will make it very hard to unleash it elsewhere, regardless of what the Obama Administration suggests as a matter of energy independence and climate protection.

The six-pack dilemma

I'd add to Colin's assessment that it's not only sprawl and fear that provide an incentive for utility owners to host multiple reactors on a single nuclear plant site. One plant with six generators - per the case in Japan - has many cost advantages over six widely dispersed units feeding the same grid. A six-pack plant takes a single land parcel, accesses one transmission line, needs one license, deals with one local government and one state, prepares one environmental impact statement and one evacuation

plan, can share a single cooling water intake/discharge pipe and intake crib/diffuser for all six reactors, needs one safety department, has one safety program, prepares one annual report, and so on.

Compromise layout

If you put all six reactors spread out across one much larger parcel more land is needed and pipe runs have to be longer, fatter, and need larger pumps to move water: adding cost. More wires, possibly several control rooms, etc.

It's going to be tough, national decision process but we can't trust only the experts. US nuclear power had originally to compete mainly with coal-fired electricity. Now it competes against abundant cheap natural gas as well. Because of that added competition, and as long as Wall Street demands a return on investment from a nuclear-based utility, and while sprawl still exists, I can't believe that nuclear utilities will on their own move create a distributed generation business model (mini nucs or whatever).

The only way to make a redistributed nuclear industry happen would be for government to take a very strong hand with eminent domain and licensing: buy out suburban landscapes and turn them into clustered nuclear parks. Can you imagine the public row?

INTERNATIONAL NUCLEAR NEWS

Japan Nuclear Plant Plugs Highly Radioactive Leak (AP)

By Malcolm Foster And Ryan Nakashima

Associated Press, April 6, 2011

TOKYO – Workers at Japan's tsunami-damaged nuclear power plant on Wednesday finally stemmed a tide of radiation that was pouring into the Pacific and exacerbating concerns over the safety of seafood.

High levels of contamination have been measured at the shoreline of the Fukushima Dai-ichi complex in recent days, prompting the government to set limits for the first time on the amount of radiation permitted in fish.

While officials have said the crack in a maintenance pit plugged early Wednesday was the only one found, they have not explicitly ruled out that radioactive water is leaking into the sea from another point.

Authorities insisted the radioactive water would dissipate and posed no immediate threat to sea creatures or people who might eat them. Most experts agreed.

Still, Japanese officials adopted the new standards as a precaution. And the mere suggestion that seafood from the country that gave the world sushi could be at any risk stirred worries throughout the fishing industry.

"Even if the government says the fish is safe, people won't want to buy seafood from Fukushima," says Ichiro Yamagata, a fisherman who lived in the shadow of the power plant. "We probably can't fish there for several years."

Fukushima is not a major fishing region, and no fishing is allowed in the direct vicinity of the plant. But experts estimate the coastal areas hit by the massive wave last month account for about a fifth of Japan's annual catch.

Radiation concerns in the area intensified after the discovery over the weekend of the crack, which photos showed water pouring out of and splashing into the sea.

Since then, workers have raced to find a way to seal it, pouring in concrete and injecting a mixture of polymer, sawdust and shredded newspaper. Both failed.

But on Wednesday morning, Tokyo Electric Power Co. spokesman Naoki Tsunoda said the injection of 400 gallons (1,500 liters) of "water glass," or sodium silicate, and another agent near a seaside pit appeared to be successful.

It was a rare bit of good news for the utility that owns the crippled nuclear plant, located about 140 miles (220 kilometers) northeast of Tokyo. But highly contaminated water continues to pool around the complex. Tsunoda said officials were investigating whether the contaminated water is leaking from other places.

The new limits on radioactivity in fish were imposed after TEPCO announced water tested near the plant Saturday contained levels of radioactive iodine 7.5 million times the legal limit. That level had dropped to 5 million two days later.

Japan said some fish caught last week about 50 miles (80 kilometers) from the plant would have exceeded the new safety limits, which may change as circumstances do.

Fears of radiation contamination prompted India to announce Tuesday that it was halting food imports from Japan. Few countries have gone so far, but India's three-month ban reflected the unease created by the nuclear crisis among consumers. India said the ban would last three months or until the risk subsides. It planned to review the situation weekly.

Yamagata, whose home is within the 12-mile (20-kilometer) evacuation zone around the plant, is staying in a Tokyo soccer stadium with his wife and about 140 other refugees. He expects his fishing days are over.

After the magnitude-9.0 earthquake on March 11, he ran outside and watched the second floor of his house collapse, then fled with his family when tsunami warnings sounded.

Since then, he hasn't been allowed to return to check on the 5-ton boat he used to troll for flounder. He assumes it's gone, too. The tsunami killed up to 25,000 people and left tens of thousands homeless as it swamped about 250 miles (400 kilometers) of the northeastern coast and knocked out power to the nuclear plant.

Workers there have been desperately trying to cool down overheated reactors, but the effort has required spraying large amounts of water and allowing it to gush out wherever it can escape, sometimes into the sea.

Radioactivity will continue spewing into the air and water until cooling systems are restored.

The radiation standards for fish will be the same as for vegetables. After spinach and milk exceeded safety limits following the quake, health experts said people would still have to eat enormous quantities of tainted produce or dairy before getting even the amount of radiation contained in a CT scan.

Japan imports far more fish than it exports, but it sent the world \$2.3 billion worth of seafood last year.

Some people were undaunted. At Sushizanmai, a sushi bar just outside Tokyo's famed Tsukiji fish market, customers were still eating Japan's famed raw fish delicacies Tuesday night.

But chef Seiichiro Ogawa said the fuss over radiation could hurt business. His restaurant is trying to get more fish from the western part of Japan, which has not been affected by the nuclear crisis.

"Japanese customers are especially sensitive to this kind of thing, so I'm worried they'll stop eating sushi," said Ogawa, who has already seen his business drop 50 percent after foreigners stopped visiting the city after the quake. "We need this nuclear problem to be resolved."

TEPCO also said this week it is purposely dumping more than 3 million gallons of low-level radioactive water into the sea to make room in a storage tank for more highly contaminated water that it needs to remove before workers can restore important cooling systems.

That announcement angered Fukushima's federation of fisheries groups, which sent the company a letter of protest.

"Our prefecture's fishermen have lost their lives, fishing boats, piers and buildings due to the Great Eastern Japan Disaster," federation chairman Tetsu Nozaki said in the letter. "This low-level contaminated water has raised fears among fishermen that they will never be able to fish in our prefecture's waters again, and we absolutely want you to stop."

TEPCO's reputation has taken a serious hit in the crisis. On Tuesday, its stock dropped 80 yen - the maximum daily limit, or 18 percent - to just 362 yen (\$4.30), falling below its previous all-time closing low of 393 yen from December 1951. Since the quake, the share price has plunged 80 percent.

In what could be an effort to counter the bad publicity, Takashi Fujimoto, TEPCO's vice president, said it was offering 20 million yen (\$240,000) in "apology money" to each town or city affected by the mandatory evacuation zone around the plant.

That's likely to be little comfort to fisherman Yamagata and his wife, Chiharu, who are angry with TEPCO over the situation.

"All we heard was that the plants were safe, safe, safe," she said. "I feel like they were hiding things from us. Now that radiation is seeping out, it's too late."

Ichiro Yamagata, who is 50, said he would like to return to his home and his job, but he sees no way that could happen. Nearly 17,000 boats have already been reported damaged in three hardest-hit prefectures, and that's just a partial tally.

Some fishing boats that left the harbor immediately after the quake got far enough out to sea that they were safe from the tsunami, Yamagata said, but others were swept away.

For now, the Yamagatas are passing their days at the soccer stadium, sleeping on mats in large rooms sectioned off with blue, knee-high dividers. They have no possessions - Ichiro Yamagata doesn't even have his driver's license - and only enough cash in the bank to last six months.

"After that, I'm going to have to find some kind of work," he said. "But fishermen can't be salarymen. I can only do simple jobs."

Associated Press writers Yuri Kageyama and Noriko Kitano contributed to this report.

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Does Discount Grocer Aldi Have the Upper Hand in Urban Growth? Mallory Factor: Tom Reed (R-NY) Springtime For Bailouts But Economic Zombies Still Roam Muni Bond Bubble

Radiation 101: How Far Will Radioactive Water Leaking From Nuclear Plant Go? (CSM)

Christian Science Monitor, April 6, 2011

Seawater near the stricken Fukushima Daiichi nuclear complex is highly contaminated with radioactive iodine, plant operator Tokyo Electric Power Co. (TEPCO) reported Tuesday. But TEPCO also said workers are making headway in an attempt to seal a concrete pit they believe is leaking radioactive water into the Pacific Ocean. Skip to next paragraph

Ocean contamination has become a more critical issue in Japan in recent days as the extent of Fukushima's leakage has become clearer. The presence in seawater samples of highly radioactive substances such as iodine-131 and cesium-137 indicates that the radioactivity is flowing out of reactor units themselves, according to Japanese officials.

This situation led Japan on Tuesday to set first-ever radiation safety limits for fish. That level is equal to the maximum allowable radiation limit for vegetables, said Chief Cabinet Secretary Yukio Edano at a press conference.

"We will conduct strict monitoring and move forward after we understand the complete situation," said Mr. Edano.

However, TEPCO insists that the radioactivity detected so far presents little risk to human health. The half-life of iodine-131 is eight days, so it will decay quickly. The half-life of cesium-137 is much longer, at 30 years, but it will be quickly diluted in the vast Pacific Ocean, say TEPCO officials.

Where will the radioactive water go? Japan is fortunate in that ocean currents near Fukushima may well carry the radiation away from land and help the dilution process. The Kuroshio Current, the Japanese equivalent of the Gulf Stream, flows up Japan's east coast before veering off to the northeast in open waters.

This temperate current carries the water volume of 6,000 Danube Rivers and should quickly mix and dilute radioactive elements. The Japan Coast Guard keeps a close watch on the current and posts daily updates on its condition.

Japan's radioactive water problem has developed in large part due to the ad hoc methods workers have used to try to cool reactor fuel units and avoid the disaster of a complete meltdown of the reactors' cores.

With normal pumps broken and electricity unavailable in the weeks since an earthquake and tsunami shattered the plant, TEPCO has had to cool the site by pouring water on reactor units using hoses and temporary pumps from outside containment buildings. While much of this water has evaporated or remained within the buildings, much has also inevitably leaked away.

A hole in a pit beneath reactor Unit 2 has become a prime suspect in the search for the source of radioactive pollution. On Tuesday workers continued to inject a hardening agent, liquid glass, into gravel beneath the pit. That appears to be slowing the leak, according to photos released by TEPCO.

Seawater measurements taken in recent days show radioactive contamination at several million times the legal limit, said TEPCO on Tuesday. These readings were taken closer to the plant than previous measurements, however, so it was not clear whether they reflected an actual worsening of the situation.

The International Atomic Energy Agency reported Tuesday that its own measurements of radiation in seawater close to the discharge pipe that serves reactor units 1 through 4 showed a "decreasing trend" from April 1 to April 4.

These measurements were taken before TEPCO, with approval of the Japanese government, began releasing water with low levels of contamination directly into the ocean in order to clear tank storage space for reactor-unit wastewater with much higher radioactivity readings.

Japan Sets Radiation Standards For Fish (NYT)

By Andrew Pollack, Ken Belson And Kevin Drew

New York Times, April 6, 2011

TOKYO — Japan's government announced its first radiation safety standards for fish on Tuesday, hours after the operator of a crippled nuclear power plant said that seawater collected near the facility contained radiation several million times the legal limit.

The standards were announced after a sample of kounago fish, or sand lance, that was caught last Friday off the coast halfway between the plant and Tokyo was found to have high levels of radioactive iodine 131.

On Wednesday morning, the company that operates the plant announced a rare bit of good news, saying it had halted a leak from a maintenance pit, discovered over the weekend, that has dumped tons of highly radioactive water a day into the ocean. But even if the repairs to the damaged pit continue to hold back the water there, the company is still having trouble ridding the plant of tons of runoff and has been flushing thousands of tons of relatively low-level radioactive water into the Pacific.

Workers are dumping that water to make room in storage containers for increasing amounts of far more contaminated runoff. The water being released contains about 100 times the legal limit of radiation, said the Tokyo Electric Power Company, the plant's operator. The more contaminated water has about 10,000 times the legal limit.

The runoff resulted from workers' pouring massive amounts of water on reactors and spent fuel-rod pools to keep them from overheating after their normal cooling systems failed.

The small fish caught Friday — before the intentional dumping began — had 4,080 becquerels of iodine 131 per kilogram. The standards allow up to 2,000 becquerels of iodine 131 per kilogram, the same standard used for vegetables in Japan.

The fish also contained cesium 137, which decays much more slowly than iodine 131, at a level of 526 becquerels per kilogram.

“Clearly the fish are consuming highly radioactive food,” said Paul G. Falkowski, a professor of marine, earth and planetary sciences at Rutgers University. But Professor Falkowski emphasized that even those levels were not likely to present health hazards in Japan or elsewhere, since fishing is restricted in Japan and these levels of radiation are not likely to travel far.

Still, experts on radiation in seafood said it was nearly impossible to get a full sense of the scope of the environmental and health risks until the Japanese released information on radiation levels in more species of fish and seaweed and in a greater number of locations.

Measurements in the seawater are often not a good indication of how much radiation may be entering the food chain, scientists say.

Fish and seaweed can concentrate radioactive elements as they grow, leading to levels that are higher, sometimes far higher, than in the surrounding water. Seaweed can concentrate iodine 131 10,000-fold over the surrounding water; fish concentrate cesium 137 modestly.

The announced standards for fish came hours after Tokyo Electric said it had found iodine 131 in seawater samples at 200,000 becquerels per cubic centimeter, or five million times the legal limit. The samples were collected Monday near the water intake of the No. 2 reactor of the Fukushima Daiichi Nuclear Power Station.

The samples also showed levels of cesium 137 to be 1.1 million times the legal limit, according to the Japanese public broadcaster NHK. Cesium remains in the environment for centuries, losing half its strength every 30 years.

The Monday sampling of seawater showed a drop in radioactive iodine levels since Saturday, when the company said the level of iodine 131 was 300,000 becquerels per cubic centimeter.

Meanwhile, the death toll from the March 11 9.0-magnitude earthquake and tsunami rose to 12,341 on Tuesday, the country's National Police Agency said. More than 15,000 people are missing, and more than 160,000 are staying in temporary shelters across the country, the agency said.

The crisis at the power station, now in its fourth week, has shaken public confidence in Tokyo Electric. Its share prices plunged to an all-time low on Tuesday over concern by investors about the financial burden of the work being carried out at Daiichi.

The company has found itself lurching from crisis to crisis since the plant's crucial cooling systems stopped working after the quake and tsunami. Even the welcome news about stopping the leak at the maintenance pit came after days of false starts, including attempts to plug a large crack in the pit with more than 120 pounds of sawdust, three garbage bags full of shredded newspaper and about nine pounds of a polymeric powder that absorbs water.

In the end, the company said it had succeeded in stopping the leak using sodium silicate, which acts as a cement.

A government panel suspended work on Tuesday on revising the country's policy platform on nuclear power, according to local news media reports, saying the crisis needed to be resolved before Japan could publicly assess its nuclear power policies.

The country's trade and industry minister, Banri Kaieda, said on Tuesday that 60,000 tons of radioactive water was thought to be flooding the basements of the plant's reactor buildings and underground tunnels, according to a report by the Kyodo news agency.

Radioactivity Found In Fish As Tepco Purges Nuclear Plant (BLOOM)

By Tsuyoshi Inajima And Kari Lundgren

Bloomberg News, April 6, 2011

Radioactivity in fish exceeding health guidelines was detected for the first time off northern Japan as Tokyo Electric Power Co. dumped tainted water into the ocean to gain control of its crippled nuclear plant.

Cesium radioactivity in sand-lance caught south of the Fukushima Dai-ichi plant was 526 becquerel per kilogram, compared with a health ministry standard of 500 becquerel, Makato Osodo, of the fishing policy division of the Ibaraki prefectural government, said in a telephone interview.

Fukushima Prefectural Federation of Fisheries Co-operative Associations asked the company, known as Tepco, to stop dumping radioactive water into the sea. Dumping began April 3 because radioactive water on site is hindering repair of cooling pumps. Discharges continued, Japan's Nuclear and Industrial Safety Agency said.

"Clearly, they haven't got the site under control," said Richard Wakeford, a visiting professor of epidemiology at the University of Manchester's Dalton Nuclear Institute in England. "They've got to make difficult decisions and one of those is you get rid of the mildly radioactive liquid to make way for the really contaminated liquid."

Fishing in Ibaraki Prefecture has been suspended since the March 11 earthquake and tsunami that damaged the plant, leading radioactivity to escape into water and air. The number of dead and missing following the earthquake and tsunami reached 27,688 as of 10 a.m. local time yesterday, according to the National Police Agency in Tokyo.

Exposure to Cesium-137, among the isotopes Tepco says were released from the plant, increases the risk of cancer, according to the U.S. Environmental Protection Agency. Japan has struggled to keep the radioactive fuel at the Fukushima reactors cool after equipment was damaged by the earthquake and tsunami, triggering the worst nuclear crisis since Chernobyl.

Tokyo Electric plunged the daily limit of 80 yen, or 18 percent, to close at 362 yen on the Tokyo Stock Exchange yesterday, the lowest since its listing in August 1951. The stock has dropped 83 percent since the day before the magnitude-9 earthquake.

The risk to people from the deliberate discharge at the Fukushima plant is low, according to the Vienna-based International Atomic Energy Agency.

The potential additional radiation dose to a person eating seaweed or seafood caught near the Fukushima plant every day for a year would be 0.6 millisievert, the agency 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.

With a radioactive half-life of 30 years, cesium can build up in the meat of marine predators as they eat smaller animals, said Karen Gaines, chairwoman of the biology department at the University of Eastern Illinois in Charleston.

"If they're going to restart fisheries and make people feel comfortable, they'll need real-time monitoring of the catch," said Gaines, who studies radioactive cesium in animals at the Savannah River Site in South Carolina, which made plutonium for U.S. nuclear weapons.

The cost of insuring Tokyo Electric's 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.

Tokyo Electric is paying 20 million yen (\$237,276) to each of 10 local governments affected by the disaster, Vice President Takashi Fujimoto said at a news conference. The utility may ask government assistance to pay compensation, Fujimoto said.

To handle the plant's radioactive material, Japan has asked Russia for a waste-treatment plant housed on a barge, Sergei Novikov, a spokesman for Rosatom Corp., said in Moscow.

There are about 60,000 tons of contaminated water in basements and trenches outside reactors No. 1, 2 and 3, said Takeo Iwamoto, a company spokesman. Tokyo Electric plans to pump half of that to a waste-treatment facility and the rest to tanks and floating storage vessels, he said.

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Japan Nuclear Crisis: Nuclear Plant Operator Reports Some Success On Plugging Leak (LAT)

By Kenji Hall And Julie Makinen

Los Angeles Times, April 6, 2011

Reporting from Tokyo—

The operator of Japan's stricken nuclear plant said Wednesday that it had apparently contained at least one leak that was allowing radiation to seep into the sea.

Tokyo Electric Power Co. had said Tuesday that it had found iodine-131 at 7.5 million times the legal limit in a seawater sample taken near the facility, and government officials instituted a health limit for radioactivity in fish. Other samples were found to contain radioactive cesium at 1.1 million times the legal limit.

The exact cause of the radiation was not immediately clear, though Tepco has said that highly contaminated water has been leaking from a pit near the No. 2 reactor. The utility had suspected that the leak was coming from a crack, but several attempts to seal the crack failed to stop the flow.

On Tuesday the company said the leak might instead be coming from a faulty joint where the pit meets a duct, allowing radioactive water to seep into a layer of gravel underneath. The utility injected "liquid glass" into the gravel, and on Wednesday officials were reporting that the leak had been contained.

Meanwhile, Tepco continued releasing what it described as water contaminated with low levels of radiation into the sea to make room in onsite storage tanks for more highly contaminated water. In all, the company said it planned to release 11,500 tons of the water, but by Tuesday morning it had released less than 25% of that amount.

Although the government authorized the release of the 11,500 tons and has said that any radiation would be quickly diluted as it dispersed in the ocean, fish with high readings of radioactive iodine are being found.

On Monday, officials detected more than 4,000 becquerels of iodine-131 per kilogram in a fish called a sand lance caught less than three miles offshore from the town of Kitaibaraki, about 50 miles south of the Fukushima Daiichi nuclear complex. The fish also contained 447 becquerels of cesium-137, which is considered more problematic than iodine-131 because it has a much longer half-life, which means it takes longer to decay.

On Tuesday, Chief Cabinet Secretary Yukio Edano said the government was imposing a standard of 2,000 becquerels of radioactive iodine per kilogram of fish, the same level it allows in vegetables. Previously, the government did not have a specific level for fish.

Fishing of sand lances has been suspended. Local fishermen demanded that Tepco compensate them for their losses.

Fishing has been banned near the nuclear plant, and the vast majority of fishing activity in the region has been halted because of damage to boats and ports by the March 11 earthquake and tsunami. Still, some fishermen are out making catches, only to find few buyers because of fears about radiation.

It was unclear what Tepco might offer the fishermen, but the company said Tuesday that it would be giving "condolence payments" totaling about \$2 million to residents who had to evacuate their homes because of radiation from the Fukushima plant. One town, however, refused the payment.

The company has yet to decide how it will compensate residents near the plant for damages, though financial analysts say the claims could be in the tens of billions of dollars. Tepco's executive vice president, Takashi Fujimoto, said the company's decision on damages hinges on how much of the burden the government will share.

Edano, the government spokesman, urged the company to accelerate its decisions on compensation.

For now, Fujimoto said, the company has offered \$240,000 to each of 10 villages, towns and cities within 12 miles of the plant, the area in which the government has ordered residents to evacuate.

"We hope they will find it of some use for now," he said.

Namie, a town of 20,600 about six miles north of the plant, refused the money. Town official Kosei Negishi said he and other government officials were working out of a makeshift office in Nihonmatsu, elsewhere in Fukushima prefecture, and that they faced more pressing issues.

"The coastal areas of Namie were hit hard by the earthquake and the tsunami, but because of the radiation and the evacuation order, we haven't had a chance to conduct a search for the 200 people who are missing," Negishi said. "Why would we use our resources to hand out less than 1,000 yen [\$12] to every resident?"

Tepco's Fujimoto acknowledged that there was a "gap" in the views of company and Namie officials.

Radioactive Water No Longer Leaking Into Sea, Nuclear Plant Operator Says (WP)

By Chico Harlan

Washington Post, April 6, 2011

Workers at the Fukushima Daiichi nuclear plant on Wednesday fixed a leak that was allowing radioactive water to spill into the sea, officials from the Tokyo Electric Power Co. said.

The apparent breakthrough capped a five-day struggle to plug a concrete pit with an eight-inch crack. Engineers had tried to fill the crack with concrete and polymer but were unsuccessful, and water — with a dosage rate several times the amount that nuclear plant workers can be exposed to in a year — continued to flow into the Pacific.

This time, Tepco said, the crack was treated with a sodium silicate. Tepco also said it will check the disaster-stricken facility for additional cracks.

It remains to be seen if the repair of the crack quickly improves radiation levels in the nearby water, particularly given that workers this week have been dumping some 11,500 tons of radioactive water into the sea. The five-day dumping operation is part of Tepco's plan to remove low-level radioactive water from the site — and in turn create more storage room for dangerously radioactive water that has accumulated in the plant.

The contaminated water has raised concerns for fishermen and restaurant owners who fear that radioactive elements could enter the food chain. Japan on Tuesday adopted new standards to measure for radioactivity in fish.

Japan Stops Radioactive Water Leak Into Ocean (USAT)

By Oren Dorell, Usa Today

USA Today, April 6, 2011

The utility that owns Japan's crippled nuclear reactor says that highly radioactive water has stopped leaking into the ocean.

Tokyo Electric Power Co. spokesman Naoki Tsunoda said today the company's attempt to stem the leak by injecting 1,500 liters (400 gallons) of "water glass," or sodium silicate, and another agent near a seaside pit where the water was leaking appeared to have been successful.

In the meantime, the Japanese government set radiation safety limits for fish for the first time Tuesday, after radiation levels in water just outside the damaged nuclear plant registered 7.5 million times higher than the legal limits on Saturday.

Radiation levels fell to 5 million times the limit on Monday. Monitors also found radiation levels about 10 miles from the plant were 130 to 140 times less concentrated than at the mouth of the discharge canal where it entered the ocean, according to TEPCO, which owns and operates the reactor.

"That means it's becoming more dilute," said Jere Jenkins, director of the Radiation Laboratory at Purdue University in Indiana. "You've got a source of contamination, but it's going into a very, very large sink with a lot of water in it" — the Pacific Ocean.

The new levels coupled with reports that radiation was building up in fish led the government to create an acceptable radiation standard for fish for the first time. Some fish caught Friday off Japan's coastal waters would have exceeded the new limit.

Japan's Chief Cabinet Secretary Yukio Edano said the government is setting the same radiation-safety limits for fish as it did for vegetables. "Even if the government says the fish is safe, people won't want to buy seafood from Fukushima," said Ichiro Yamagata, a fisherman who used to live near the nuclear plant. "We probably can't fish there for several years," he said.

The Fukushima plant was damaged March 11, when a 9.0-magnitude earthquake and subsequent tsunami knocked out power and backup diesel generators, shutting down cooling mechanisms and causing nuclear cores to overheat. Water poured in by the military, firefighters and plant workers to cool the cores and spent fuel ponds, however, collected in the plant.

TEPCO this week began dumping 11,500 tons of low-level radioactive water that has built up at the plant into the ocean.

The South Korean foreign ministry expressed concerns about the dumping through its embassy in Japan, according to The Korea Herald. Hong Kong and India have banned Japanese seafood.

Nuclear engineer Kenneth Solomon, who worked for years on nuclear safety and non-proliferation projects at the RAND Corp., said the South Koreans are too far away to be affected by tainted water from Fukushima, but that public fear of radiation may cause economic damage.

"The very fact of radiation in the environment is enough to drive the price of seafood down, because demand will go down. That's totally independent of what the true risk is," Solomon said.

Damon Moglen, director of Friends of the Earth's energy and climate program, said the Fukushima accident is already having an impact on fisheries.

"That's not a question of perception alone, it's a simple matter of acceptance of risk. Who takes responsibility for that stuff?" he said.

Zeke Grader, executive director of the Pacific Coast Federation of Fishermen's Associations, representing 1,200 West Coast fishing operations, said he's not worried about an impact on U.S. fisheries, "unless we see consumer concern."

Release Of Irradiated Water Is Stopped (WSJ)

By Mitsuru Obe

Wall Street Journal, April 6, 2011

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

Tepco Stops Leak From No. 2 Reactor At Nuclear Station (BLOOM)

By Michio Nakayama, Tsuyoshi Inajima And Ichiro Suzuki

Bloomberg News, April 6, 2011

Tokyo Electric Power Co. said radioactive water stopped leaking into the sea at its stricken nuclear plant north of Tokyo that was damaged in the earthquake and tsunami on March 11.

"We observed the stoppage of the water spilling from the crack on the concrete lateral of the pit" near the No. 2 reactor at the Fukushima Dai-Ichi nuclear station at 5:38 a.m. today, Tepco, as the company is called, said in an English-language statement. The company will take further measures "in order to prevent further outflow of high-level radioactive materials to the ocean."

Engineers used sodium-silicate in its attempt to stop the leak, the company said. Radioactivity in fish exceeding health guidelines was detected for the first time off northern Japan yesterday as Tepco dumped tainted water into the ocean as part of attempts gain control of the crippled nuclear plant.

Fishing off the coast Ibaraki prefecture northeast of Tokyo and to the south of the damaged plant was suspended after the earthquake and tsunami. The Fukushima prefectural Federation of Fisheries Co-operative Associations asked the company to stop dumping radioactive water into the sea.

Cesium radioactivity in sand-lance caught south of the Fukushima Dai-Ichi plant was 526 becquerel per kilogram, compared with a health ministry standard of 500 becquerel, Makato Osodo, of the fishing policy division of the Ibaraki prefectural government, said in a telephone interview.

Exposure to Cesium-137, among the isotopes Tepco says were released from the plant, increases the risk of cancer, according to the U.S. Environmental Protection Agency. Japan has struggled to keep the radioactive fuel at the Fukushima reactors cool, triggering the worst nuclear crisis since Chernobyl.

Engineers started disposal of some contaminated water on April 3. The risk to people from the deliberate discharge at the Fukushima plant is low, according to the Vienna-based International Atomic Energy Agency.

The potential additional radiation dose to a person eating seaweed or seafood caught near the Fukushima plant every day for a year would be 0.6 millisievert, the agency said in a statement.

With a radioactive half-life of 30 years, cesium can build up in the flesh of marine predators as they eat smaller animals, said Karen Gaines, chairwoman of the biology department at the University of Eastern Illinois in Charleston.

"If they're going to restart fisheries and make people feel comfortable, they'll need real-time monitoring of the catch," said Gaines, who studies radioactive cesium in animals at the Savannah River Site in South Carolina, which made plutonium for U.S. nuclear weapons.

To handle the plant's radioactive material, Japan has asked Russia for a waste-treatment plant housed on a barge, Sergei Novikov, a spokesman for Rosatom Corp., said in Moscow.

There are about 60,000 tons of contaminated water in basements and trenches outside reactors No. 1, 2 and 3, said Takeo Iwamoto, a company spokesman. Tokyo Electric plans to pump half of that to a waste-treatment facility and the rest to tanks and floating storage vessels, he said.

The number of dead and missing following the earthquake and tsunami was at 27,688 as of 10 a.m. local time yesterday, according to the National Police Agency.

Tepco fell 11 percent to 322 yen on the Tokyo Stock Exchange as of 9:23 a.m. local time, heading for a record low. The stock has slumped 87 percent since the day before the magnitude-9 earthquake.

The cost of insuring Tepco's debt rose 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.

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Japan Stops Nuclear Plant Leak, Still Pumps Radioactive Water Into Sea (REU)

By Chizu Nomiyama And Yoko Nishikawa

[Reuters](#), April 6, 2011

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

Tepco Seals Leak From Fukushima Plant (FT)

By Jonathan Soble

[Financial Times](#), April 5, 2011

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

Japan Stops Uncontrolled Leak From Nuclear Plant (AFP)

By Harumi Ozawa

[AFP](#), April 6, 2011

TOKYO (AFP) – An accidental leak of highly radioactive water into the ocean from a Japanese nuclear plant was stopped Wednesday, boosting efforts to contain the worst nuclear accident since Chernobyl 25 years ago.

The leak was thought to be a source of spiking radiation levels in the sea, which prompted Japan to announce its first seafood radiation safety standards following the discovery of fish with elevated contamination.

To stop the long-running leak from the Fukushima plant on the Pacific coast, operator TEPCO had injected sodium silicate, a chemical agent known as "water glass", to solidify soil near a cracked pit where the water had been escaping.

The pit, which has a 20-centimetre crack in its wall, is linked to the plant's reactor No. 2, one of several that had their cooling systems disabled by a catastrophic earthquake-tsunami disaster on March 11.

"Workers confirmed at 5:38 am (2038 GMT Tuesday) that the water running out of a pit had stopped," Tokyo Electric Power Co. (TEPCO) said in a statement on Wednesday.

Several unsuccessful attempts had been made to try to plug pipes that run to the pit, using a polymer and even newspapers and sawdust, and an effort to seal the crack with cement had also failed to stop the leak.

Leaking water from the Fukushima plant has reached more than 1,000 millisieverts and is thought to be the source of radioactive iodine-131 readings in the sea that have hit more than 4,000 times the legal limit.

Amid increasing unease about water contamination, Japan has imposed a legal limit for radioactive iodine in fish and may widen tests to cover a larger area, after elevated levels were discovered in a fish caught off Ibaraki prefecture, south of the crippled plant.

The stopping of the leak is the first piece of major good news for several days in the battle to control the crisis at the Fukushima plant, where the natural disaster triggered explosions and radiation releases.

The contamination has forced the evacuation of tens of thousands of people within 20 kilometres (13 miles) of the plant, affected agriculture and fishing, and triggered health scares as far away as Tokyo.

India on Tuesday banned all food imports from Japan, the first country to impose a blanket block. Several countries including China, Singapore and the United States have barred food from some Japanese prefectures.

Fishing has been banned within 20 kilometres of the stricken plant, matching the radius of the evacuation zone on land.

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

TEPCO is dumping 11,500 tonnes, or more than four Olympic pools' worth, of the less radioactive water, raising concerns about marine life in the island nation, where seafood is a key source of protein.

As well as fish, iodine above legal limits has been detected in vegetables, dairy products and mushrooms, triggering shipping bans, but officials had said seafood was less at risk as ocean currents and tides dilute dangerous isotopes.

But the government in Seoul has questioned TEPCO's deliberate water dumping, saying the proximity of the two neighbours made the action "a pressing issue" for South Korea.

Shares in TEPCO – Japan's biggest power utility – tumbled anew Wednesday. They were down 16.85 percent in early trade after plunging to 362 yen Tuesday – their lowest ever close – amid concerns the firm will face huge compensation bills.

Some analysts estimate TEPCO could face claims of more than 10 trillion yen (\$120 billion).

The wider economic fallout from Japan's triple calamity – the massive earthquake, giant tsunami and the nuclear crisis – is likely to drive the country into recession in coming months, said a survey of economists.

The disaster, which has left more than 12,000 dead and over 15,000 missing, has also hit exports, business confidence and consumer spending, economists say.

The government is planning a first emergency budget of more than three trillion yen (\$35 billion), Kyodo news agency reported, quoting ruling party politicians saying total spending could top 10 trillion yen.

On Japan: Russia Sends Help, China Finds Radiation And India Bans Rice (FORBES)

By Kenneth Rapoza

Forbes, April 6, 2011

Japan continues to be a cause of concern among its big neighbors, Russia and China. But on Tuesday, India joined the fray and banned food imports over fears they may be contaminated by radiation from tsunami-hit reactors.

This week, Japan was back to seeking Russia's nuclear disaster expertise. The country suffered its own colossal nuclear meltdown with Chernobyl in April of 1986. Japan asked Russia this time to send help with liquid radioactive waste disposal at Tokyo Electric Power Company's Fukushima power plant.

Russia's nuclear power company, Rosatom, said it was sending a floating waste-disposal facility called Lily of the Valley (Landysh in Russian) to dispose of waste from Fukushima. The plant is currently housed on a barge in far east Russia, near Japan, and was actually financed by Japan in 1997-98.

As it stands, Fukushima will dump an estimated 11,500 tons of radioactive water into the ocean. The water contains some 100 times the legal limit of radiation. Tokyo Electric has been using colored powder to trace the source of highly radioactive water leaking into the ocean near Fukushima, which was damaged by an earthquake and tsunami last month.

Meanwhile, in China on Tuesday, more radioactive particles have been found in 17 provinces, up from 13 on Monday. They pose no threat to public health or to the environment, according to a daily statement issued by China's National Nuclear Emergency Coordination Committee.

India's Food Safety Authority said in a statement on Tuesday that all food coming from Japan will be suspended for three months, or longer. FSA said it was taking precautions similar to other nations, mainly the US, Europe and Australia.

The country is currently testing rice and soft drink imports for radiation, the Times of India reported. The market for Japanese food imports in India is pretty small, so unclear whether this means other countries will be called to supply India while Japan is off limits.

Though import of food products from Japan is estimated at a little over \$1 million during April-September 2010, the demand for fish and packed food products has picked up in recent years. Since October, the list of products that has entered the country from Japan included soybean curd, dried noodles, boiled mushrooms, radish paste, cooking sauces, roasted seaweed, flavouring extracts, tea bags, wheat flour, food additives and tofu. Now, these products would be off the shopping list. — The Times of India, April 5, 2011.

Use Of Radioactive Disposal Facility Weighed (JT)

Japan Times, April 6, 2011

The government is considering borrowing a Japan-funded radioactive waste disposal facility from Russia to help contain the crisis at the Fukushima No. 1 power plant, a nuclear safety agency official said Tuesday.

"We are checking whether it is technically possible to use the facility for this event, and whether the facility's machines are working smoothly," Hidehiko Nishiyama, a spokesman for the Nuclear and Industrial Safety Agency, told a news conference.

He said Japan has already been communicating with Russia over possible use of the floating facility, called Suzuran, which Japan gave to Russia in 2001 to help dispose of low-level radioactive waste from decommissioned submarines.

Japan offered the facility after Russia dumped radioactive waste into the Sea of Japan in 1993 in the process of dismantling its nuclear subs.

Dumping defended

The government defended on Tuesday dumping massive amounts of low-level radioactive water from the Fukushima nuclear plant, saying the action doesn't violate international laws, and pledged to fully inform the international community of steps to tackle the emergency.

Foreign Minister Takeaki Matsumoto said the government briefed the diplomatic corps in Tokyo on the start of the disposal hours before Tokyo Electric Power Co. began releasing the water into the Pacific Ocean on Monday evening.

Why Didn't Japan Tell Korea Of Nuclear Waste Plans? (CHOSUN)

Chosun Ilbo, April 6, 2011

The Japanese government neither consulted nor informed Korea about a plan to discharge some 10,000 tons of contaminated water from the Fukushima Daiichi nuclear power plant into the sea. Yet according to Japan's TBS Television on Tuesday, Tokyo discussed the matter with the United States in advance and they agreed that it is feasible to dump water tainted with low levels of radioactivity into the sea rather than storing it unless there are other options available.

Tokyo also told the International Atomic Energy Agency of the decision in conformity with the Convention on the Prevention of Marine Pollution, but it did not tell individual neighboring countries because the water was discharged on the Pacific side. That at least is the explanation offered by Japan's Chief Cabinet Secretary Yukio Edano in a press conference Tuesday after Tokyo's silence raised eyebrows in the region.

Japanese Foreign Minister Takeaki Matsumoto told reporters separately the dumping does not violate the 1986 Convention on Early Notification of a Nuclear Accident, which obligates nations to provide data such as the accident's time, location and radiation releases to affected states "when harmful trans-boundary radiation release is feared."

But Korea has already detected small levels of radiation linked to the stricken plant, and even Japan's own maritime pollution prevention act stipulates that Tokyo should consult with countries that could be affected when it decides to dump harmful materials into the sea. It is common sense for Tokyo to notify Seoul because seawater from the Pacific side is borne by currents to the East Sea.

Even in Japan itself some feel they could have been given more information. Japanese Minister of Agriculture, Forestry and Fisheries Michihiko Kano said it is "very regrettable that Tokyo Electric Power Company has released radioactive water into the sea without telling" the ministry. Fishermen in the nearby areas protested because they are worried about their catch.

"It stands to reason that Korea should be given more accurate information since it imports Japanese agricultural and fisheries products," a diplomatic source in Tokyo said. "It seems Japan is trying to downplay the scale of the disaster by keeping a lid on information."

Meanwhile, contamination was worsening Tuesday in the sea near the Fukushima plant, with iodine-131 detected in coastal waters at 7.5 million times above normal. Contamination fears have led to a sharp drop in seafood consumption in Japan.

Amid Nuclear Crisis, Japan's Tepco Planned New Reactors (WP)

By Andrew Higgins

Washington Post, April 6, 2011

FUKUSHIMA, JAPAN — Even as it struggled to contain the world's worst nuclear disaster in a quarter-century, Tokyo Electric Power Co. late last month quietly set out big plans for the future: It proposed building two new nuclear reactors at its radiation-spewing Fukushima Daiichi power plant.

Tokyo Electric, known as Tepco, informed Fukushima prefecture on March 26 of its desire to start building the reactors as early as next spring, local officials said. That was just two weeks after an explosion at the utility's tsunami-crippled complex set off a cascade of catastrophes.

The proposal was then included in a formal report submitted to authorities in Tokyo on March 31 as part of an annual process designed to assess Japan's future electricity supply.

"It was just unbelievable," said Yoichi Nozaki, director general of Fukushima's Planning and Coordination Department, which oversees energy matters here in the capital of the region most blighted by the biggest nuclear debacle since Chernobyl.

With its reputation and its finances already shredded by the events at Fukushima Daiichi, Tepco now has another fiasco to contain. Its proposal for new reactors, first reported Sunday in a Fukushima newspaper, has caused horrified dismay — and significant backpedaling by the utility.

"It was a mistake," Hiroshi Aizawa, a Tepco official in Fukushima, said Monday. He said the company had been too busy trying to get Fukushima Daiichi under control and avoiding power cuts to revise a plan that took shape before the March 11 earthquake and tsunami.

The disarray — on full view just as BP seeks to restart drilling in the Gulf of Mexico, the scene of a spectacular blowout last year on a rig leased by the oil giant — has sharpened a question that has dogged Tepco since the tsunami slammed into its Fukushima plant: Has the scale of the disaster triggered a managerial meltdown, or is the world's largest private electric utility simply sticking to the aloof, heedless habits of a corporate behemoth accustomed to getting its way?

"I don't know what they're doing," Nozaki, the Fukushima planning chief, said of Tepco's executives. "Ask them!"

'Totally unacceptable'

The idea of building two new reactors at a facility that is still leaking radiation into the air and sea "is of course totally unacceptable," Nozaki said. He now meets each morning with other senior officials to hear the latest figures on the radiation being spread by Tepco's crippled plant.

Tepco announced last week that four reactors at the center of the crisis at Fukushima Daiichi will never go back into service. At the same time, it submitted a report to the Ministry of Economy, Trade and Industry that included a proposed timetable for constructing and commissioning two reactors — No. 7 and No. 8 — at the same complex.

"We regret that we submitted the report as it was, considering the feelings of the local residents in Fukushima," said Hiro Hasegawa, a Tepco spokesman in Tokyo. He said the company will revise its plans as soon as it has had time to analyze the effects of the quake.

A Tepco vice president, meanwhile, went on television and declared the construction of the proposed reactors "impossible."

The company is in shambles, its share price and credit rating plunging, its leadership disabled by ill health. Its president, Masataka Shimizu, checked into hospital a week ago, and Tepco is now being steered by its chairman, whose own reputation was tarnished by an earlier, though far less serious, nuclear accident.

Tokyo Electric has dreamed for more than 15 years of adding two reactors to the six-reactor Fukushima Daiichi complex but has been repeatedly thwarted.

Nozaki said he knows that Tepco has long wanted to build the reactors but could "not understand how it could submit such a request in these circumstances." Talking about new reactors when "so many people are scared and in difficulty . . . is completely out of the question," he said.

Residents' rage

More than 80,000 people have fled their homes in the coastal areas of Fukushima prefecture for fear of contamination by Tepco's existing reactors. Farmers cannot sell their goods, and entire towns have been abandoned.

Aizawa, the Tepco official in Fukushima, said his office has been bombarded with calls from angry residents, particularly farmers. The company is now so reviled that it has covered up its name on some buildings to spare employees abuse. To try to soften the hostility, it is handing out gifts of \$240,000 to towns most at risk from contamination. At least one town, Namie, said "No, thanks."

Radiation levels in Fukushima are now declining somewhat, but Tepco's decision over the weekend to start dumping large quantities of radioactive water into the sea has added a new source of alarm in Japan and beyond.

When Tepco notified Fukushima's energy department of its new reactor plans on March 26, Nozaki immediately told Fukushima's governor, Yuhei Sato, who reacted with fury. "What is going on?" he fumed. Tepco then sent a team from Tokyo to discuss the matter, but it was told by prefectural officials "to sort out problems on the ground first and stop thinking about new reactors," Nozaki said.

The company pressed on, submitting its final report to Tokyo authorities. "Tokyo Electric may want to ignore the feelings of Fukushima residents, but this is definitely not acceptable," Nozaki said.

Sushi Science: Fear, Not Radiation, Seen As Risk (NPR)

By Jon Hamilton

NPR, April 6, 2011

Every day, hundreds of tons of fish and seaweed are bought and sold at Tokyo's seafood markets. The markets are still bustling, but prices have fallen sharply amid concerns that some products might be contaminated with radioactive material leaking from Japan's troubled Fukushima Dai-ichi nuclear plant. How likely is that?

NPR posed the question to Masashi Kusakabe, director of the Nakaminato Laboratory for Marine Radioecology not far from Tokyo. The research center is devoted to figuring out precisely what happens to radioactive material that gets into the ocean.

Kusakabe says what's been getting into the Pacific Ocean near Fukushima is mostly radioactive iodine. It dissolves in water, and experiments have shown that the iodine tends to concentrate in algae. Then it gets even more concentrated as it works its way up the food chain.

Kusakabe says that might sound bad, "but the iodine we're talking about now is iodine -131, which has a very short half-life at eight days."

Every eight days, half of the iodine goes away. So after a few weeks, there's not much iodine-131 left in a fish.

Kusakabe says radioactive cesium is a lot worse: Its half-life is measured in decades, not days. But so far, much less cesium has gotten into the ocean at Fukushima.

Also, the ocean is so vast that radioactive materials are heavily diluted by the time they travel even a few miles.

So the Japanese fish most likely to become contaminated are the ones that spend their entire lives right near the Fukushima power plant. And the government isn't letting fishing vessels anywhere near the place.

But what about the ocean-going fish that show up on sashimi platters — fish like salmon and tuna? Might they be contaminated by radioactive material from the power plant?

"I don't think so," he says, "because tuna move everywhere. They travel, you know, maybe hundreds of kilometers, so they never stay there."

A tuna might swim by the Fukushima plant. But it wouldn't hang around long enough to become seriously contaminated.

Kusakabe says the biggest threat to the Japanese fishing industry right now isn't radiation. It's fear.

"Most people now think, 'Oh, it's very dangerous to eat fish in Japan or fish around this coast.' But I think it's very safe. So now is your chance to eat fish, because it's cheap," he says.

Asked if he is still eating fish, Kusakabe replies, "Oh, of course. Why not?"

Kusakabe says once people realize that Japanese fish are safe, he expects the price of Pacific Bluefin to go back up.

U.K. Says Nuclear Plants Will Move Ahead During Study On Safety (BLOOM)

By Sally Bakewell

Bloomberg News, April 6, 2011

The U.K. government will allow work on building new nuclear power plants to progress as it conducts a study of the disaster at an atomic facility in Japan, the minister in charge of climate change said.

There will be no "material delay" in the U.K.'s plan to allow new nuclear generators at eight sites, Climate Change Minister Greg Barker said in an interview in New York. The report, he said, is due to be handed to ministers next month.

Barker's remarks were aimed at assuaging concerns that Britain's reactor-building program would be held up while the nuclear regulator studies the accident in Japan, caused when an earthquake and tsunami interrupted power to cooling pumps at a Tokyo Electric Power Co. facility. The U.K. estimates it needs investment of 200 billion pounds (\$320 billion) to replace aging generators including nuclear plants by 2010.

"We're not proposing to build in an earthquake zone, and we're not proposing to build somewhere prone to tsunamis, but we will be looking to see what can be taken from that terrible crisis," Barker, a Conservative member of Parliament in the coalition government, said.

E.ON AG (EOAN), EDF SA (EDF) and RWE AG (RWE) are among the companies bidding for work replacing Britain's aging atomic power stations. Germany halted nuclear stations and said it would review whether it should continue with building more, and China and India also are studying what they should change as a result of the accident in Japan.

Britain's Deputy Prime Minister Nick Clegg fanned concerns about a delay last week, when he told reporters that the new plants may never be built because of raising costs associated with new safety standards.

Energy Secretary Chris Huhne's last month asked Mike Weightman, the country's chief nuclear inspector, to determine what the U.K. can learn about the accident in Japan. Barker dismissed the idea that the report would make any conclusions that would hold up work.

"We aren't expecting any surprises and are equally determined to learn any lessons that are applicable in the U.K.," Barker said. "There's no change to our timetable."

It's too soon to tell if the incident at the Fukushima power plant will affect global emissions targets, he said. "But it will drive an even greater sense of the need to save energy to reduce dependency," he said. Energy efficiency will be the technology that receives the greatest boost from the disaster at Fukushima, he said.

"We don't see in the U.K. a need for any major departure from our strategy as a result of Fukushima. Safety remains our paramount concern but we see no reason today to divert from our published plans," he said.

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Fukushima Reviews To Cause 3-month Delay In UK Nuclear Program (PLATTS)

By David Stellfox

Platts.com, April 6, 2011

There will be a minimum three-month delay in new reactor construction in the UK as a result of plans for nuclear safety reviews in the wake of the nuclear accident at Tokyo Electric's Fukushima-1 nuclear power plant in Japan, UK officials said Tuesday.

The UK Health and Safety Executive said it will not publish its final conclusions on the safety of the Areva EPR and Westinghouse AP1000 reactor designs until after a nuclear safety review investigates the implications of the nuclear accident at Fukushima on the safety of UK reactors.

That review, being conducted by Chief Nuclear Inspector Mike Weightman, is not expected to be complete until September and the HSE had been planning to publish its conclusions under the generic design assessment, or GDA, program at the end of June. The GDA program is reviewing the safety of the reactor designs for construction in the UK.

In a statement Tuesday, HSE said that it would proceed to publish all the GDA safety issues on the two reactor designs that it had identified as of June 30, as well as the reactor vendors' resolution plans for those issues. But it said it would not issue its final conclusions in the form of design acceptance confirmations until after the completion of the Weightman report.

Among the GDA issues to be published at the end of June will be a requirement that the reactor vendors address any issues raised by the Weightman report.

GDA issues must be resolved before the agency will issue final design acceptance confirmations for the reactors, HSE said.

Nuclear safety-related construction of new reactors cannot proceed if there are any unresolved GDA issues, HSE has said.

UK Nuclear Plans On Hold After Fukushima (GUARD)

By Tim Flannery

[The Guardian \(UK\)](http://TheGuardian(UK)), April 6, 2011

The government's plans to build a new programme of nuclear power stations in England will be delayed by at least three months so that lessons can be learned from the accident at Fukushima in Japan.

The Health and Safety Executive (HSE) and the Environment Agency (EA), which are jointly assessing the safety of proposed reactor designs, have said this year's deadline for completing the assessments will now not be met.

The two regulatory agencies said that they would not come to any conclusions in June as had been promised. Instead they will wait for a final report on the implications of Fukushima, by the chief nuclear inspector, Mike Weightman, due in September.

Weightman has been asked by the energy and climate change secretary, Chris Huhne, to examine the lessons that could be learned from the Japanese accident, triggered by an earthquake and a tsunami last month. Until now it had not been clear how this would impact on the "generic design assessment" of reactors which the HSE and EA have been working on since 2006.

In a joint statement, the two agencies said: "Safety and protection of people and the environment will always be our top priority. It is important that we take the necessary time needed to ensure that we learn any relevant lessons emerging from the events in Japan, and implement any improvements that might be required to the new reactor designs." New reactors cannot be built until the regulators are satisfied they are safe.

A spokesman for the Department of Energy and Climate Change said the Weightman's recommendations should be taken into account.

"It's too early to say exactly what impact this will have on the overall timeline. We're continuing with our facilitative actions to encourage investment to come forward as soon as possible," he said.

But this was in marked contrast to a statement by the climate change minister, Greg Barker. He was quoted by Bloomberg as saying that Fukushima would cause no "material delay" to Britain's nuclear power programme.

The French company that wants to build its EPR design of power station, EDF Energy, has been previously quoted as saying that any delays due to Fukushima would be "minimal". The US firm, Westinghouse, is bidding to build differently designed AP1000 reactors.

Last October the UK government gave the initial go-ahead for new nuclear stations at eight sites around the coast of England and Wales. Last week, the Guardian revealed that ministers were being taken to court over allegations that cancer risks had not been properly evaluated.

The Nuclear Industry Association, which represents UK nuclear companies, said that the regulators' announcement was "correct". A spokesman said: "We should take time to review and learn the lessons of the Japanese crisis, while at the same time recognising that new nuclear development is essential for the UK."

UK Nuclear Review To Delay Reactor Approvals (REU)

By Daniel Fineren

Reuters, April 6, 2011

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

Nuclear Safety Review Delays New Reactors (FT)

By Sylvia Pfeifer

Financial Times, April 6, 2011

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

Panel To Suspend Work To Revise Japan's Atomic Energy Platform (KYODO)

Kyodo, April 6, 2011

TOKYO (Kyodo)—The Japan Atomic Energy Commission said Tuesday it will suspend its work to revise the country's nuclear power platform in the wake of the ongoing nuclear crisis at the Fukushima Daiichi nuclear power station triggered by the massive March 11 earthquake and tsunami that struck northeastern Japan.

The government commission said it would "suspend the revision work for the time being," look into the causes of the crisis at the Fukushima plant and monitor discussions on the country's energy policy on a national level.

Commission chairman Shunsuke Kondo said the current crisis contradicts the conventional argument that nuclear power generation is safe. "We have to admit that there has been an error in the criteria of judgment in promoting the country's nuclear power policy," he said.

Kondo, professor emeritus at the University of Tokyo, also said the commission's significance might be questioned if investigations into the ongoing crisis find panel members responsible, adding it would be better not to take any action to revise the platform until the investigation finds "the answers."

Originally, the panel was scheduled to work out the new platform this year to replace the current one which was compiled in October 2005.

After its regular meeting Tuesday, the five-member commission expressed its view on the current nuclear crisis, saying it has shaken confidence in the country's efforts to ensure the safety of nuclear power.

The panel called for strengthening urgent safety measures over nuclear plants which are now in operation or are scheduled to go into operation soon and giving sufficient reports to local residents living near such plants.

Kondo said two of the six reactors at the Fukushima Daiichi nuclear power station cannot be said to be in a stable condition.

Japan's 2005 basic nuclear power platform, officially titled the Framework for Nuclear Energy Policy, calls for establishing a nuclear fuel cycle by reprocessing spent nuclear fuel, recycling plutonium for nuclear fuel, and using uranium-plutonium mixed oxide fuel at light-water reactors.

The current basic policy also aims to maintain the share of nuclear power generation at 30-40 percent of the country's entire power output in 2030 and beyond.

The country's top atomic energy panel, which revises the basic platform once every five years, launched its work to revise the 2005 platform last year.

The Japan Atomic Energy Commission was established in 1956 to promote the country's nuclear power development systematically. It ceded its authority on safety regulation to the Nuclear Safety Commission of Japan in 1978 after Japan's first nuclear-powered ship, the 8,242-ton Mutsu, developed a radiation leak during a test run in 1974.

Panel Suspends Work On Revising Nuclear Energy Guidelines (YOMIURI)

Yomiuri Shimbun, April 6, 2011

The government's nuclear energy commission announced Tuesday it would suspend its work to revise the nation's nuclear energy platform in the wake of accidents at the Fukushima No. 1 and No. 2 nuclear power plants.

The nation's policy of promoting nuclear power generation is facing a major shift, and the entire energy policy will likely be changed significantly.

The Japan Atomic Energy Commission of the Cabinet Office has been working on revising the current Framework for Nuclear Energy Policy, which was compiled in October 2005.

This is the first time work to revise the nuclear power promotion framework has been suspended. The policy stipulates the nation's long-term plans for nuclear energy.

The current framework calls nuclear power generation "a key source of electricity" and "important as a measure against global warming and as a contributor to a stable energy supply in Japan."

After the Tuesday meeting of the commission, the first since the Great East Japan Earthquake, the panel released a report on its views on the nuclear plant accidents.

The panel said the crisis has shaken confidence in the safety of nuclear power at home and abroad.

Japan should work urgently to bring the crisis at the Fukushima No. 1 plant under control by tapping foreign and domestic expertise, the report said.

The panel said work on revising the framework would be suspended indefinitely.

Unlike the No. 1 plant, all four reactors at the Fukushima No. 2 nuclear power plant were safely halted by March 15 after their cooling functions were lost due to the March 11 earthquake and tsunami.

The current framework stipulates the current level of nuclear power generation—30 percent to 40 percent of total domestic electricity generation—should be maintained or increased even after 2030.

The guidelines are usually revised every 10 years, but the current work began last year based on the Basic Energy Plan approved by the Cabinet in June. The revisions were to reflect changes in the international situation, including global warming countermeasures and the rise in crude oil prices.

Suspension of the revisions, the 11th since 1956, indicates a fundamental review of the nation's atomic energy policy is in the works.

"Nuclear policy can't ignore public opinion. In the wake of such serious accidents, it's appropriate to suspend revisions [to the framework]," said Yoichi Fujie, professor emeritus at Tokyo Institute of Technology. Fujie is a former chairman of the commission.

"By understanding the information about the current accidents, the program guidelines should provide reflections and lessons [for the future]," he said.

2 Saskatchewan First Nations Pass 1st Screening For Nuclear Waste Storage Site (CAP)

Canadian Press, April 6, 2011

LA RONGE, Sask. - Two First Nations in northern Saskatchewan have passed an initial site screening for hosting a potential nuclear waste storage facility.

The Nuclear Waste Management Organization says Pinehouse Lake and the English River seem to have the necessary geological features to make it happen.

Organization spokesman Mike Krizanc says these communities are still seven to 10 years away from having to make a decision about nuclear waste.

Kineepik Metis Local spokesman Vince Natomagan says early fears expressed at community meetings are slowly being replaced by a willingness to at least explore this possibility.

Natomagan says his community will take up to a year deciding whether it wants to enter the next phase in the site selection process, which is a two-to-three-year feasibility study.

Krizanc says an initial site screening for Creighton "which has also signalled some interest in nuclear waste storage" will get underway over the next few months.

Mango Farmers Invoke Japan To Fight Top India Nuclear Plant (BLOOM)

By Adi Narayan, Siddharth Philip And Archana Chaudhary

Bloomberg News, April 6, 2011

The temple for the Hindu monkey god Hanuman, near Jaitapur on the western coast of India, seems a long way from Japan's Fukushima Dai-Ichi, where the worst nuclear disaster since Chernobyl continues to unfold.

For the crowd gathering amid the scent of incense and prayer lamps, the crisis is looming on their doorstep. Less than three miles away, the Indian government plans to build what would be the world's largest nuclear-power plant and the villagers, fearing a repeat of the Japanese catastrophe, are here to protest.

Opposition to the development, to be built with Paris-based Areva SA (CEI), pits local fishermen and farmers, growers of the world's most expensive mangoes, against Prime Minister Manmohan Singh's government as India struggles to bridge a power shortfall to maintain the second-fastest rate of growth among major economies. The site would generate double the power produced at Fukushima, even as that crisis prompts nations such as Germany to scale back their nuclear plans.

"After Japan, our politicians should realize that nuclear plants are not safe," said Shobha Chavan, 40, a doctor and housewife in the nearby town of Ratnagiri. "In this region, earthquakes have happened. Businessmen and politicians want to build the plant because they want to build their bank balances."

Even before the 9-magnitude temblor struck Japan on March 11, sending a giant wave crashing into Fukushima, locals campaigned to stop the 9,900-megawatt development, arguing that hot water discharge posed a risk to fish stocks, while a security cordon would block access to the sea. The prawns, mackerels and king fish from the sea off Jaitapur are exported to markets from Europe to Thailand and Japan.

Now, protesters say Jaitapur could suffer the same fate as Fukushima, where Tokyo Electric Power Co. is struggling to contain radiation leaks after a partial meltdown. The planned complex sits in an area of seismic activity and state-owned Nuclear Power Corp. of India, India's monopoly atomic generator, is underplaying the risk, according to Janhit Seva Samiti, a movement comprising hundreds of locals opposed to the plans.

"Earlier, government officials used to say: 'Look at Japan. It has so many nuclear plants in earthquake-prone areas and there have been no accidents,'" said Praveen Gavankar, a 57-year-old Alphonso mango grower who is also one of the leaders of the movement. "Now we are saying: See, we told you it was dangerous."

The area around Jaitapur, 420 kilometers (262 miles) south of Mumbai, is ranked as level three in India's five-step scale of seismic risk, with five being the most severe, according to Nuclear Power Corp., or NPCIL. Konkan Bachao Samiti, another local group opposing the project, provided Bloomberg News with data showing the site is in a level four area. The area around Jaitapur suffered 40 shocks of magnitude 4 or higher from 1996 to 2005, the data show.

A. Sundaramoorthy, director general of the Geological Survey of India in Kolkata, was not available for comment after five calls to his office.

A 1945 shock along the zone where the Arabian plate slides under the Eurasian plate sent a 2-meter (6.6-foot) high wave slamming into Mumbai, according to a December 2008 paper in the journal *Current Science*. The 800-kilometer fault, called the Makran subduction zone, could host "a very large earthquake, certainly as big as the one that occurred in Japan recently," said Phil Cummins, professor of geology at the Australian National University.

Still, there are no active fault lines within a 30-kilometer (18.6-mile) radius of the Jaitapur site, according to a government report last year. That's more than the 5-kilometer limit stipulated by India's Atomic Energy Regulatory Board. Furthermore, the site sits on average 24.5 meters above mean sea level, reducing the tsunami risk, NPCIL say.

The company also claims water discharged into the sea will be at most about 5 degrees Celsius warmer and confined to an area of 0.28 square kilometers. There have been no adverse effects on marine life at existing coastal nuclear power sites, according to NPCIL.

Nevertheless, the company will "revisit" its plans after it gets more information from Japan, according to Chairman Shreyans Kumar Jain.

Areva didn't immediately respond to requests to comment. The reactors at Fukushima Dai-Ichi were built by General Electric Co. (GE), Toshiba Corp. (6502) and Hitachi Ltd. (6501)

The Jaitapur plant would be the first to be built in India after the U.S. helped lift a more than three-decade ban on the South Asian nation trading in atomic equipment and fuel in 2008. The project, consisting of six 1,650-megawatt Areva reactors, will be built in phases, with the first set of two reactors scheduled to be completed in 2018, NPCIL said last year.

The company has capacity of 4,780 megawatts, less than 3 percent of India's total. The government needs to boost electricity generation to plug a 10 percent peak shortfall and meet a target of providing power to all its 1.2 billion people. India's \$1.3 trillion economy may grow as much as 9.25 percent this financial year, the government forecast in February.

NPCIL bought 938 hectares of land from four villages for the project, about three times the size of New York's Central Park. Still, the diggers can't move in until compensation is agreed. Out of about 2,000 landowners offered money, just 154 accepted, according to Madhukar Gaikwad, the top administrative official of Ratnagiri district.

Protesters also say they are preparing a fresh legal challenge after a 2009 attempt to block the plan was dismissed by the Bombay High Court. If they can show the area is in a seismic zone and the project "would not serve the public purpose," they can ask the court to stall the project, said Narinder Singh Vashisht, a senior Delhi High Court lawyer who specializes in real estate law.

"They can take advantage of the fallout of the Fukushima disaster as well," he said.

Meanwhile, the protests continue. Colorful posters with images of mushroom clouds and warnings of catastrophes worse than those in Japan are plastered at intersections and on trees and shop fronts in the area. Security has been beefed up in the villages and police vans, each with 30 or so khaki-clad officers, are a common sight.

Two rallies near Jaitapur turned violent and 39 people were arrested, according to local inspector Dilip Boraste. All have since been released on bail, he said.

Protesters claim they are being targeted by the Maharashtra state government, headed by Chief Minister Prithviraj Chavan. Gangadhar Mahadeo, 41, a farmer who claims to own 170 acres of land including five which are being acquired by NPCIL, said he was arrested and put in jail for nine days for protesting. He's now on bail.

"I am ready to go to jail for a year if required but we won't allow the plant to come up here," he said.

Chavan didn't return a call made to his mobile phone. His personal assistant Satish Lalit said the chief minister was unavailable because he was attending the state assembly.

Uddhav Thackeray, leader of opposition party Shiv Sena, has declared his support for the protesters. He's scheduled to visit Jaitapur on April 9, Gavankar said.

Back at Hanuman's temple, the crowd listens to the latest news from Fukushima as Milind Desai, the village doctor, reads aloud from a newspaper. A group of policemen watches, one recording proceedings on a video camera.

Then, a group of young folk singers with hand-held drums, cymbals and tambourines and dressed in brightly colored traditional costumes get to their feet. They perform a song dedicated to stopping the nuclear plant.

"No one can predict an earthquake," says Desai. "Nature will do what it wants and the consequences will be the same for everyone."

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Indian Villagers Say Reactor Will Destroy Livelihoods (BLOOM)

Bloomberg News, April 6, 2011

April 6 (Bloomberg) -- Fisherman Amjad Borkar and mango grower Praveen Gavankar talk about their opposition to a proposed nuclear power plant in Jaitapur on the western coast of India. In the wake of Japan's Fukushima disaster, local villagers fear the plant, to be built with France's Areva SA, will damage their health and their livelihoods. The opposition pits fishermen and farmers against Prime Minister Manmohan Singh's government, which is struggling to bridge a 10 percent peak power shortfall needed to maintain growth in one of the world's fastest growing economies.

Bulgaria, Russia Postpone Building Of Nuclear Plant For 3 Months To Analyze Plant Safety (AP)

Associated Press, April 6, 2011

SOFIA, Bulgaria (AP) - Bulgaria and Russia say they will postpone the building of a nuclear plant for three months while they analyze plant safety in the wake of the Fukushima nuclear disaster.

Bulgarian utility NEK and Russia's Atomstroyexport agreed Tuesday to put the Belene nuclear power project on hold until the end of June.

The two state companies have signed a memorandum of understanding that will effectively stop new construction and delay the ordering of new equipment for the two 1,000 megawatt reactors at the plant on the Danube River, NEK said in a statement.

The two sides have pledged to comply with all new safety requirements set by international nuclear experts.

Construction of Bulgaria's second nuclear power plant has been repeatedly delayed due to a lack of funding.

Russia's Rosatom Denies Bulgaria Nuclear Plant Frozen (BLOOM)

By Elizabeth Konstantinova And Ilya Arkhipov

Bloomberg News, April 6, 2011

Bulgaria and Russia's state-owned Rosatom Corp. decided to freeze plans to build a nuclear power plant in the Balkan country so authorities can conduct an analysis on nuclear safety, Bulgaria's National Electricity Co. said today in a statement in Sofia.

"Rosatom has not taken a decision to freeze the Belena plant," Sergei Novikov, a spokesman in Moscow for Rosatom, said today in Moscow. "No such bilateral documents were signed."

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Barroso Says Remedial Action For Nuclear Plants 'Remains Open' (BLOOM)

By Jonathan Stearns

Bloomberg News, April 6, 2011

European Commission President Jose Barroso comments on planned Europe-wide safety checks on nuclear power plants following the atomic accident in Japan. Barroso spoke to the European Parliament today in Strasbourg, France.

The commission, the European Union's regulatory arm, is drawing up the details of checks on the EU's 143 nuclear plants. The "stress tests" are scheduled to start in the second half of the year.

"Should an installation fail the test, the question of remedial actions remains open."

"In case an upgrade is technically or economically not feasible, reactors will have to be shut down and decommissioned. However, it is possible to envisage situations where safety upgrades are economically meaningful and technically feasible."

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German Nuclear U-turn Links Power With Coal Prices (REU)

By Henning Gloystein

Reuters, April 6, 2011

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

Germany Told Wind Energy Can Replace Nuclear, Handelsblatt Says (BLOOM)

By Ragnhild Kjetland

Bloomberg News, April 6, 2011

Power generated from wind farms could supply more than 65 percent of Germany's energy needs in the long term, replacing nuclear power, according to Hermann Albers, the head of the German WindEnergy Association, Handelsblatt reported.

The wind energy industry will be capable of meeting 25 percent of the country's requirements by 2020, the newspaper cited Albers as saying.

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Spain And U.S. Near Accord On Atomic Cleanup (NYT)

By Raphael Minder

New York Times, April 6, 2011

PALOMARES, SPAIN — Forty-five years after narrowly avoiding nuclear obliteration in a U.S. Air Force accident, the villagers of Palomares, in southern Spain, have grown hopeful that the governments in Washington and Madrid will finally rid their land of contamination.

Their recent optimism has been fueled by Foreign Minister Trinidad Jiménez, who told the Spanish Senate in February, in what probably amounted to the clearest commitment by the Spanish government to date, that clearing Palomares was “a priority.” Days later, Washington sent a team of experts to Palomares to help evaluate how to clean Western Europe’s most radioactive site.

After that American visit, Glenn S. Podonsky, the chief health, safety and security officer in the U.S. Department of Energy, said, “The two governments are exploring the best options in dealing with the issue of the contaminated soil.”

Washington has now invited a Spanish delegation to visit for the first time a U.S. rehabilitation site, although no date has yet been agreed.

While the situation in Spain is far different than the developments unfolding at the damaged nuclear plant in Japan, the case of Palomares helps illustrate the ways that radioactive debris can continue to tear at a community decades later.

About 5,000 barrels of contaminated earth were shipped from Palomares to South Carolina in the aftermath of the 1966 collision, when a U.S. bomber hit a refueling tanker in mid-air and dropped four hydrogen bombs, two of which released plutonium into the atmosphere, though no warheads detonated. Madrid insists that leftover plutonium will also need to be shipped to the United States because Spain still does not have any facility to store such soil.

But the clearance work at the time, undertaken under U.S. military supervision, has over the past five years been found by the Spanish authorities to have been insufficient and in some respects flawed, leaving a thorn in diplomatic relations between the two countries.

With indications that radioactivity levels around Palomares have risen over recent years, the renewed sense of urgency in part reflects an upgraded risk assessment following the completion of the first in-depth examination of the site by the Spanish nuclear research agency in 2008. The main scientific concern is that plutonium is being allowed to degenerate into other radioactive components like americium, which emits gamma rays that travel farther and are harder to block.

So far, however, regular health checks on residents of Palomares have shown no adverse side effects from the surrounding contamination.

Still, “the big problem is not what has happened so far but what can still happen here,” said Jesús Caicedo, mayor of Cuevas del Almanzora, a neighboring town under whose political jurisdiction Palomares falls. “We cannot leave our children and the next generation exposed to a danger that everybody knows to be increasing.”

The U.S. government provided some compensation for the Palomares region, including a gift of \$150,000 in 1968 to upgrade water facilities and the financing of the health checks for villagers. The Spanish authorities, paid landowners in return for expropriating land considered to be toxic. But financial compensation remains a burning issue, specifically over how much money the Spanish authorities paid to put land out of bounds.

Although Palomares is no longer the impoverished farming community that it was when the bombs fell, local property developers say other coastal areas developed faster during Spain’s decade-long construction boom because they were not tainted by contamination.

Almanzora, a property developer, is seeking €9 million, or about \$12.7 million, in compensation from the Spanish authorities — instead of the €200,000 that it claims to have been offered. The reason, the company has said, is because land on which it had been granted building permission for a housing and commercial center project was eventually declared out of bounds following a revised safety assessment.

Having bought the land in 1988, “we were then suddenly told that it was contaminated in 2007, which was right at the peak of the boom and when we were ready to go and start construction,” said Fraser Prynne, planning director for Almanzora. The company has been active in the region for over 25 years, and its projects there include a luxury golf resort overlooking the Palomares area.

One of the mistakes made during the initial cleaning efforts was the burning of contaminated tomato crops, which helped spread the contamination, said Mr. Prynne, who added that this fact came to light only in 2007 when U.S. documentation about Palomares was declassified. “We, at the time, did not dream of contamination being sent so far from the bomb sites by smoke,” Mr. Prynne said. “No one knew.”

The Spanish authorities say the original clearance work was insufficient, but do not claim foul play.

"We have to believe that the Americans did the best that they knew and could, but we're talking about the year 1966, when there was no regulation anywhere in the world on radioactive protection," said Teresa Mendizábal, an adviser at Ciemat, Spain's nuclear agency.

After a survey completed in 2008, the contaminated land is divided into three main sections, covering a total of about 40 hectares, or 99 acres, some of which almost touch private homes, as well as fields and greenhouses.

The steepest section of scrubland, moreover, was cordoned off rather than fenced off, allowing a shepherd and his herd of goats to cross last month. Such a crossing, witnessed by this newspaper's photographer, had "never occurred before," the nuclear agency said. It subsequently filed a police complaint against the shepherd.

Still, some locals worry that the revived political debate over Palomares could in the short term prove counterproductive, reminding outsiders of the contamination risk at a time when Palomares is already struggling because of Spain's broader economic downturn. Until the 1980s, the local tomato, lettuce and watermelon production did not carry any Palomares label.

Bartolomé Pérez, a 71-year-old retired fisherman, said: "We somehow didn't get killed that day and have managed to get on with the problems of living here since, so let sleeping dogs lie."

Mr Pérez was coming back to shore when the collision occurred on the morning of Jan. 17, 1966. He then joined a search party and eventually found "a head, an arm and a leg."

Of the 11 crew members on the two U.S. planes, 7 were killed.

"There was just no way to know who these guys were," Mr Pérez said, "or to realize that it was totally reckless to pick up body parts without wearing gloves and a mask."

Mr. Caicedo, the Cuevas mayor, was among children who scrambled across the fields to collect aircraft seats and other debris. "People here were so poor that many didn't even have chairs in their home, so of course they took whatever they could," he said.

Assuming that Washington and Madrid complete a political agreement before year-end on clearing Palomares, as predicted by local officials, Ms. Mendizábal, the Ciemat adviser, estimated that three more years might be needed to complete the work, starting with the construction of an industrial plant in which the soil could be treated ahead of shipment.

But however long the additional wait, the people of Palomares sound determined to put an end to what the local mayor, Juan José Pérez, called "a treatment worthy of second-class citizens."

"If these bombs had fallen near Madrid or in fact any place slightly more relevant and less isolated than Palomares," he said, "I can guarantee you that this problem would have long been solved."

Iran Makes Latin American Inroads Beyond Venezuela (AP)

By Donna Cassata, Associated Press

Associated Press, April 6, 2011

WASHINGTON – Iran has expanded its ties in Latin American beyond its close relationship with Venezuela, a top U.S. commander said Tuesday as he described a troubling development that the United States is watching closely.

Gen. Douglas Fraser, the head of the U.S. Southern Command, said Iran has nearly doubled the number of embassies in the region, from six in 2005 to 10 in 2010 while also building cultural centers in 17 countries. Last year, Iran also has hosted heads of state from three countries — Bolivia, Guyana and Venezuela.

"Iran continues expanding regional ties to support its own diplomatic goal of reducing the impact of international sanctions connected with its nuclear program," Fraser told the Senate Armed Services Committee. Washington fears that Iran is trying to develop nuclear weapons.

Fraser described a close relationship between Venezuelan President Hugo Chavez and Iran's President Mahmoud Ahmadinejad. They've had at least nine visits during Chavez's 12 years in office. Fraser said the alliance is still largely for diplomatic and commercial purposes, but said there were still too many unknowns.

"There are flights between Iran and Venezuela on a weekly basis, and visas are not required for entrance into Venezuela or Bolivia or Nicaragua. So we don't have a lot of visibility in who's visiting and who isn't, and that's really where I see the concerns," he said. "I don't have connections with those organizations that Iran has supported in other parts of the world, Hezbollah. But we're still skeptical and watching that on a routine basis."

Fraser said the ties between the two countries are based on several shared interests, such as access to military and petroleum technologies and avoiding international isolation.

On a separate issue, Fraser said Venezuela has purchased \$8 billion to \$12 billion worth of weapons from Russia, China and Spain, including automatic weapons. The U.S. is concerned the weapons could end up in the hands of illegal groups.