

Group AB

(Records Released  
In Their Entirety)

**From:** [Akstulewicz, Brenda](#)  
**To:** [Burnell, Scott](#); [Harrington, Holly](#)  
**Cc:** [Brenner, Eliot](#); [Courret, Ivonne](#)  
**Subject:** Are either of you in the OPS Ctr? Mike Webber has requested OPA presence there  
**Date:** Friday, March 11, 2011 9:58:00 AM  
**Importance:** High

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**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ 1

**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot  
**Subject:** Chmn Interview Requesst  
**Date:** Friday, March 11, 2011 5:00:00 PM

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From: Andrea DeVito, Sunday Fox News w/Chris Wallace  
Phone: 202-824-6494  
When: Live, Sunday, 9am

**Brenda Akstulewicz**  
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301-415-8209  
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ABI 2

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** FW: I'm here - let me know if you need anything!  
**Date:** Saturday, March 12, 2011 7:58:00 AM

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**From:** Brenner, Eliot  
**Sent:** Saturday, March 12, 2011 7:56 AM  
**To:** Akstulewicz, Brenda  
**Subject:** RE: I'm here - let me know if you need anything!

Maybe tea later.

Ivonne should call and tell both those outlets we will not have anyone available for them

Scott is going to come over and close his eyes for about an hour or two. He will bring my tea travel cup to the office. I have some lemon tea there. Two splena packets go into the carafe. Thanks for thinking of me.

Eliot

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**From:** Akstulewicz, Brenda  
**Sent:** Saturday, March 12, 2011 7:42 AM  
**To:** Brenner, Eliot  
**Subject:** RE: I'm here - let me know if you need anything!

Can't sleep for you, but I can bring you sustenance or tea.

Two calls:

Shannon  
MS NBC, NY  
Wants someone at the top of the hour for updates from 7am-2pm  
212-664-1450

Jennifer  
Fox & Friends, NY  
On air until 10 this am do we have someone they can interview (I believe phone will do)  
212-601-2475

Question – Is Scott with you (in Ops Ctr?)? Do we have any other OPA staff here who might be w/you

b

AB/3

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**From:** Brenner, Eliot  
**Sent:** Saturday, March 12, 2011 7:17 AM  
**To:** Akstulewicz, Brenda  
**Subject:** RE: I'm here - let me know if you need anything!

Sleep. And thanks for coming in.

---

**From:** Akstulewicz, Brenda  
**Sent:** Saturday, March 12, 2011 7:05 AM  
**To:** Brenner, Eliot  
**Subject:** I'm here - let me know if you need anything!

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**From:** Akstulewicz, Brenda  
**To:** Akstulewicz, Frank  
**Subject:** FW: Latest Kyodo News Story filed  
**Date:** Saturday, March 12, 2011 9:11:00 AM

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Hey Bud -  
Is this good news?  
PS- you are the best husband in the world!

## Explosion did not occur at reactor: Japan gov't spokesman

TOKYO, March 12, Kyodo

Japanese authorities have confirmed there was an explosion at the Fukushima No. 1 nuclear power plant Saturday afternoon but it did not occur at its troubled No. 1 reactor, top government spokesman Yukio Edano said.

The chief Cabinet secretary also told an urgent press conference that the operator, Tokyo Electric Power Co., has confirmed there is no damage to the steel container housing the reactor.

Edano said the 3:36 p.m. explosion caused the roof and the walls of the building housing the reactor's container to be blown off. He said there has been no serious damage to the steel container of the reactor.

The blast occurred as vapor from the container turned into hydrogen and mixed with outside oxygen, he added.

As a precaution, the authorities expanded from 10 kilometers to 20 km the radius of the area to be evacuated by residents living in the vicinity of the Fukushima No. 1 and No. 2. plants.

The top government spokesman said Tokyo Electric Power has begun operations to fill the reactor with sea water and pour in boric acid to prevent an occurrence of criticality, noting it may take several hours to inject water into the reactor. In addition, it will take about 10 days to fill the container with sea water, he said.

Officials of Japan's nuclear safety agency said there was no sign that radiation levels had jumped after the explosion.

The incident came after the plant lost its cooling functions after it was jolted by a magnitude 8.8 earthquake Friday and radioactive cesium and iodine were detected near the facility Saturday.

The detection of the materials, which are created following atomic fission, led Japan's nuclear safety agency to admit the reactor had partially melted -- the first such case in Japan.

The melting temperature for pellets containing cesium, a nuclear fissile material, is around 2,800 Celsius

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degrees and its release indicates the reactor has been significantly heated up.

A partial core meltdown also occurred in a major nuclear accident at Three Mile Island in the United States in 1979. About 45 percent of nuclear fuels melted in the incident, leading radioactive materials to be released.

According to the Fukushima prefectural government, the hourly radiation from the Fukushima plant reached 1,015 micro sievert before the explosion, an amount equivalent to that permissible for a person in one year.

Four workers -- two from the company and two others from another firm -- were injured in the explosion, according to Tokyo Electric Power. The four were working to deal with problems caused by a powerful earthquake that hit northeastern Japan on Friday, it said.

The company said the injuries the four have suffered are not life-threatening and that they are conscious.

Before the explosion, the operator of the quake-hit nuclear plants in Fukushima Prefecture, successfully released pressure in the container of the No. 1 reactor to prevent a nuclear meltdown, the Nuclear and Industrial Safety Agency said.

The depressurizing work involved the release of steam that includes radioactive materials. It is aimed at preventing the plants from sustaining damage and losing their critical containment function, and the government has issued an unprecedented order to conduct it at the Fukushima No. 1 and No. 2 plants.

The nuclear safety agency said as a result of reducing the container's pressure at the No. 1 plant, radioactive levels at the plant briefly went up. It denied that the radiation amount will pose an immediate threat to the health of nearby residents, as wind was blowing toward the sea in the Pacific coast town in northeastern Japan.

At the Fukushima plant, the amount of radiation reached around 1,000 times the normal level in the control room of the No. 1 reactor, and 140 times the normal level near the main gate of the plant at one point. It was the first time an external radioactive leak had been confirmed since the disaster.

==Kyodo

**Ivonne L. Couret**  
Public Affairs Officer  
Office of Public Affairs



☎ (301) 415-8205

✉ [ivonne.couret@nrc.gov](mailto:ivonne.couret@nrc.gov)

Visit our online photo gallery. Incorporate graphics and photographs to tell your story!  
<http://www.nrc.gov/reading-rm/photo-gallery/>

2010-2011 Information Digest - Where you can find NRC Facts at a Glance

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>

**NRC Employees can read interesting insight on the OPA Blog**  
<http://portal.nrc.gov/OCM/opa/blog/default.aspx>



Please consider the environmental impact before printing this email.

**From:** Akstulewicz, Brenda  
**To:** Akstulewicz, Frank  
**Subject:** FW: NHK report  
**Date:** Saturday, March 12, 2011 10:37:00 AM

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On the lighter side, this from Dave McIntyre.

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

From: McIntyre, David  
Sent: Saturday, March 12, 2011 10:32 AM  
To: Brenner, Eliot  
Cc: Akstulewicz, Brenda; Harrington, Holly  
Subject: NHK report

Watching NHK on my iPad, excerpt of NISA press conference, through interpreter: "We have confirmed that the explosion did not happen in the reactor's container. The explosion occurred because the building's walls fell down."

Well, that's a relief!

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**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot  
**Subject:** Don't want to overstep my boundaries...  
**Date:** Saturday, March 12, 2011 12:14:00 PM

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... and Ivonne is over there with you, we got a call from:

Daniel Steinberger

ABC News

202-567-8778

Wants to interview someone within the next few hours for ABC World News Tonight

I will gladly call him back and say we don't have anyone available if that makes life easier for you.

B

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AB/6

**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly  
**Subject:** FYI  
**Date:** Saturday, March 12, 2011 12:32:00 PM

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Don't know if it makes a difference in your decision making, but I'm beginning to receive calls from people who are very disappointed, concerned, uncertain of the information they're receiving on TV, etc. and would like/feel more comfortable if there was a statement/information from the NRC.

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**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot  
**Subject:** Lisa Myers,  
**Date:** Saturday, March 12, 2011 3:10:00 PM  
**Importance:** High

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Wants to shoot footage of the Ops ctr to show how diligently we are monitoring the situation

Please call

202-885-4049

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**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Magwood's Speech  
**Date:** Saturday, March 12, 2011 5:14:00 PM

---

Hey Ivonne,

Do you have the slides that accompany the commissioner's speech? If so, please send to me so I can link them from the speech.

Thanks,

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AB/9

**From:** [Harrington, Holly](#)  
**To:** [LIA04 Hoc](#)  
**Subject:** RE: WASHINGTON INQUIRIES  
**Date:** Sunday, March 13, 2011 5:03:00 PM

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We are not able to provide customized responses by state. We were looking for a generic statement. We'll consider adding "or visit the state Website" to our generalize guidance.

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**From:** LIA04 Hoc  
**Sent:** Sunday, March 13, 2011 12:11 AM  
**To:** Hayden, Elizabeth; Harrington, Holly  
**Cc:** Turtill, Richard  
**Subject:** WASHINGTON INQUIRIES

See State of Washington's preference that inquiries be referred to the website listed on the press release

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**From:** DOH HAN Alert [mailto:HANALERT@doh.wa.gov]  
**Sent:** Sunday, March 13, 2011 12:08 AM  
**To:** LIA04 Hoc  
**Cc:** Banks, Dan (DOH)  
**Subject:** Re: Request from Rosetta Virgilio, NRC Liaison

Please refer them to the press release or the website.

Thanks

---

**From:** LIA04 Hoc <LIA04.Hoc@nrc.gov>  
**To:** DOH HAN Alert  
**Cc:** Duty Officer (EMD)  
**Sent:** Sat Mar 12 20:54:49 2011  
**Subject:** RE: Request from Rosetta Virgilio, NRC Liaison

Thanks much – I assume NRC can refer calls to the POCs on the press release, right?

Contacts: Gordon MacCracken, Communications Office 360-236-4072  
Tim Church, Communications Office 360-236-4077

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**From:** DOH HAN Alert [mailto:HANALERT@doh.wa.gov]  
**Sent:** Saturday, March 12, 2011 11:36 PM  
**To:** LIA04 Hoc  
**Cc:** Duty Officer (EMD)  
**Subject:** RE: Request from Rosetta Virgilio, NRC Liaison

All,

Please find attached today's press release concerning DOHs radiation monitoring.

DOH Duty Officer

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**From:** LIA04 Hoc [mailto:LIA04.Hoc@nrc.gov]

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**Sent:** Sat 3/12/2011 8:33 PM

**To:** DOH HAN Alert; DutyOfficer@doh.wa.gov

**Cc:** Turtill, Richard

**Subject:** Request from Rosetta Virgilio, NRC Liaison

Dan/Dan – This is in follow up to our telecon asking for State of Washington points of contact to whom NRC can refer members of the public who are asking about Washington State's response to the Japanese event

Rosetta O. Virgilio

NRC State Liaison Team

301-816-5100

**From:** [Akstulewicz, Brenda](#)  
**To:** [Brenner, Eliot](#)  
**Subject:** Clips  
**Date:** Monday, March 14, 2011 7:40:00 AM

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Eliot,

I just spoke w/Patti. She's assuming there is going to be an 8:30 staff meeting this morning. I'm printing clips now. Would you like me to take upstairs so you don't need to come here before the 8:30 meeting or will someone attend in your stead?

B

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AB/11

**From:** Akstulewicz, Brenda  
**To:** Burnell, Scott  
**Subject:** Media Call  
**Date:** Monday, March 14, 2011 9:04:00 AM

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Dee Carden

ABC News

202-222-7700

Anything new to report since yesterday?

**Brenda Akstulewicz**

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AB/12

**From:** Akstulewicz, Brenda  
**To:** Burnell, Scott  
**Subject:** Call - asked for you specifically for you  
**Date:** Monday, March 14, 2011 10:52:00 AM

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Jim Morris  
Ctr. Public Integrity  
202-481-1258

**Brenda Akstulewicz**  
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**From:** Akstulewicz, Brenda  
**To:** Burnell, Scott  
**Subject:** CALL  
**Date:** Monday, March 14, 2011 11:21:00 AM

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Scott Disavino

Reuters

646-223-6702 or 6707 (I apologize I'm not sure what the last digit is.)

**Brenda Akstulewicz**

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**From:** Akstulewicz, Brenda  
**To:** McIntyre, David  
**Subject:** CALL  
**Date:** Monday, March 14, 2011 12:10:00 PM

---

Noreen  
Dow Jones  
212-416-4210

**Brenda Akstulewicz**  
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**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot  
**Cc:** Hayden, Elizabeth; Harrington, Holly; Landau, Mindy  
**Subject:** Chairman Remarks  
**Date:** Monday, March 14, 2011 12:30:00 PM  
**Importance:** High

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Eliot – just got a call from Mindy Landau. Bill Borchardt would like to see the chairman’s remarks for the press conference – do you have them? If so, please send them to Bill, Mindy, Beth, Holly and cc me if appropriate. ~ B

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**From:** Akstulewicz, Brenda  
**To:** McIntyre, David  
**Subject:** Call-interview  
**Date:** Monday, March 14, 2011 12:39:00 PM

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Jamie Blanco  
Fed News Radio  
202-274-4824

**Brenda Akstulewicz**  
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**From:** Akstulewicz, Brenda  
**To:** McIntyre, David  
**Subject:** Call Tom Olson  
**Date:** Monday, March 14, 2011 1:52:00 PM

---

Tom Olson  
Pittsburgh Tribune  
412-320-7854  
\*Information

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**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Call-P.Tadona  
**Date:** Monday, March 14, 2011 1:53:00 PM

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Pat Tadona  
The Day  
860-701-4324  
Seeking information

**Brenda Akstulewicz**  
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**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne; McIntyre, David  
**Subject:** Call  
**Date:** Monday, March 14, 2011 2:12:00 PM

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Pam Russell  
Engineering News Records  
504-865-0805  
Seeking information

**Brenda Akstulewicz**  
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**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne; McIntyre, David  
**Subject:** Call  
**Date:** Monday, March 14, 2011 2:14:00 PM

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Kendall Heath  
ABC "This Week"  
202-222-7854  
Interview to air 3/20

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**From:** Hayden, Elizabeth  
**To:** Brenner, Eliot; Harrington, Holly  
**Cc:** Burnell, Scott; McIntyre, David  
**Subject:** FW: Jeanne Meserve phone number  
**Date:** Monday, March 14, 2011 2:20:24 PM

---

*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:** Janbergs, Holly  
**Sent:** Monday, March 14, 2011 1:25 PM  
**To:** Hayden, Elizabeth  
**Subject:** RE: Jeanne Meserve from CNN

I know. Only reason I mentioned that is because I thought she might've had plans with Eliot specifically, and I know he's busy!

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**From:** Hayden, Elizabeth  
**Sent:** Monday, March 14, 2011 1:19 PM  
**To:** Janbergs, Holly  
**Subject:** RE: Jeanne Meserve from CNN

Thanks. They all want everything immediately.

*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:** Janbergs, Holly  
**Sent:** Monday, March 14, 2011 12:58 PM  
**To:** Hayden, Elizabeth  
**Subject:** Jeanne Meserve from CNN

Jeanne Meserve from CNN called for Eliot and wanted to ask a question about the Reuters flash regarding our latest PR. She'd like someone to get back to her quickly.

202-898-7553

Beth Janbergs

AB/13

Public Affairs Assistant  
301-415-8211

**From:** Burnell, Scott  
**To:** Hayden, Elizabeth; Brenner, Eliot  
**Cc:** Harrington, Holly; McIntyre, David; Akstulewicz, Brenda  
**Subject:** RE: Jeanne Meserve Questions Needing Responses  
**Date:** Monday, March 14, 2011 2:21:37 PM

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Working on it here in Ops Ctr

**From:** Hayden, Elizabeth  
**Sent:** Monday, March 14, 2011 2:20 PM  
**To:** Brenner, Eliot  
**Cc:** Harrington, Holly; Burnell, Scott; McIntyre, David; Akstulewicz, Brenda  
**Subject:** Jeanne Meserve Questions Needing Responses

Her questions are:

- 1) Can we provide a list of those plants with the highest potential seismic vulnerability? i.e., those that are problematic in the GSI-199 study. I've sent that question to Annie Kemmerer but need someone to followup.
- 2) How did the Japanese ask for our help—oral, letter, other? Who in Japan was the requestor?
- 3) Is MOX fuel in the #3 reactor? If so is there a greater threat to the public from this fuel melting?
- 4) What is the nature of the help Japan asked for? What is the team expertise composition? How many and where will they be in Japan?
- 5) With regard to our Fact Sheet on seismology, what are we doing to follow up:

The GIP confirmed that operating nuclear power plants are safe. The assessment also found that, although still small, some seismic hazard estimates have increased and warrant further attention. In September 2010, NRC issued a Safety/Risk Assessment report (ADAMS Accession No. ML100270582) and an Information Notice (ADAMS Accession No. ML101970221) to inform stakeholders of the Safety/Risk Assessment results. Further action may include obtaining additional, updated information, as well as developing methods to determine if plant improvements to reduce seismic risk are warranted. Information regarding this generic issue and the GIP in general is available at <http://www.nrc.gov/about-nrc/regulatory/gen-issues.html>.

Her deadline is 5 pm and her e-mail address is [Jeanne.Meserve@turner.com](mailto:Jeanne.Meserve@turner.com)

*Beth*

AB/14

**From:** Akstulewicz, Brenda  
**To:** McIntyre, David  
**Subject:** Call  
**Date:** Monday, March 14, 2011 3:29:00 PM

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Jeff Schogol  
Stars & Stripes  
202-761-0581

Wants to talk w/someone about the "fake" map that's out – he's doing an article to counter the information.

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ABI 15

**From:** Akstulewicz, Brenda  
**To:** McIntyre, David  
**Subject:** Call Fox News - National  
**Date:** Monday, March 14, 2011 3:33:00 PM

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Mike Emanuel  
Fox News (National)  
202-628-1748  
# of new facilities in the works

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AB/ 16

**From:** Akstulewicz, Brenda  
**To:** Hoffman, Joan; Hardy, Sally  
**Cc:** Harrington, Holly; Brenner, Eliot; Sheehan, Neil  
**Subject:** Coverage after 5:30  
**Date:** Monday, March 14, 2011 4:02:00 PM

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Greetings!

If Sally is not on call this evening, please let me know who our contact is if we have a press release for issuance after 5:30.

Thanks,  
Brenda

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AB/17

**From:** Harrington, Holly  
**To:** Burnell, Scott  
**Subject:** for Tuesday morning  
**Date:** Monday, March 14, 2011 10:09:00 PM

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Reuters Tom Doggin (sp?)

How will events in Japan affect schedule for AP1000 etc.

*fil*

202-898-8320 (I think our Q&As say something about this; premature blah blah blah)

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**From:** [Harrington, Holly](#)  
**To:** [McIntyre, David](#)  
**Subject:** RE: something else for you?  
**Date:** Monday, March 14, 2011 10:13:00 PM

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Thanks for trying

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**From:** McIntyre, David  
**Sent:** Monday, March 14, 2011 10:13 PM  
**To:** Harrington, Holly  
**Subject:** RE: something else for you?

No answer, no voicemail.

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**From:** Harrington, Holly  
**Sent:** Monday, March 14, 2011 10:06 PM  
**To:** McIntyre, David  
**Subject:** something else for you?

Aaron Welch, Japanese newspaper, wants info on our team, what their mission is, etc.

212-765-1240 *re*

*AD 19*

**From:** Akstulewicz, Brenda  
**To:** Harrington, Holly  
**Subject:** FW: request from NHK for document on Mark I containment failure  
**Date:** Tuesday, March 15, 2011 8:48:00 AM

Holly – Please advise on how the PDC should handle this. Thanks ~Brenda

**From:** PDR Resource  
**Sent:** Tuesday, March 15, 2011 8:28 AM  
**To:** OPA Resource; Akstulewicz, Brenda  
**Subject:** request from NHK for document on Mark I containment failure

Hi Brenda,

Here are the details I mentioned on the phone:

A person from NHK called yesterday to ask for a report mentioned in a fact sheet on the NIRS Web site, <http://www.nirs.org/reactorwatch/accidents/gemk1reactorsinus.pdf>, which states in paragraph 3:

“An NRC analysis of the potential failure of the Mark I under accident conditions concluded in a 1985 report that Mark I failure within the first few hours following core melt would appear rather likely.”

He requested this 1985 report. We searched and found NUREG-1079 draft for comment, which we have on microfiche (8601070488 below).

Item ID	011303172
Accession Number	8601070488
Estimated Page Count	289
Document Date	12/31/1985
Document Type	NRC TECHNICAL REPORT NUREG REPORTS TEXT-SAFETY REPORT
Availability	Publicly Available
Title	ESTIMATES OF EARLY CONTAINMENT FROM CORE MELT ACCIDENTS. Draft Report for Comment.
Author Name	
Author Affiliation	NRC OFFICE OF NUCLEAR REACTOR REGULATION (NRR)
Author Affiliation Class	N
Addressee Name	
Addressee Affiliation	
Addressee Affiliation Class	
Docket Number	
License Number	
Case/Reference Number	
Document/Report Number	NUREG-1079 NUREG-1079-DRFT NUREG-1079-DRFT-FC
Keyword	ACCIDENTS CONTAINMENT DRAFTS ESTIMATES MELTDOWN
Package Number	8601070488
Date Docketed	
Related Date	
Comment	
Document Status	
Media Type	Microform
Physical File Location	PDR:NUREG--1079-R-851231,PDR:NUREG//1079 R 851231
Microform Addresses	34184:024-34184:312
Distribution List Codes	

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Text Source Flag	Other Text Sources
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This NUREG falls under the category of "accidents" which we have been told not to release without it being reviewed for SUNSI, even though it's marked publicly available, because many of these older Legacy documents were never redacted.

On page 5-13 and 5-14 of this NUREG it discusses Mark I containment failure, and the quote mentioned in the NIRS fact sheet is on page 5-14.

I am not sure who to ask in NRR to review it, since it's from 1985. I am asking you in OPA since the requester is from NHK, and I don't know how urgent the request is.

The requester's e-mail address is [kirst@nhkny.com](mailto:kirst@nhkny.com), and I'm sorry, I didn't get his full name. I replied to him yesterday afternoon to tell him I was still searching for the document, and he hasn't replied back yet.

Thanks so much,

Mary Mendiola  
Technical Librarian  
US NRC Public Document Room  
[Mary.Mendiola@nrc.gov](mailto:Mary.Mendiola@nrc.gov)  
301-415-2821

**From:** [Akstulewicz, Brenda](#)  
**To:** [Burnell, Scott](#)  
**Subject:** Len Tepper CBS News wants confirmation...  
**Date:** Tuesday, March 15, 2011 8:58:00 AM

---

That NRC is reporting that the inner core of #2 was uncovered yesterday

212-975-6883

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/21

**From:** Akstulewicz, Brenda  
**To:** Harrington, Holly; Burnell, Scott  
**Cc:** Steger (Tucci), Christine; Janbergs, Holly; Shannon, Valerie  
**Subject:** Forwarding calls and messages today  
**Date:** Tuesday, March 15, 2011 9:02:00 AM

---

Holly/Scott,

When Dave was here yesterday, I was forwarding all (reporter) requests for information to him and interview requests to Ivonne. Dave's not here yet. Who should we send requests for information to in his absence? You, Rob, Undine?

Thanks,  
Brenda

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/22

**From:** Akstulewicz, Brenda  
**To:** Shannon, Valerie  
**Subject:** FYI  
**Date:** Tuesday, March 15, 2011 9:15:00 AM

---

Val,

I checked on the p.r.'s. There was only press release issued last night, 11-048. 11-049 is a draft that has not gone out yet. In the future if you need to check something like this you can go to the public website and see what was released overnight. Hope this info helps!

~B

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/23

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** CNN Washington - time sensitive  
**Date:** Tuesday, March 15, 2011 9:54:00 AM

---

Alan Silverlei  
CNN Washington  
202-898-7931

Other countries have "ranked" the events in Japan, i.e. Japan has said level 4, France, level 6  
Has the US "ranked" the event?

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/24

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Interview Request  
**Date:** Tuesday, March 15, 2011 9:55:00 AM

---

Lisa Fletcher  
ABC News, DC  
541-554-4300

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/25

**From:** Akstulewicz, Brenda  
**To:** Couret, Yvonne  
**Subject:** Media Call  
**Date:** Tuesday, March 15, 2011 11:01:00 AM

---

Cindy Waite  
TV ASAHI  
202-347-2933

AB/26

**From:** [OPA Resource](#)  
**To:** [Harrington, Holly](#)  
**Subject:** FW: ProPublica questions (for Holly Harrington)  
**Date:** Tuesday, March 15, 2011 12:03:17 PM

---

**From:** Sasha Chavkin [mailto:Sasha.Chavkin@propublica.org]  
**Sent:** Tuesday, March 15, 2011 12:02 PM  
**To:** OPA Resource  
**Subject:** ProPublica questions (for Holly Harrington)

Hello,

I am writing from ProPublica with some questions on nuclear emergency preparedness. I spoke yesterday to Holly Harrington who said she would get back to me, but I haven't yet heard from her. I'm hoping to speak with her (or the appropriate NRC officials) to address the questions below.

We're planning to publish a story on this later today or tomorrow, and I'm hoping to speak with someone as soon as possible. Here are my questions:

*On March 13, Rep. Ed Markey wrote [a letter](#) to Pres. Obama that stated the following: "I am concerned that it appears that no agency sees itself as clearly in command of emergency response in a nuclear disaster." It said that depending on the type of incident, the lead agency could be NRC, Homeland Security or the EPA, and that there was confusion about which agency would fulfill which role. But the NRC website says: "As Coordinating Agency, NRC has technical leadership for the Federal government's response to the event," except in case of a General Emergency or nuclear terrorist attack. Is it correct that any other type of nuclear disaster beside a General Emergency or terrorist attack, the federal response will be led by the NRC?*

*How does an event get to be designated a general emergency? Who makes the decision?*

*Markey's letter, and a story in Inside EPA from last November, said that NRC, the EPA and FEMA were struggling to determine which agency would be in charge of cleanup for a nuclear disaster. Has that question been resolved?*

*Markey also writes in his letter: "When my staff was briefed by staffs of the EPA and NRC, they were informed by both agencies that there is no clarity regarding which agency would be in charge of the various aspects of a response to a nuclear disaster, and that the identity of the lead Federal agency is dependent on many different factors. One Agency official essentially told my staff that if a nuclear incident occurred, they would all get on the phone really quickly and figure it out." Do you have any comment on this? Has this been figured out yet?*

*Do you believe there is sufficient clarity about different federal agencies roles in responding to a nuclear disaster, or is this something you're still working on improving?*

AS 27

Thanks so much for your attention and I look forward to hearing from you.

Best,

Sasha Chavkin  
917 512-0232

*pel*

**From:** [Harrington, Holly](#)  
**To:** [sasha.chavkin@propublica.org](mailto:sasha.chavkin@propublica.org)  
**Subject:** FW: LINK  
**Date:** Tuesday, March 15, 2011 12:18:00 PM

---

Sorry, Sasha, as you see below I attempted to respond, but did not get your e-mail address correct. I do not know if I can get someone to speak with you in time for your deadline, but hopefully the answers below will help.

*"As Coordinating Agency, NRC has technical leadership for the Federal government's response to the event."*

*This is a correct statement as it relates to U.S. nuclear power plants and is covered in the Federal Response Framework. This is true even in a General Emergency. DHS takes an overall coordinating lead (with addition of DOJ/FBI if there is a security element), but NRC remains the technical expert "inside the fence."*

*How does an event get to be designated a general emergency? Who makes the decision?*

**A general emergency is declared by the plant itself according to NRC criteria. Here is some helpful language in that regard:**

**A general emergency is the most severe of four event classifications and means there could be imminent degradation of the reactor core or core melting with a possibility of an off-site radiation release.**

**OR**

**A general emergency is the most severe of four event classifications and means the plant operator has lost or is likely to lose physical control of the facility.**

*Markey's letter, and a story in Inside EPA from last November, said that NRC, the EPA and FEMA were struggling to determine which agency would be in charge of cleanup for a nuclear disaster. Has that question been resolved?*

**My understanding is that clean-up is an EPA responsibility according to the National Response Framework. DHS or EPA may be able to clarify for you.**

*Markey also writes in his letter: "When my staff was briefed by staffs of the EPA and NRC, they were informed by both agencies that there is no clarity regarding which agency would be in charge of the various aspects of a response to a nuclear disaster, and that the identity of the lead Federal agency is dependent on many different factors. One Agency official essentially told my staff that if a nuclear incident occurred, they would all get on the phone really quickly and figure it out." Do you*

AB | 28

*have any comment on this? Has this been figured out yet?*

**See my response above.**

---

**From:** Harrington, Holly  
**Sent:** Monday, March 14, 2011 2:59 PM  
**To:** 'sasha.charkin@propublica.org'  
**Subject:** LINK

This is our link to information on emergency preparedness related to nuclear power plants in the U.S.:

<http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-emerg-plan-prep-nuc-power.html>

**From:** [Akstulewicz, Brenda](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** Interview requests  
**Date:** Tuesday, March 15, 2011 12:36:00 PM

---

Ana  
In the Arena (CNN)  
212-275-7551  
Tonight 8pm

Tamika Forester  
Canada Broadcast Corp.  
416-205-5682  
[Diana.picken@cbc.ca](mailto:Diana.picken@cbc.ca)  
Interview for tomorrow pm

Kate Sheppard  
Mother Jones  
202-626-7242

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



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**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Information (MSNBC)  
**Date:** Tuesday, March 15, 2011 4:00:00 PM

---

Joanne Denyeau

MSNBC

212 644 0425

Exactly how prepared is the US for an event such as what's happened in Japan

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/30

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Info for Reporter  
**Date:** Tuesday, March 15, 2011 5:11:00 PM

---

Joaquin Sapien

Pro Publica

917 512 9380

[joaquin.sapien@propublica.org](mailto:joaquin.sapien@propublica.org)

Safety risk at spent fuel pools, what are we doing to make them safe.

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

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AB/ 31

**From:** Couret, Ivonne  
**To:** Harrington, Holly  
**Subject:** MEDIA REQUEST IN JAPAN FW: CNN request -- NRC experts in Japan  
**Date:** Tuesday, March 15, 2011 5:28:28 PM

---

**From:** OPA Resource  
**Sent:** Tuesday, March 15, 2011 2:57 PM  
**To:** Couret, Ivonne  
**Subject:** FW: CNN request -- NRC experts in Japan

**From:** Shelley, Jo [mailto:Jo.Shelley@turner.com] *ra*  
**Sent:** Tuesday, March 15, 2011 2:14 PM  
**To:** OPA Resource  
**Subject:** CNN request -- NRC experts in Japan

Hi there,

My name is Jo Shelley and I'm a producer at the CNN network.

CNN International would love to arrange interviews with your team in Tokyo, as part of our ongoing coverage of the aftermath of the earthquake & tsunami.

Do you think it would be possible to speak with one of your team on the phone at some point?

Please do let me know -- and don't hesitate to call or email me with any questions.

Many thanks,

Jo

Jo Shelley | Producer, CNN International  
+44 (0)207 693 1759  
+44 (0)782 731 6125  
[jo.shelley@cnn.com](mailto:jo.shelley@cnn.com)

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### **U.S. NUCLEAR REGULATORY COMMISSION**

Office of Public Affairs Telephone: 301/415-8200  
Washington, D.C. 20555-0001  
E-mail: [opa.resource@nrc.gov](mailto:opa.resource@nrc.gov) Site: [www.nrc.gov](http://www.nrc.gov)

### **REVISED: NRC SENDS ADDITIONAL EXPERTS TO ASSIST JAPAN**

The NRC has sent nine additional experts to Tokyo to provide assistance as requested by the Japanese government. Acting as part of a U.S. Agency for International Development assistance

*AS 32*

team, the NRC has dispatched the experts to Tokyo to provide assistance as requested by the Japanese government.

The first members of the team left the United States Monday evening and were due to arrive in Tokyo Wednesday afternoon. The team includes additional reactor experts, international affairs professional staffers, and a senior manager from one of the NRC's four operating regions.

The team members come from the NRC's headquarters in Rockville, Md., and from offices in King of Prussia, Pa., Chattanooga, Tenn., and Atlanta. The team has been instructed to: conduct all activities needed to understand the status of efforts to safely shut down the Japanese reactors; better understand the potential impact on people and the environment of any radioactivity releases; if asked, provide technical advice and support through the U.S. ambassador for the Japanese government's decision making process; and draw on NRC-headquarters expertise for any other additional technical requirements. The team will be in communication with the Japanese regulator, the U.S. Embassy, NRC headquarters, and other government stakeholders as appropriate.

The team is led by Charles A. Casto, deputy regional administrator of the NRC's Center of Construction Inspection, based in NRC's office in Atlanta. Casto has worked in the commercial nuclear power industry at three different nuclear power plants, including Browns Ferry, which has three boiling water reactors, operated by the Tennessee Valley Authority in Alabama. He has also worked as a licensed reactor operator and operator instructor. Casto will provide a single point of contact for the U.S. Ambassador in Japan on nuclear reactor issues.

The two reactor experts sent Saturday to Japan will participate as members

**From:** Janbergs, Holly  
**To:** Harrington, Holly  
**Subject:** Entergy  
**Date:** Tuesday, March 15, 2011 5:43:35 PM

---

Mike Burns from Entergy would like a copy of comments Jaczko gave last Thurs during a conference call with reporters.

504-576-4352 *Re*

Beth Janbergs  
Public Affairs Assistant  
301-415-8211

AB/ 33

**From:** [Harrington, Holly](#)  
**To:** [jo.shelley@turner.com](mailto:jo.shelley@turner.com)  
**Subject:** NRC Response  
**Date:** Tuesday, March 15, 2011 5:46:00 PM

---

**Jo – We got your email below and are not booking any interviews with the team right now.**

**Holly Harrington**  
**Office of Public Affairs**  
**NRC**

**From:** Shelley, Jo [<mailto:Jo.Shelley@turner.com>] *PS*  
**Sent:** Tuesday, March 15, 2011 2:14 PM  
**To:** OPA Resource  
**Subject:** CNN request -- NRC experts in Japan

Hi there,

My name is Jo Shelley and I'm a producer at the CNN network.

CNN International would love to arrange interviews with your team in Tokyo, as part of our ongoing coverage of the aftermath of the earthquake & tsunami.

Do you think it would be possible to speak with one of your team on the phone at some point?

Please do let me know -- and don't hesitate to call or email me with any questions.

Many thanks,

Jo

Jo Shelley | Producer, CNN International  
+44 (0)207 693 1759  
+44 (0)782 731 6125  
[jo.shelley@cnn.com](mailto:jo.shelley@cnn.com)

ABI/34

**From:** McIntyre, David  
**To:** McIntyre, David; Brenner, Eliot  
**Cc:** Burnell, Scott; Harrington, Holly  
**Subject:** RE: NBC News - Lisa Myers request on BWR-Mark 1s  
**Date:** Tuesday, March 15, 2011 6:25:29 PM

---

Should have added more detail – he's interested specifically in how BWR Mark-1s go kaput.

---

**From:** McIntyre, David  
**Sent:** Tuesday, March 15, 2011 6:24 PM  
**To:** Brenner, Eliot  
**Cc:** Burnell, Scott; Harrington, Holly  
**Subject:** NBC News - Lisa Myers request on BWR-Mark 1s

Eliot – I had a lengthy talk with Azriel Relph, a researcher who works with Lisa Myers at NBC. He had spoken today to Harold Denton, who recommended he talk to Brian Sheron about BWRs and all the problems they supposedly had. They want to do a piece for Thursday evenings' nightly news. I explained that we aren't making staffers available, and that the Chairman was testifying tomorrow so we wouldn't be putting others in front of cameras. So –

- 1) Be alert that NBC might try to ambush the Chairman after his testimony; he said they could certainly set up something after the hearing to interview him or anyone else we wanted to offer up.
- 2) I said that although we wouldn't be able to do an on-camera, we would like to make sure that he gets the information he needs, and I said we'd follow up in the morning. Scotty Nuke, you up for it?

His phone number is 212-413-5712, and email is azriel.relph@nbcuni.com

Dave

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**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Media Call  
**Date:** Wednesday, March 16, 2011 8:19:00 AM

---

Called and asked for Scott:

Sharon Behn

Voice of America

202/203/4343

Please confirm – police are using water cannons on plants?

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI 36

**From:** [Akstulewicz, Brenda](#)  
**To:** [Royer, Deanna](#)  
**Subject:** FW: Public Inquiries  
**Date:** Wednesday, March 16, 2011 9:01:00 AM

---

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**From:** Harrington, Holly  
**Sent:** Wednesday, March 16, 2011 9:00 AM  
**To:** Akstulewicz, Brenda; Shannon, Valerie; Landau, Mindy; Ellmers, Glenn; Janbergs, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara  
**Cc:** Bonaccorso, Amy; Deavers, Ron  
**Subject:** Public Inquiries

For today, if you get public inquiries via phone that you do not want to or can't get to, please take a message and forward to:

[Ron.deavers@nrc.gov](mailto:Ron.deavers@nrc.gov) and [amy.bonaccorso@nrc.gov](mailto:amy.bonaccorso@nrc.gov) .

You may also forward e-mail messages to these two addresses as well.

Pls cc Brenda and myself

AB/37

**From:** [Akstulewicz, Brenda](#)  
**To:** [Landau, Mindy](#)  
**Bcc:** [Royer, Deanna](#)  
**Subject:** Interview Request  
**Date:** Wednesday, March 16, 2011 9:13:00 AM

---

Gary Thomas  
Voice of America  
202-203-4323  
Seeking interview with Vladimir Graizer of NRC

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/38

**From:** Akstulewicz, Brenda  
**To:** Janbergs, Holly  
**Subject:** Call from DHS  
**Date:** Wednesday, March 16, 2011 10:12:00 AM

---

Walter Collins

DHS – NCS

703-235-5080

Confirm radiation model we are using regarding Japan

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/39

**From:** [Mitlyng, Viktoria](#)  
**To:** [Burnell, Scott](#); [McIntyre, David](#)  
**Cc:** [Harrington, Holly](#)  
**Subject:** RE: AFP questions  
**Date:** Wednesday, March 16, 2011 11:25:47 AM

---

Got it.

---

**From:** Burnell, Scott  
**Sent:** Wednesday, March 16, 2011 10:22 AM  
**To:** Mitlyng, Viktoria; McIntyre, David  
**Cc:** Harrington, Holly  
**Subject:** RE: AFP questions

Not in a position to help right now.

---

**From:** Mitlyng, Viktoria  
**Sent:** Wednesday, March 16, 2011 11:18 AM  
**To:** Burnell, Scott; McIntyre, David  
**Cc:** Harrington, Holly  
**Subject:** FW: AFP questions

I have tried to answer these AFP questions in a general way – if the design wasn't safe it wouldn't be in use, we are constantly evaluating new information about safety concern and resolving as necessary, etc. The reporter is dissatisfied and wants more specifics on how the NRC has handled GE Mark 1 containment safety concerns that have been raised through the years and what these concerns are. I don't know if we have the capacity to answer his questions. Please advise.

Also, I am getting more questions such as the one AFP is raising on any details of what our team in Japan is doing, which areas it's reviewing. Are we going to talk about any feedback the agency receives? If not, what is our position on why. If you want me to make up my own answers to these questions, rather than having to ask you, I can. Please advise on this as well.

Thank you.

Vika

---

**From:** Paul HANDLEY [mailto:Paul.HANDLEY@afp.com] *pl*  
**Sent:** Wednesday, March 16, 2011 10:04 AM  
**To:** Mitlyng, Viktoria  
**Cc:** Charlotte RAAB DE MIRANDA  
**Subject:** AFP questions

Hi Ms Mitlyng,

Thanks for your earlier comments and your contacts. Here are my questions, on the issues that have been raised by the Japan incident:

AB 40

- What sort of modifications have been required of the GE Mark 1 design since it was first introduced that address the original safety questions around the strength of the containment vessels, the pipes for the torus; the use of MOX, etc?
- Have all of the US plants been upgraded/updated to address these issues, especially the strength of containment?
- Have there been any serious incidents in the US which raised questions about the GE design and structure?
- Would that BWR design be acceptable in a new plant today?
- Does the NRC have any information about how GE Mark 1 plants may or may have not been modified around the world to address these issues?

Also, can you give details on how the NRC is helping out in Japan? – how many people have been snet, what specifically they are doing, what their view of the situation is?

Thanks and regards,

Paul Handley  
AFP  
202 4140682 *PH*

---

**From:** Mitlyng, Viktoria [mailto:Viktoria.Mitlyng@nrc.gov]  
**Sent:** Wednesday, March 16, 2011 10:50 AM  
**To:** Paul HANDLEY  
**Subject:** from NRC

Paul, here is my contact information.

Viktoria Mitlyng  
Office of Public Affairs  
US Nuclear Regulatory Commission  
Region III  
Lisle, IL 60532  
Tel 630/829-9662  
Fax 630/515-1026  
e-mail: viktoria.mitlyng@nrc.gov

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For more information on Agence France-Presse, please visit our web site at <http://www.afp.com>

**From:** [Akstulewicz, Brenda](#)  
**To:** [Landau, Mindy](#)  
**Subject:** Interview Request  
**Date:** Wednesday, March 16, 2011 11:34:00 AM

---

Tamsin Barber

BBC

0044 207 557 2476

Interview request with Anna Canner regarding tsunami/earthquake risks

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/41

**From:** [Deavers, Ron](#)  
**To:** [Harrington, Holly](#)  
**Cc:** [Bonaccorso, Amy](#)  
**Subject:** RE: Media Question  
**Date:** Wednesday, March 16, 2011 11:36:27 AM

---

Ok, thanks.

---

**From:** Harrington, Holly  
**Sent:** Wednesday, March 16, 2011 11:36 AM  
**To:** Deavers, Ron  
**Subject:** RE: Media Question

Ignore. It's a media call

---

**From:** Deavers, Ron  
**Sent:** Wednesday, March 16, 2011 11:34 AM  
**To:** Harrington, Holly  
**Cc:** Bonaccorso, Amy  
**Subject:** FW: Media Question

Holly,

Thanks for language to respond to this.

Ron

---

**From:** Akstulewicz, Brenda  
**Sent:** Wednesday, March 16, 2011 11:24 AM  
**To:** Deavers, Ron; Bonaccorso, Amy  
**Subject:** Media Question

Jack Dante  
ABC News, DC  
202-222-7662 *Rel*

Wants confirmation that things are definitely taking a turn for the worse.

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



A3/42

**From:** [Akstulewicz, Brenda](#)  
**To:** [Harrington, Holly](#)  
**Subject:** FW: National Weather Service Public Affairs  
**Date:** Wednesday, March 16, 2011 11:38:27 AM

---

Deanna checked, number is correct by searching their website. There is an extension 110. If you haven't already, try dialing a 1 before the number in case it's long distance.

---

**From:** Akstulewicz, Brenda  
**Sent:** Wednesday, March 16, 2011 11:34 AM  
**To:** Harrington, Holly  
**Subject:** RE: National Weather Service Public Affairs

Checking on it now.

---

**From:** Harrington, Holly  
**Sent:** Wednesday, March 16, 2011 11:22 AM  
**To:** Akstulewicz, Brenda  
**Subject:** RE: National Weather Service Public Affairs

Check this number. It's not going thorough

---

**From:** Akstulewicz, Brenda  
**Sent:** Wednesday, March 16, 2011 11:14 AM  
**To:** Harrington, Holly  
**Subject:** FW: National Weather Service Public Affairs

Holly,

I'm not really who should receive this. On one hand it seems like Mindy on the other you on the other Bethany!

Thanks and sorry to bug you.  
B

Susan Buchanan  
301-713-0622 *sl*

Re: Director of National Weather Service and Director of FEMA making a public announcement tomorrow on Spring Outlook. They have questions on how to field questions regarding Japan

*AS/43*

**From:** [Harrington, Holly](#)  
**To:** [Date, Jack V.](#)  
**Subject:** RE: ABC News Question.  
**Date:** Wednesday, March 16, 2011 11:50:00 AM

---

Not now. Check back later . . .

---

**From:** Date, Jack V. [mailto:Jack.V.Date@abc.com] *fil*  
**Sent:** Wednesday, March 16, 2011 11:46 AM  
**To:** Harrington, Holly  
**Subject:** ABC News Question.  
**Importance:** High

We are hearing from a source that two cores have breached, that there are two containment ruptures.

Can you confirm on background?

ABI | 44

**From:** [Akstulewicz, Brenda](#)  
**To:** [Royer, Deanna](#)  
**Subject:** LAST CALL YOU TOOK  
**Date:** Wednesday, March 16, 2011 12:26:00 PM

---

Also wants to know the emergency plan for Calloway and would like to talk w/someone who can interpret it.

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI/45

**From:** Akstulewicz, Brenda  
**To:** Deavers, Ron; Bonaccorso, Amy  
**Subject:** Information Request  
**Date:** Wednesday, March 16, 2011 12:37:00 PM

---

Rubin Crosslin

Tenn. Division Radiological Health

615-532-0424

Ruben.crosslin@tn.gov

Are we monitoring visitors from Japan for radiation?

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

brenda.akstulewicz@nrc.gov



AB/46

**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Interview Request  
**Date:** Wednesday, March 16, 2011 1:07:00 PM

---

Elena Marchukova  
Business FM Radio, Moscow  
+7 926 196 3212  
+7 495 660 8875x474  
[c.marchukova@businessfm.ru](mailto:c.marchukova@businessfm.ru)

Wants to talk with an expert on the situation in Japan, did not give a specific area/topic.

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AB/47

**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Media Calls  
**Date:** Wednesday, March 16, 2011 1:33:00 PM

---

Steve Jochim  
Fox News, NY  
212-301-3081  
Steven.jochim@foxnews.com  
General information regarding crisis

Margie  
Congressional Quarterly  
202 419 8551  
mhobson@cq.com  
effects of japan situation and earthquakes regarding Vt Yankee

Leticia Fenili  
Epoca, (Brazille)  
letfenili@gmail.com  
General info on crisis

Chris Kayaniotes  
CBC News Toronto  
416-205-2815  
chris.kayaniotes@cbc.ca  
Why no global organization has stepped in to ensure proper handling of Japan crisis

**Brenda Akstulewicz**  
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brenda.akstulewicz@nrc.gov



AB/48

**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Interview - tonight!  
**Date:** Wednesday, March 16, 2011 3:31:00 PM

---

Andrew Dallos  
Rachel Maddow Show  
212-664-1291  
[Andrew.dallos@nbcuni.com](mailto:Andrew.dallos@nbcuni.com)  
Someone to interview tonight.

**Brenda Akstulewicz**  
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301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/49

**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot  
**Subject:** Leslie Burdick - CSpan  
**Date:** Wednesday, March 16, 2011 4:03:00 PM

---

Eliot,

I took a call from Leslie Burdick who was insistent on talking with you only! She insinuated that she had been in communication with you previously. I'm checking with you to see if you want to talk w/her or I should send her through normal channels. In the event you want to talk with her, below is her info. Either way, please let me know what you decide to do.

Leslie Burdick

CSpan

202-626-4893

\*They want to make the chairman "Newsmaker of the week" and appear on The News Makers Program

\*Would tape Friday or Saturday

\*Airs Sunday 10am

**Brenda Akstulewicz**

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AB/50

**From:** [Burdick, Leslie](#)  
**To:** [Akstulewicz, Brenda](#)  
**Subject:** C-SPAN asks: Is Chairman Jaczko available to be "Newsmakers" guest this week -- taping interview Friday or Saturday... or doing it LIVE on Sunday?  
**Date:** Wednesday, March 16, 2011 4:27:02 PM

---

Dear Brenda and Eliot:

C-SPAN is interested to see if NRC Chairman Gregory Jaczko is available this week to be our "Newsmakers" guest - taping a 25-minute interview Friday or Saturday, or doing it LIVE on Sunday morning.

We'd appreciate the opportunity to talk about the Japanese nuclear accident and what kind of actions, if any, the U.S. could potentially consider as it examines U.S. nuclear plants.

"Newsmakers" is a 25-minute interview with a C-SPAN host and two reporters. It's C-SPAN's key interview program of the week with someone dealing with urgent public policy issues. It would tape and then air on Sunday.

In recent weeks, our Newsmakers guests were House Appropriations Cmte Chairman Hal Rogers, Budget Cmte Ranking Member Chris Van Hollen, DHS Secretary Janet Napolitano. We've also talk with HHS Sec. Sebelius recently and Sheila Bair of the Federal Deposit Insurance Corporation.

Is Chairman Jaczko possibly available to do an interview one of these days/times:

FRIDAY, March 18: Any 25 minutes between 10:30a.m. & 3:30 p.m.ET

SATURDAY, March 19: 25 minutes between 10:30a.m. 12 noon.ET

SUNDAY, March 20: just one time – LIVE at 10a.m.

The show airs twice on Sunday – 10am & at 6pm.

**Here's are links to some recent "Newsmakers" interviews, to show you how the program works:**

Rep. Chris Van Hollen, Budget Cmte Ranking Member: <http://www.c-span.org/Events/Rep-Van-Hollen-Gives-Insider-Account-of-Budget-Debate-in-Congress/10737419838/>

Rep. David Dreier, U.S. House Rules Committee Chairman: <http://www.c-span.org/Events/Rules-Committee-Chairman-Rep-David-Dreier-R-CA/10737419077-1/>

Janet Napolitano, Secretary of Homeland Security: <http://www.c-span.org/Events/DHS-Secretary-Janet-Napolitano/10737419403/>

Sheila Bair, Chairman of the Federal Deposit Insurance Corporation: <http://www.c-span.org/Watch/Media/2010/10/17/NM/R/39500/FDIC+Chair+Explains+New+Provisions+on+Lending+Foreclosures.aspxGGHHS>

HHS Secretary Kathleen Sebelius: <http://www.c-span.org/Events/Health-and-Human-Services-Secretary-Kathleen-Sebelius/10737418912-1/>

Phil Angelides, Financial Crisis Inquiry Cmte Chairman: <http://www.c-span.org/Watch/Media/2010/10/24/NM/A/39729/Financial+Crisis+Inquiry+Commission+Chair+Phil+Angelides.aspx>

Please let us know if this is possible.

Thanks,  
Leslie Burdick  
C-SPAN  
202 626-4893  
[lburdick@c-span.org](mailto:lburdick@c-span.org)

CONFIDENTIALITY NOTICE: This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. If you are not the intended recipient of this e-mail, please notify the sender immediately by return e-mail, purge it and do not disseminate or copy it.

AB/ 51

**From:** Ghneim, Munira  
**To:** Landau, Mindy  
**Cc:** Harrington, Holly; Akstulewicz, Brenda  
**Subject:** Rob Hendin - CBC- interview with Chairman  
**Date:** Wednesday, March 16, 2011 4:27:21 PM

---

Good Afternoon,

Rob Hendin would like to speak to someone in regards to setting up an interview with the Chairman for this Sunday's "Face the Nation".

Rob Hendin – 202-457-4450 *Rel*

Thank You  
Munira Ghneim  
Contract Secretary  
Office of Information Services  
301-415-1170

*AS/52*

**From:** [Akstulewicz, Brenda](#)  
**To:** [LIA04 Hoc](#)  
**Subject:** FW: Rad Info  
**Date:** Wednesday, March 16, 2011 4:37:00 PM

---

State folks,  
Could you please talk with the State of Hawaii's Dept. of Health? (if you haven't already)  
They had some questions below....

Thanks!  
-Jenny

---

**From:** OST05 Hoc  
**Sent:** Wednesday, March 16, 2011 12:51 PM  
**To:** Deavers, Ron; Bonaccorso, Amy; Nguyen, Quynh  
**Cc:** Harrington, Holly; Akstulewicz, Brenda; Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Herral; Maier, Bill; McNamara, Nancy; Tiff, Doug; Trojanowski, Robert; Woodruff, Gena; Flannery, Cindy; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michael; Turtill, Richard; Virgilio, Rosetta  
**Subject:** FW: Rad Info

See email Q below from Hawaii relative to checking planes from Japan for radiation

---

**From:** Maier, Bill  
**Sent:** Wednesday, March 16, 2011 12:19 PM  
**To:** Jeff Eckerd  
**Subject:** RE: Rad Info

Jeff,

NRC does not have a take on this concern as we are not the agency responsible for deciding whether or not to conduct such screenings. I will forward your question up to our Headquarters responders so that they may direct it to the appropriate group/agency.

Bill Maier

---

**From:** Jeff Eckerd [<mailto:jeffrey.eckerd@doh.hawaii.gov>]  
**Sent:** Tuesday, March 15, 2011 9:28 PM  
**To:** Maier, Bill  
**Subject:** Rad Info

Aloha, Bill!

Does NRC have any take on whether planes departing from Japan should be checked for radiation contamination? I'm not sure if you guys have received any calls yet, but we are getting inquiries. Contamination should be very low, if any and is also dependent upon where the aircraft departs from. I just wanted to make sure we are all on the same page and not sending out mixed messages. Please advise.

Thanks!

jeff

AB/53



**HAWAII STATE DEPARTMENT OF HEALTH**  
HEALTHY PEOPLE · HEALTHY COMMUNITIES · HEALTHY ISLANDS

Jeffrey M. Eckerd, Acting Program Manager  
State of Hawaii - Dept. of Health  
Indoor and Radiological Health Branch  
591 Ala Moana Blvd., Rm. 133  
Honolulu, HI 96813  
Ph. (808) 586-4700      FAX (808) 586-5838  
E-mail: [jeffrey.eckerd@doh.hawaii.gov](mailto:jeffrey.eckerd@doh.hawaii.gov)

**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Interview Request for TONIGHT  
**Date:** Wednesday, March 16, 2011 4:50:00 PM

---

K. Agle

Fox news

[k.agle@foxnews.com](mailto:k.agle@foxnews.com)

Wants someone to interview tonight

**Brenda Akstulewicz**  
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Office of Public Affairs  
301-415-8209  
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AB/54

**From:** Ghneim, Munira  
**To:** Landau, Mindy  
**Cc:** Harrington, Holly; Akstulewicz, Brenda  
**Subject:** Brian Drew -WTOP Radio  
**Date:** Wednesday, March 16, 2011 4:51:40 PM

---

Good Afternoon,

Brian Drew from WTOP Radio would like to have a nuclear safety expert on air for a duration of three to five minutes. Brian may be reached at 202-895-5060. *Rel*

Thank You  
Munira Ghneim  
Contract Secretary  
Office of Information Services  
301-415-1170

*AB/55*

**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Media Calls  
**Date:** Wednesday, March 16, 2011 5:17:00 PM

---

Steve Eliot

Moline Dispatch

[selliott@qconline.com](mailto:selliott@qconline.com)

regarding the report ranking the earthquake safety of US plants

**Brenda Akstulewicz**

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AB/56

**From:** Ghneim, Munira  
**To:** Burnell, Scott  
**Cc:** Harrington, Holly; Akstulewicz, Brenda  
**Subject:** Tiffany Demaster - Spectrum Newspaper  
**Date:** Wednesday, March 16, 2011 5:19:45 PM

---

Good Evening,

Tiffany Demaster would like someone to return her call regarding the radioactivity going on in Japan. Tiffany may be reached at 435-674-6231. *Re*

Thank You  
Munira Ghneim  
Contract Secretary  
Office of Information Services  
301-415-1170

AB/57

**From:** Akstulewicz, Brenda  
**To:** Landau, Mindy  
**Subject:** Chmn. Interview  
**Date:** Wednesday, March 16, 2011 5:22:00 PM

---

Rania Zaydan

Australian Broadcasting Corp.

[zaydan.rania@abc.net.au](mailto:zaydan.rania@abc.net.au)

+61 412 322 107

Wants to set up an interview with the chairman can only do 5pm or later tomorrow.

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AB/58

**From:** Ghneim, Munira  
**To:** Burnell, Scott  
**Cc:** Harrington, Holly; Akstulewicz, Brenda  
**Subject:** Nell Greenfield-Boyce -NPR  
**Date:** Wednesday, March 16, 2011 5:31:17 PM

---

Good Evening,

Nell would like someone to call her back to confirm the latest news that is on AP.  
Please call her back at 202-513-2432. *RL*

Thank You  
Munira Ghneim  
Contract Secretary  
Office of Information Services  
301-415-1170

*AS/59*

**From:** [Stephanopoulos, George](mailto:Stephanopoulos.George)  
**To:** [Harrington, Holly](mailto:Harrington.Holly)  
**Subject:** RE: Hi Holly...George Stephanopoulos here...do you have a minute to talk? 202-230-3316  
**Date:** Wednesday, March 16, 2011 5:50:37 PM

---

*Rel*

Thanks Holly.

Ideally, we'd love to have the Chairman on the show tomorrow morning. We've devoted the bulk of every program this week almost exclusively to this Issue, and it would be terrific for our viewers to get the perspective of the Most relevant and informed official in the US government – your boss! Ideal hit time is in the 7:05-7:15 range. Thanks...George

---

**From:** [Harrington, Holly](mailto:Harrington.Holly) [mailto:Holly.Harrington@nrc.gov]  
**Sent:** Wednesday, March 16, 2011 5:48 PM  
**To:** [Stephanopoulos, George](mailto:Stephanopoulos.George)  
**Subject:** RE: Hi Holly...George Stephanopoulos here...do you have a minute to talk? 202-230-3316

*Rel*

Hi George – I assume you're still interesting in an interview with the Chairman? Give me whatever your updated request particulars are and I'll get them to my boss. No promises, of course, but I'll see what we can do.

Holly

---

**From:** [Stephanopoulos, George](mailto:Stephanopoulos.George) [mailto:George.Stephanopoulos@abc.com]  
**Sent:** Wednesday, March 16, 2011 5:03 PM  
**To:** [Harrington, Holly](mailto:Harrington.Holly)  
**Subject:** Hi Holly...George Stephanopoulos here...do you have a minute to talk? 202-230-3316

*Rel*

*AB/60*

**From:** [Akstulewicz, Brenda](#)  
**To:** [Landau, Mindy](#)  
**Subject:** Media  
**Date:** Wednesday, March 16, 2011 6:11:00 PM

---

Greg

CBS News

212 975 5485

[gmmm@cbsnews.com](mailto:gmmm@cbsnews.com)

List of most vulnerable plants that came out today – is it from NRC, is it accurate

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AB/ 61

**From:** McIntyre, David  
**To:** Brenner, Eliot; Akstulewicz, Brenda; Couret, Ivonne  
**Subject:** Ahlers of CNN  
**Date:** Thursday, March 17, 2011 8:04:47 AM

---

Mike Ahlers will be here in about a half hour. He will call 8200 when he arrives.

AB/62

**From:** [Ghneim, Munira](#)  
**To:** [Courret, Ivonne](#)  
**Cc:** [Akstulewicz, Brenda](#); [Harrington, Holly](#)  
**Subject:** Andrea Devito - Fox News Sunday  
**Date:** Thursday, March 17, 2011 9:22:11 AM

---

Good Morning Ivonne,

Andrea Devito would like to schedule an interview with the Chairman for this Sunday. The show will be live and begins at 9am. Andrea may be reached at 202-824-6494 or [andrea.devito@foxnews.com](mailto:andrea.devito@foxnews.com) .

*1/rel*

Thank you,  
Munira Ghneim  
Contract Secretary  
Office of Information Services  
301-415-1170

*AB/63*

**From:** [Akstulewicz, Brenda](#)  
**To:** [Harrington, Holly](#)  
**Subject:** FW: enroute office--will go by office first.  
**Date:** Thursday, March 17, 2011 9:38:00 AM

---

Holly – just reading this sending to you FYI.

b

---

**From:** Brenner, Eliot  
**Sent:** Thursday, March 17, 2011 7:58 AM  
**To:** McIntyre, David; Akstulewicz, Brenda  
**Subject:** enroute office--will go by office first.

Have spoken to chairman. Re the voluntary evac, he wanted to be sure we would refer calls to DOS. My private reactor was ... DUH

AB/64

**From:** [Ghneim, Munira](#)  
**To:** [Courret, Ivonne](#)  
**Cc:** [Harrington, Holly](#); [Akstulewicz, Brenda](#)  
**Subject:** Ayesha Roscoe - Reuters - International News Wire  
**Date:** Thursday, March 17, 2011 10:13:22 AM

---

Good Morning,

Ayesha Roscoe would like someone to answer a few questions that were not answered yesterday such as does "NRC have emergency planning and drills at the nuclear plants". Ayesha may be reached by email at Ayesha. [Roscoe@thomsonreuters.com](mailto:Roscoe@thomsonreuters.com) or 202-317-5613.

Thank you,  
Munira Ghneim  
Contract Secretary  
Office of Information Services  
301-415-1170

*Ret*

*AB/65*

**From:** Ghneim, Munira  
**To:** Couret, Ivonne  
**Cc:** Harrington, Holly; Akstulewicz, Brenda  
**Subject:** Rodney Comrie - National Network - CBS  
**Date:** Thursday, March 17, 2011 10:34:01 AM

---

Organization – CBS – National Network

Contact – Rodney Comrie

Phone – 212-975-7212 - *RH*

Email – [rac@cbsnews.com](mailto:rac@cbsnews.com)

Request – Information on nuclear facilities that have be fined or shut down for a period of time.

Thank you,

Munira Ghneim

Contract Secretary

Office of Information Services

301-415-1170

*AB/66*

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** BBC / Fox News - National  
**Date:** Thursday, March 17, 2011 11:18:00 AM

---

Tom Esslemont

BBC

+44 207 557 2141

tom.esslemont@bbc.co.uk

Would like to tape interview with chmn (7min) air today at 2pm

Jason Robinson

Fox, National

212-301-2726

Jason.robinson@fox news.com

wants someone for an interview at 11:20am today! (and I just got the call)

**Brenda Akstulewicz**

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AB/67

**From:** [Loyd, Susan](#)  
**To:** [Harrington, Holly](#)  
**Subject:** RE: Talking Points  
**Date:** Thursday, March 17, 2011 11:38:36 AM

---

Ok. Great. Thanks.

Susan K. Loyd  
Communications Director  
Office of the Chairman  
U.S. Nuclear Regulatory Commission  
Tele: 301-415-1838  
[Susan.Loyd@nrc.gov](mailto:Susan.Loyd@nrc.gov)

---

**From:** Harrington, Holly  
**Sent:** Thursday, March 17, 2011 11:34 AM  
**To:** Loyd, Susan; Brenner, Eliot  
**Subject:** RE: Talking Points

Not an email list. We've been posting talking points on Web EOC. I will try to remember to keep you informed. Here are the latest. Feel free to reminder me occasionally!!

Holly

---

**From:** Loyd, Susan  
**Sent:** Thursday, March 17, 2011 11:31 AM  
**To:** Brenner, Eliot  
**Cc:** Harrington, Holly  
**Subject:** Talking Points

Eliot/Holly:

I think you are the keeper of the talking points on the status of Japan situation? I am receiving the narrative status reports from Ops Cntr, but believe I've only received the talking points in hard copy. If you are sending our electronic updated Talking Points, can you please make sure I'm on the list to get them? Thanks.

Susan

Susan K. Loyd  
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Tele: 301-415-1838  
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AB/68

# OPA

## TALKING POINTS

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### JAPAN NUCLEAR SITUATION

As of 3/17/2011 7:15 a.m. EDT

**Update: Addition of bullet on status of SFPs**

- Based on calculations performed by NRC experts, we now believe that it is appropriate for U.S. residents within 50 miles of the Fukushima reactors to evacuate. Our recommendation is based on NRC guidelines for public safety that would be used in the United States under similar circumstances.
- Given the results of the monitoring and distance between Japan and Hawaii, Alaska, U.S. Pacific Territories and the U.S. West Coast, the NRC expects the U.S. to avoid any harmful levels of radioactivity. The NRC is aware of various internet postings depicting modeled radiation plumes for the ongoing events at the nuclear power plants in Japan. All of the models the NRC has seen are based on generic assumptions regarding the potential radiation release from the plants and as such are unable to predict actual radiation levels away from the site. The NRC is working closely with our federal partners to monitor radiation releases from the Japanese nuclear power plants.
- The NRC continues to believe, based on all available information, that the type and design of the Japanese reactors, combined with how events have unfolded, will prevent radiation at harmful levels from reaching U.S. territory.

- [Status as of 7:00pm on 3/16] The NRC is closely monitoring the condition of the spent fuel pools at the Japanese nuclear power plants. Our current understanding, which is based on the best available information provided to NRC reactor experts in Japan, is the following:
  - Unit 4 – The SFP is likely dry and the integrity of the spent fuel pool is in question.
  - Units 2 & 3 – Steam is escaping which indicates that boiling is likely occurring in the spent fuel pool. The current water level of the pool is uncertain.
  - Unit 1 – The status of the SFP is unknown.
- In accordance with established protocols, U.S. Customs and Border Protection (CBP) employs several types of radiation detection equipment in its operations at both air and sea ports, and uses this equipment, along with specific operational protocols, to resolve any security or safety risks that are identified with inbound travelers and cargo. Out of an abundance of caution, CBP has issued field guidance reiterating its operational protocols and directing field personnel to specifically monitor maritime and air traffic from Japan. CBP will continue to evaluate the potential risks posed by radiation contamination on inbound travelers and cargo and will adjust its detection and response protocols, in coordination with its interagency partners, as developments warrant.
- The Japanese government has formally asked for U.S. assistance in responding to nuclear power plant cooling issues triggered by an earthquake and tsunami on March 11. The NRC has eleven staff on the ground in Japan as part of the USAID team.
- The NRC is coordinating its actions with other federal agencies as part of the U.S. government response. The NRC's headquarters Operations Center was activated at the beginning of the event and has been monitoring the situation on a 24-hour basis ever since.

- The NRC is always looking to learn information that can be applied to U.S. reactors and we will analyze the information that comes from this incident.
- The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path.
- U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes. Even those plants that are located outside of areas with extensive seismic activity are designed for safety in the event of such a natural disaster.
- The NRC requires that safety-significant structures, systems, and components be designed to take into account the most severe natural phenomena historically reported for the site and surrounding area. The NRC then adds a margin for error to account for the limitations on historical data. In other words, U.S. nuclear power plants are designed to be safe based on historical data to predict the area's maximum credible earthquake.

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** MEdia (McClatch) 2nd Call  
**Date:** Thursday, March 17, 2011 12:23:00 PM

---

Greg Gordon  
McClatchy Newspapers  
202-383-0005  
[ggordon@mcclatchy.dc.com](mailto:ggordon@mcclatchy.dc.com)

Have we considered having a press conference or teleconference  
Has other general questions about the situation

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AB/69

**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot  
**Subject:** Couple of Things  
**Date:** Thursday, March 17, 2011 12:54:00 PM

---

1. Got the following phone call for you  
Matthew Daley / Associated Press / 202-641-9541 / Re: today's meeting  
Do you want to call him or should he be processed with others?
2. The driver will meet you at 2pm at the SW gate on 17st
3. Meeting today 2:30pm: Logistics of Commission Meeting re: Japan / O16-H1  
RE: discuss the logistics (security, parking, escorting, webcast, etc.) of a public Commission regarding the events in Japan, probably on Monday morning. (Note: There will also probably be a closed Commission meeting right after the public meeting, where the Commission would move to the 18<sup>th</sup> floor conference room.) Susan will be attending this meeting
4. Meeting: 3:15 tomorrow / O17-B6 / Japanese Event & US Response, are you available or should someone else go for you?
5. Do you have food or would you like me to get something for you to have when you return?

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AD/70

**From:** [Akstulewicz, Brenda](#)  
**To:** [Shannon, Valerie](#)  
**Subject:** FW: List serve  
**Date:** Thursday, March 17, 2011 1:04:00 PM

---

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**From:** Royer, Deanna  
**Sent:** Thursday, March 17, 2011 10:15 AM  
**To:** Akstulewicz, Brenda  
**Subject:** List serve

Brenda,

Christina Bilski

[Bilski\\_wdc@nikkei.com](mailto:Bilski_wdc@nikkei.com)

Japanese newspaper

Re: She wants to be added to the list serve for news releases/speeches

I'm not sure if this would go to Ivonne?

Deanna Royer  
Contract Secretary  
301-415-8200

AB/71

**From:** [Akstulewicz, Brenda](#)  
**To:** [Deavers, Ron](#); [Bonaccorso, Amy](#)  
**Subject:** FW: Solution to cool Japan reactor!  
**Date:** Thursday, March 17, 2011 3:00:00 PM  
**Importance:** High

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**From:** Herr, Linda  
**Sent:** Thursday, March 17, 2011 2:50 PM  
**To:** OPA Resource  
**Cc:** Akstulewicz, Brenda; Shannon, Valerie; Brenner, Eliot; Bozin, Sunny; Franovich, Mike; Herr, Linda; Kock, Andrea; Nieh, Ho; Warnick, Greg; Zorn, Jason  
**Subject:** FW: Solution to cool Japan reactor!  
**Importance:** High

Hello!

Ho requested that I forward this to OPA for response.

Many thanks,  
Linda

---

**From:** CMROSTENDORFF Resource  
**Sent:** Thursday, March 17, 2011 2:21 PM  
**To:** Herr, Linda  
**Subject:** FW: Solution to cool Japan reactor!  
**Importance:** High

---

**From:** Robert Sanchez [<mailto:robert.sanchez@linclightingelectrical.com>]  
**Sent:** Thursday, March 17, 2011 1:25 PM  
**To:** CMROSTENDORFF Resource  
**Subject:** Solution to cool Japan reactor!  
**Importance:** High

William,

I hope this reaches you, and I hope I'm not just wasting your time. Their efforts in Japan on cooling the spent fuel suggests to me that this "pool" is outdoors. They tried to reach it with water cannons which also suggests to me that the safe distance needed is not too far for what I suggest. I believe that helicopters can bring in hoses and direct them to the pool(s). They would have to be weighted of course to anchor them. And from a safer distance pump water through them. I hope this helps!

**Robert Sanchez**  
Journeyman Electrician |  
Linc Lighting and Electrical |,  
An **ABM** Company  
Work: | Mobile: | Fax: | Other:

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Email: [robert.sanchez@inlightingelectrical.com](mailto:robert.sanchez@inlightingelectrical.com) | <http://www.thelincgroup.com>

---

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**From:** [Akstulewicz, Brenda](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** Korean Broadcast System  
**Date:** Thursday, March 17, 2011 3:24:00 PM

---

Yuri Kim  
202-662-7345  
wants urgent interview with an expert

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI/73

**From:** [Akstulewicz, Brenda](#)  
**To:** [Courret, Ivonne](#)  
**Subject:** LA Times  
**Date:** Thursday, March 17, 2011 3:37:00 PM

---

Amina Khan

LA Times

213-237-4529

[amina.khan@latimes.com](mailto:amina.khan@latimes.com)

Info on radiation: when will it get here, how much, what to do, etc...

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/74

**From:** Akstulewicz, Brenda  
**To:** Steger (Tucci), Christine; Royer, Deanna; Ghneim, Munira; Shannon, Valerie  
**Subject:** Calls for Eliot  
**Date:** Friday, March 18, 2011 8:23:00 AM

---

Good Morning!

If you should receive a call for Eliot Brenner, please transfer it to me at 415-8209. He's expecting a few calls and I want to make sure he gets them.

Thanks,

B

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ 75

**From:** Akstulewicz, Brenda  
**To:** Uselding, Lara  
**Subject:** Media Call  
**Date:** Friday, March 18, 2011 10:00:00 AM

---

Lara,

The following was left on our voicemail – send back to me if it should go to Ivonne.

KNX News Radio  
ask for the editor  
323-700-2070  
wants info on plume

b

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/76

**Riley (OCA), Timothy**

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**From:** Powell, Amy  
**Sent:** Friday, March 18, 2011 11:16 AM  
**To:** OCA Distribution  
**Subject:** General talking points from OPA  
**Attachments:** boardfile.docx

Also from OPA, here is an updated set of general talking points on events in Japan, NRC's involvement. Again, this is not something that we can ship to the Hill at this point, but may be helpful with calls.

I referenced a third document that I would be sending, but it was a repeat of another file that Dave McIntyre sent to me. You should now have two docs for reference.

I asked about the Q&As to see if there was a refresh since Wed, but was told that the focus had been more on the earthquake talking points and no new Q&As added at this point.

Amy

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## Riley (OCA), Timothy

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**From:** Schmidt, Rebecca  
**Sent:** Friday, March 18, 2011 11:45 AM  
**To:** Decker, David; Powell, Amy  
**Cc:** Belmore, Nancy; Riley (OCA), Timothy  
**Subject:** Re: Call with House T&I re: possible hearing

Did she know that FEMA has primary responsibility

---

**From:** Decker, David  
**To:** Powell, Amy  
**Cc:** Schmidt, Rebecca; Belmore, Nancy; Riley (OCA), Timothy  
**Sent:** Fri Mar 18 11:43:24 2011  
**Subject:** RE: Call with House T&I re: possible hearing

I just spoke with Joanna from the subcommittee and she said their subcommittee (which oversees FEMA) was planning for their first hearing of the year. She said the first hearing is normally a broad overview of how FEMA is doing leading domestic preparedness and response to disasters. They plan to do that again, and are looking at Wednesday, March 30<sup>th</sup> at 10am for the hearing. There is nothing yet up on the committee/subcommittee web-site about the hearing that I saw.

The hearing will be comprised of two panels with the first panel being the head of FEMA and the Deputy Chief of the US Forest Service. Given everything going on in Japan they would like an NRC witness to provide info about the NRCs Emergency and Preparedness program for nuclear reactors. The second panel will be state and local officials.

---

**From:** Powell, Amy  
**Sent:** Friday, March 18, 2011 10:23 AM  
**To:** Decker, David  
**Cc:** Schmidt, Rebecca; Belmore, Nancy  
**Subject:** Call with House T&I re: possible hearing

David –

Would you please call this staffer back and learn what they are looking for from NRC and when a hearing would be?

Thanks,  
Amy

---

**From:** Belmore, Nancy  
**Sent:** Friday, March 18, 2011 9:54 AM  
**To:** Powell, Amy  
**Cc:** Schmidt, Rebecca  
**Subject:** Return call

Joanna Hardy  
House Transportation and Infrastructure Sub on Emergency Mgmt  
202-225-3014

They are going to schedule a hearing on emergency response and would like a witness from NRC

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*Nancy Belmore*  
*Office of Congressional Affairs*  
*U.S. Nuclear Regulatory Commission*  
[nancy.belmore@nrc.gov](mailto:nancy.belmore@nrc.gov)  
301-415-1776

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Bloomberg  
**Date:** Friday, March 18, 2011 12:09:00 PM

---

Edward Klump  
713-651-4607  
[eklump@bloomberg.net](mailto:eklump@bloomberg.net)  
Questions on spent fuel

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



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**Riley (OCA), Timothy**

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**From:** LIA12 Hoc  
**Sent:** Friday, March 18, 2011 12:40 PM  
**To:** Dacus, Eugene; Schmidt, Rebecca; Powell, Amy; Droggitis, Spiros; Riley (OCA), Timothy; Weil, Jenny; Decker, David; Shane, Raeann  
**Subject:** FW: USAID NRC Liaison - Phone Number

FYI

---

**From:** LIA08 Hoc  
**Sent:** Thursday, March 17, 2011 6:55 PM  
**To:** RMTPACTSU\_ELNRC; LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA12 Hoc; Marshall, Jane; Grant, Jeffery; Gott, William; Harrington, Holly; McIntyre, David; Burnell, Scott  
**Subject:** RE: USAID NRC Liaison - Phone Number

Thanks, Mike. Contact number has been added to the LT Log.  
Rani

---

**From:** RMTPACTSU\_ELNRC [[mailto:RMTPACTSU\\_ELNRC@ofda.gov](mailto:RMTPACTSU_ELNRC@ofda.gov)]  
**Sent:** Thursday, March 17, 2011 6:52 PM  
**To:** LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; LIA12 Hoc; Marshall, Jane; Grant, Jeffery; Gott, William; Harrington, Holly; McIntyre, David; Burnell, Scott  
**Subject:** USAID NRC Liaison - Phone Number

Just wanted to let everyone know that we have a phone now down here at USAID. We can be reached at 202-712-4384.

If you need anything, please don't hesitate to ask.

Michael J. Dudek

AB/80

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** CNN  
**Date:** Friday, March 18, 2011 1:17:00 PM

---

John Kauffman of NRC ,Research

301-251-7465

Tom Patterson of CNN

called him to talk about Generic Issue 199, safety risk assessment

There is an active com plan on GI 199

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



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## Riley (OCA), Timothy

---

**From:** Schmidt, Rebecca  
**Sent:** Friday, March 18, 2011 1:29 PM  
**To:** 'Annie\_Caputo@epw.senate.gov'; Riley (OCA), Timothy  
**Subject:** Re:

Tim riley will send him the info. Thanks

---

**From:** Caputo, Annie (EPW) <Annie\_Caputo@epw.senate.gov>  
**To:** Plack, Brendon (RPC) <Brendon\_Plack@rpc.senate.gov>; Schmidt, Rebecca  
**Sent:** Fri Mar 18 13:26:31 2011  
**Subject:** Re:

Sure, it's a 3:00. Becky, can you send Brendan the call-in info?

---

**From:** Plack, Brendon (RPC)  
**Sent:** Friday, March 18, 2011 01:24 PM  
**To:** Caputo, Annie (EPW)  
**Subject:**

Annie,  
Is there a NRC call re: Japan today? If so, could I join the call?  
Thanks,  
BP

**Brendon Plack**  
Agriculture, Energy, and Environment Analyst  
Republican Policy Committee  
U.S. Senator John Thune, Chairman  
(202) 224-2946  
(202) 224-1235 (Fax)  
[www.rpc.senate.gov](http://www.rpc.senate.gov)

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**From:** Akstulewicz, Brenda  
**To:** Powell, Amy  
**Cc:** Quesenberry, Jeannette  
**Subject:** Media Advisory  
**Date:** Friday, March 18, 2011 1:57:00 PM

---

Amy,

Just spoke w/Eliot. We will send it to you 15 minutes prior to posting.

Brenda

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI 83

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** KUL Radio  
**Date:** Friday, March 18, 2011 3:15:00 PM

---

Ian Crawford

KUL Radio

512-475-0238

What guidance is the NRC giving on the Japan issue

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



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## Riley (OCA), Timothy

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**From:** Decker, David  
**Sent:** Friday, March 18, 2011 5:13 PM  
**To:** Milligan, Patricia  
**Cc:** Riley (OCA), Timothy  
**Subject:** FW: Your Call from Yesterday  
**Attachments:** KI\_states.xls

Trish,

This staffer from Congressman Markey's office is putting together a spreadsheet that shows number of states eligible for KI, and the number of states who've asked for KI. It looks like his spreadsheet is right from info sources from our web-site, and looks okay. He's wondering if the statement on the web-site (last link below) that there are 34 states eligible for KI is still the right number, since he feels there's one state he's missing. Thanks. I won't be in the office next week, so please respond to Tim. Thanks for your help on this.

David

---

**From:** Fischhoff, Ilya [<mailto:Ilya.Fischhoff@mail.house.gov>]  
**Sent:** Friday, March 18, 2011 3:59 PM  
**To:** Decker, David  
**Cc:** Freedhoff, Michal; Joseph, Avenel  
**Subject:** RE: Your Call from Yesterday

Hi David,

I understand you are all very busy, and this request about seismic research is not so time-sensitive, so please hold off on it for now.

I would instead like to ask if you can help determine the states that have and have not requested KI from NRC. I am attaching a spreadsheet with states in one column and yes/no of whether the state has requested KI in the other. I based this spreadsheet on these sources:

First, the NRC's spreadsheet on reactors, which identifies where reactors are located:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/appa.xls>

Second, the NRC's list of states that have requested and/or received KI:

<http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html#current-status>

Third, NRC indicates that it wrote to a total of 34 states w/ eligible residents in 2001, which means that there is one "mystery state."

<http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html>

Are there still 34 states with eligible residents? If so, there appears to be one state I have not identified. Can you please find out if 34 is still the total number of relevant states? If so, can you tell me which is the missing state?

Thanks a lot! Best,

Ilya

---

**From:** Decker, David [<mailto:David.Decker@nrc.gov>]  
**Sent:** Friday, March 18, 2011 12:36 PM

ABI 85

**To:** Fischhoff, Ilya

**Subject:** Your Call from Yesterday

Ilya,

Sorry it's taken me so long to get back to you on your question about how the NRC competes the contract for seismic research. Did I summarize that correctly? If so, I will get it out to the staff to work on. Sorry again for the delay.

David

## Riley (OCA), Timothy

---

**From:** Fischhoff, Ilya [Ilya.Fischhoff@mail.house.gov]  
**Sent:** Friday, March 18, 2011 5:21 PM  
**To:** Decker, David  
**Cc:** Riley (OCA), Timothy  
**Subject:** RE: Your Call from Yesterday

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Hi David,  
Got it, thanks!

As a follow-up that I forgot to ask, I noticed that the NRC refers to 22 states that have "requested and/or received KI". Does NRC know whether these states have all received KI, or could some have requested but not yet received? Thanks again!

Ilya

---

**From:** Decker, David [mailto:David.Decker@nrc.gov]  
**Sent:** Friday, March 18, 2011 5:19 PM  
**To:** Fischhoff, Ilya  
**Subject:** RE: Your Call from Yesterday

Ilya,

The question I sent to our staff was your updated one on KI states and who's requested. I thought I was "replying" to that e-mail, and not the one below on the research question. Just wanted to let you know the staff is working the right question.

David

---

**From:** David Decker  
**Sent:** Friday, March 18, 2011 5:15 PM  
**To:** 'Fischhoff, Ilya'  
**Subject:** RE: Your Call from Yesterday

Ilya,

I have sent your question out to the staff to answer. I won't be in the office next week, so Tim Riley from our office will hopefully be getting the info from the staff and then sending it to you.

David

---

**From:** Fischhoff, Ilya [mailto:Ilya.Fischhoff@mail.house.gov]  
**Sent:** Friday, March 18, 2011 3:59 PM  
**To:** Decker, David  
**Cc:** Freedhoff, Michal; Joseph, Avenel  
**Subject:** RE: Your Call from Yesterday

Hi David,

I understand you are all very busy, and this request about seismic research is not so time-sensitive, so please hold off on it for now.

ABI | 86

I would instead like to ask if you can help determine the states that have and have not requested KI from NRC. I am attaching a spreadsheet with states in one column and yes/no of whether the state has requested KI in the other. I based this spreadsheet on these sources:

First, the NRC's spreadsheet on reactors, which identifies where reactors are located:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/appa.xls>

Second, the NRC's list of states that have requested and/or received KI:

<http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html#current-status>

Third, NRC indicates that it wrote to a total of 34 states w/ eligible residents in 2001, which means that there is one "mystery state."

<http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html>

Are there still 34 states with eligible residents? If so, there appears to be one state I have not identified. Can you please find out if 34 is still the total number of relevant states? If so, can you tell me which is the missing state?

Thanks a lot! Best,

Ilya

---

**From:** Decker, David [<mailto:David.Decker@nrc.gov>]

**Sent:** Friday, March 18, 2011 12:36 PM

**To:** Fischhoff, Ilya

**Subject:** Your Call from Yesterday

Ilya,

Sorry it's taken me so long to get back to you on your question about how the NRC competes the contract for seismic research. Did I summarize that correctly? If so, I will get it out to the staff to work on. Sorry again for the delay.

David

## Riley (OCA), Timothy

---

**From:** Fischhoff, Ilya [Ilya.Fischhoff@mail.house.gov]  
**Sent:** Friday, March 18, 2011 5:28 PM  
**To:** Riley (OCA), Timothy; Decker, David  
**Subject:** RE: Your Call from Yesterday

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Hi Tim,

This is very helpful, thank you!

And just to confirm my understanding, is WV on the list because it is close to a reactor in a neighboring state, even though it does not have an operating reactor itself?

Ilya

---

**From:** Riley (OCA), Timothy [mailto:Timothy.RileyOCA@nrc.gov]  
**Sent:** Friday, March 18, 2011 5:25 PM  
**To:** Decker, David; Fischhoff, Ilya  
**Subject:** RE: Your Call from Yesterday

Ilya,

I was able to track this down and can identify the "mystery state" as the Prairie Island Indian Community. The NRC treats them as a state entity, however in this instance they have decided to allow Minnesota be the KI provider.

I will respond to your second question shortly.

Thank you,

Tim

---

**From:** Fischhoff, Ilya [mailto:Ilya.Fischhoff@mail.house.gov]  
**Sent:** Friday, March 18, 2011 3:59 PM  
**To:** Decker, David  
**Cc:** Freedhoff, Michal; Joseph, Avenel  
**Subject:** RE: Your Call from Yesterday

Hi David,

I understand you are all very busy, and this request about seismic research is not so time-sensitive, so please hold off on it for now.

I would instead like to ask if you can help determine the states that have and have not requested KI from NRC. I am attaching a spreadsheet with states in one column and yes/no of whether the state has requested KI in the other. I based this spreadsheet on these sources:

First, the NRC's spreadsheet on reactors, which identifies where reactors are located:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/appa.xls>

Second, the NRC's list of states that have requested and/or received KI:

<http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html#current-status>

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Third, NRC indicates that it wrote to a total of 34 states w/ eligible residents in 2001, which means that there is one "mystery state."

<http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html>

Are there still 34 states with eligible residents? If so, there appears to be one state I have not identified. Can you please find out if 34 is still the total number of relevant states? If so, can you tell me which is the missing state?

Thanks a lot! Best,

Ilya

---

**From:** Decker, David [mailto:David.Decker@nrc.gov]

**Sent:** Friday, March 18, 2011 12:36 PM

**To:** Fischhoff, Ilya

**Subject:** Your Call from Yesterday

Ilya,

Sorry it's taken me so long to get back to you on your question about how the NRC competes the contract for seismic research. Did I summarize that correctly? If so, I will get it out to the staff to work on. Sorry again for the delay.

David

**Riley (OCA), Timothy**

---

**From:** Fischhoff, Ilya [Ilya.Fischhoff@mail.house.gov]  
**Sent:** Friday, March 18, 2011 5:40 PM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Thanks!

---

**From:** Riley (OCA), Timothy [mailto:Timothy.RileyOCA@nrc.gov]  
**Sent:** Friday, March 18, 2011 5:39 PM  
**To:** Fischhoff, Ilya  
**Subject:** RE: Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

<http://www.nrc.gov/public-involve/public-meetings/webcast-live.html>  
Agenda: <http://www.nrc.gov/reading-rm/doc-collections/commission/agenda/2011/agenda-20110321.pdf>

---

**From:** Fischhoff, Ilya [mailto:Ilya.Fischhoff@mail.house.gov]  
**Sent:** Friday, March 18, 2011 5:36 PM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Hi Tim,  
Can you direct me to a link to the Notice on the NRC website? Thanks!  
Ilya

---

**From:** Riley (OCA), Timothy [mailto:Timothy.RileyOCA@nrc.gov]  
**Sent:** Friday, March 18, 2011 5:34 PM  
**To:** Riley (OCA), Timothy  
**Subject:** Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Please see attached

## Riley (OCA), Timothy

---

**From:** Christensen, Adam (Feinstein) [Adam\_Christensen@feinstein.senate.gov]  
**Sent:** Friday, March 18, 2011 6:48 PM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Thanks Tim

Adam

---

**From:** Riley (OCA), Timothy [mailto:Timothy.RileyOCA@nrc.gov]  
**Sent:** Friday, March 18, 2011 6:19 PM  
**To:** Christensen, Adam (Feinstein)  
**Subject:** RE: Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Adam,  
INPO is the Institute of Nuclear Power Operators <http://www.inpo.info/> it is not affiliated with the NRC.  
I will review your question and provide you with an answer as soon as possible.  
Thank you,  
Tim

---

**From:** Christensen, Adam (Feinstein) [mailto:Adam\_Christensen@feinstein.senate.gov]  
**Sent:** Friday, March 18, 2011 6:01 PM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Hi Tim,

I've heard that there is a body called INPO that coordinates an inventory of equipment within the nuclear industry. In case of an incident... this inventory can be drawn upon to provide rapid response. Do you know more about this? If this exists does NRC have a part in it?

Thanks,  
Adam

---

**From:** Riley (OCA), Timothy [mailto:Timothy.RileyOCA@nrc.gov]  
**Sent:** Friday, March 18, 2011 5:34 PM  
**To:** Riley (OCA), Timothy  
**Subject:** Press Release: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Please see attached

**Riley (OCA), Timothy**

---

**From:** Drogitis, Spiros  
**Sent:** Saturday, March 19, 2011 7:18 AM  
**To:** OCA Distribution  
**Subject:** FW: Report on Meeting between Chairman Jaczko and Japanese Ambassador to the U.S. Ichiro Fujisaki  
**Attachments:** Doc1.docx; bechtel detailed diagram.pdf; Japan Aid.xlsx; Chairmans March 18 Doc.docx

---

**From:** LIA07 Hoc  
**Sent:** Saturday, March 19, 2011 6:25 AM  
**Subject:** Report on Meeting between Chairman Jaczko and Japanese Ambassador to the U.S. Ichiro Fujisaki

Dear Colleagues,

Attached is the report summarizing Chairman Jaczko's meeting with Japanese Ambassador to the U.S. Ichiro Fujisaki, held on March 18, 2011, at 1600 hours EST. We have also included other key documents which provide additional information pertinent to the recent events. Please note this information is "official use only" and is only being shared within the federal family. Please call the Headquarters Operations Office at 301-816-5100 with questions.

International Liaison Team  
U.S. Nuclear Regulatory Commission

AB/90

**Riley (OCA), Timothy**

---

**From:** Droggitis, Spiros  
**Sent:** Saturday, March 19, 2011 9:17 AM  
**To:** Leeds, Eric  
**Cc:** Riley (OCA), Timothy  
**Subject:** Japan link on NRC webpage

<http://www.nrc.gov/>

Eric: We now have a link in the upper right hand corner on Japan. I think it is pretty good and has links to other agencies like DOE and EPA which take you right to their radiation monitoring activities, etc. It may be worth mentioning that at the 3:00 pm call as an avenue for constituents to get basic information.

AB/91

## Riley (OCA), Timothy

---

**From:** LIA12 Hoc  
**Sent:** Saturday, March 19, 2011 10:37 AM  
**To:** OCA Distribution  
**Subject:** FW: RE-UPDATED: Japan EQ Press Guidance  
**Attachments:** 110318 0905 EDT Japan EQ Press Guidance.doc  
  
**Importance:** High

---

**From:** RMTFACTSU\_ELNRC [[mailto:RMTFACTSU\\_ELNRC@ofda.gov](mailto:RMTFACTSU_ELNRC@ofda.gov)]  
**Sent:** Saturday, March 19, 2011 10:30 AM  
**To:** LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; LIA12 Hoc; LIA12 Hoc; Harrington, Holly; Burnell, Scott; McIntyre, David; ET07 Hoc  
**Subject:** RE-UPDATED: Japan EQ Press Guidance  
**Importance:** High

**Subject:** RE-UPDATED: Japan EQ Press Guidance  
**Importance:** High

Re-updated to reflect the request of MoFA that we not mention the "end of rescue."

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The Government of Japan (GoJ) National Police Agency reported 7,348 deaths, 10,947 persons missing, and 2,603 people injured due to the earthquake and tsunami as of 0500 hours EDT on March 19. In addition, the natural disasters damaged or destroyed more than 117,000 buildings and 1,300 roads.

Conditions at the Fukushima Daiichi nuclear power plant remain relatively stable as of 0500 hours EDT March 19, according to U.S. Nuclear Regulatory Commission (NRC) personnel on the RMT. DART and RMT staff facilitated a NRC–Bechtel collaboration to design and procure 12 pumps intended to inject water into spent fuel pools, which are being transported to Japan by the Government of Australia and U.S. Forces-Japan. The NRC plans to host an information-sharing, industry to industry/government agency meeting at 1400 hours EDT today.

### USG ASSISTANCE

The U.S. Agency for International Development is working with agencies across the U.S. Government—including the Departments of State, Defense, and Energy and the Nuclear Regulatory Commission—to assure that we are able to provide necessary assistance to the Government of Japan in the aftermath of the devastating earthquake and tsunami.

The USAID Disaster Assistance Response Team (DART) is in Japan and working to manage the overall U.S. Government response effort in Japan in coordination with the U.S. Embassy in Tokyo.

Nuclear specialists on the DART—including 11 NRC officers, 1 DoE officer, and 1 U.S. Department of Health and Human Services (HHS) officer—are monitoring technical aspects of the nuclear issues at the Fukushima Daiichi nuclear power plant, engaging with GoJ officials on the status of the health impacts of radiation, and providing guidance to the U.S. Embassy in Tokyo on efforts to cool reactors.

DART staff continue to engage at three levels to determine any possible humanitarian needs in Japan—nationally through Japan’s Ministry of Foreign Affairs (MoFA) and other GoJ contacts, locally at the prefecture level and in coordination with U.S. Forces-Japan, and through Japanese civil society organizations, including Japan Platform (JP).

On a March 18 field assessment to Miyagi Prefecture, DART staff observed that assistance is flowing in an organized manner from the national level to the evacuation center level. However, concerns that fuel shortages may limit the transport of existing relief supplies remain. To address fuel shortages, the GoJ is working to redirect 38,000 kiloliters of fuel per day—the average daily demand before the tsunami—from oil refineries in Hokkaido and western Japan. In addition, USFJ continues to coordinate with the GoJ to ensure the availability of fuel without negatively impacting the domestic fuel economy.

The DART is working to vet requests for assistance from local prefectures and convey them to USFJ for coordination with JSDF for transportation and onward distribution. The DART notes that sufficient relief commodities are available in-country and the GoJ has not requested in-kind contributions.

On March 13, USAID’s Urban Search and Rescue (USAR) teams from Fairfax County and Los Angeles County, comprising 144 personnel and 12 live search canines, arrived in Misawa, Japan and were immediately dispatched to Ofunato in Iwate prefecture.

In coordination with the Government of Japan (GoJ), the National Japanese USAR teams and our international partners, the U.S. teams made a thorough search of their assigned locations. The GoJ has indicated that the U.S. teams have completed the missions asked of them.

The U.S. USAR teams are now returning to the United States, and they should arrive on Saturday afternoon in LA and just after midnight in Fairfax.

Prior to their departure, the U.S. USAR teams transferred nearly \$145,000 in equipment to the Ofunato fire department to assist with local recovery efforts. The equipment includes 4 zodiac boat kits—containing boats, motor, fuel tanks, and paddles—16 kerosene heaters, 160 cots, and 160 sleeping bags.

For individuals and businesses who wish to help those in Japan, we encourage making a cash donation to a reputable organization working in the affected area. Nothing will get there faster or help more at this time. Visit [www.usaid.gov](http://www.usaid.gov) for more info or email [japanhelp@ofda.gov](mailto:japanhelp@ofda.gov).

**From:** [Akstulewicz, Brenda](#)  
**To:** [Courret, Ivonne](#)  
**Date:** Saturday, March 19, 2011 11:32:00 AM  
**Attachments:** [11-053.attchmt.docx](#)  
[11-053.attchmt.pdf](#)

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**Brenda Akstulewicz**  
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AB/ 93

# NRC frequently asked questions related to the March 11, 2011 Japanese Earthquake and Tsunami

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**1) Can an earthquake and tsunami as large as happened in Japan also happen here?**

This earthquake occurred on a “subduction zone”, which is the type of tectonic region that produces earthquakes of the largest magnitude. A subduction zone is a tectonic plate boundary where one tectonic plate is pushed under another plate. Subduction zone earthquakes are also required to produce the kind of massive tsunami seen in Japan. In the continental US, the only subduction zone is the Cascadia subduction zone which lies off the coast of northern California, Oregon and Washington. So, a continental earthquake and tsunami as large as in Japan could only happen there. The only nuclear plant near the Cascadia subduction zone is the Columbia Generating Station. This plant is located a large distance from the coast (approximately 225 miles) and the subduction zone (approximately 300 miles), so the ground motions estimated at the plant are far lower than those seen at the Fukushima plants. This distance also precludes the possibility of a tsunami affecting the plant. Outside of the Cascadia subduction zone, earthquakes are not expected to exceed a magnitude of approximately 8. Magnitude is measured on a log scale and so a magnitude 9 earthquake is ten times larger than a magnitude 8 earthquake.

**2) Did the Japanese underestimate the size of the maximum credible earthquake and tsunami that could affect the plants?**

The magnitude of the earthquake was somewhat greater than was expected for that part of the subduction zone. However, the Japanese nuclear plants were recently reassessed using ground motion levels similar to those that are believed to have occurred at the sites. The ground motions against which the Japanese nuclear plants were reviewed were expected to result from earthquakes that were smaller, but were much closer to the sites. The NRC does not currently have information on the maximum tsunami height that was expected at the sites.

**3) How high was the tsunami at the Fukushima nuclear plants?**

The tsunami modeling team at the National Oceanic and Atmospheric Administration’s Pacific Marine Environmental Lab have estimated the wave height just offshore to be approximately 8 meters in height at Fukushima Daiichi and approximately 7 meters in Fukushima Daini. This is based on recordings from NOAA’s Deep-ocean Assessment and Reporting of Tsunamis (DART) buoys and a high resolution numerical model developed for the tsunami warning system. If plant recordings exist they were not yet provided to the NRC.

**4) Was the damage to the Japanese nuclear plants mostly from the earthquake or the tsunami?**

Because this event happened in Japan, it is hard for NRC staff to make the assessment necessary to understand exactly what happened at this time. In the nuclear plants there may have been some damage from the shaking, and the earthquake caused the loss of offsite power. However, the tsunami appears to have played a key role in the loss of other power sources at the site producing station blackout, which is a critical factor in the ongoing problems.

**5) Have any lessons for US nuclear plants been identified?**

The NRC is in the process of following and reviewing the event in real time. This will undoubtedly lead to the identification of issues that warrant further study. However, a complete

understanding of lessons learned will require more information than is currently available to NRC staff.

**6) Was there any damage to US reactors from either the earthquake or the resulting tsunami?**

No.

**7) How many US reactors are located in active earthquake zones?**

Although we often think of the US as having “active” and “non-active” earthquake zones, earthquakes can actually happen almost anywhere. Seismologists typically separate the US into low, moderate, and high seismicity zones. The NRC requires that every nuclear plant be designed for site-specific ground motions that are appropriate for their locations. In addition, the NRC has specified a minimum ground motion level to which nuclear plants must be designed.

**8) What level of earthquake hazard are the US reactors designed for?**

Each reactor is designed for a different ground motion that is determined on a site-specific basis. The existing nuclear plants were designed on a “deterministic” or “scenario earthquake” basis that accounted for the largest earthquakes expected in the area around the plant, without consideration of the likelihood of the earthquakes considered. New reactors are designed using probabilistic techniques that characterize both the ground motion levels and uncertainty at the proposed site. These probabilistic techniques account for the ground motions that may result from all potential seismic sources in the region around the site. Technically speaking, this is the ground motion with an annual frequency of occurrence of  $1 \times 10^{-4}$ /year, but this can be thought of as the ground motion that occurs every 10,000 years on average. One important aspect is that probabilistic hazard and risk-assessment techniques account for beyond-design basis events. NRC’s Generic Issue 199 (GI-199) project is using the latest probabilistic techniques used for new nuclear plants to review the safety of the existing plants. [see questions 16 to 21 for more information about GI-199]

**9) What magnitude earthquake are currently operating US nuclear plants designed to?**

Ground motion is a function of both the magnitude of an earthquake and the distance from the fault to the site. Nuclear plants, and in fact all engineered structures, are actually designed based on ground motion levels, not earthquake magnitudes. The existing nuclear plants were designed based on a “deterministic” or “scenario earthquake” basis that accounted for the largest earthquakes expected in the area around the plant. A margin is further added to the predicted ground motions to provide added robustness.

**10) Have events in Japan changed our perception of earthquake risk to the nuclear plants in the US?**

The NRC continues to determine that US nuclear plants are safe. This does not change the NRC’s perception of earthquake hazard (i.e., ground motion levels) at US nuclear plants. It is too early to tell what the lessons from this earthquake are. The NRC will look closely at all aspects of response of the plants to the earthquake and tsunami to determine if any actions need to be taken in US nuclear plants and if any changes are necessary to NRC regulations.

**11) Can significant damage to a nuclear plant like we see in Japan happen in the US due to an earthquake? Are the Japanese nuclear plants similar to US nuclear plants?**

All US nuclear plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those nuclear plants that are located within areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even rare and extreme seismic and tsunami events. In addition to the design of the plants, significant effort goes into emergency response planning and accident management. This approach is called defense-in-depth.

The Japanese facilities are similar in design to some US facilities. However, the NRC has required modifications to the plants since they were built, including design changes to control hydrogen and pressure in the containment. The NRC has also required plants to have additional equipment and measures to mitigate damage stemming from large fires and explosions from a beyond-design-basis event. The measures include providing core and spent fuel pool cooling and an additional means to power other equipment on site.

**12) What is the likelihood of the design basis or “SSE” ground motions being exceeded over the life of a nuclear plant?**

The ground motions that are used as seismic design bases at US nuclear plants are called the Safe Shutdown Earthquake ground motion (SSE). In the mid to late 1990s, the NRC staff reviewed the potential for ground motions beyond the design basis as part of the Individual Plant Examination of External Events (IPEEE). From this review, the staff determined that seismic designs of operating nuclear plants in the US have adequate safety margins for withstanding earthquakes. Currently, the NRC is in the process of conducting GI-199 to again assess the resistance of US nuclear plants to earthquakes. Based on NRC’s analyses to date, the probability of ground motions exceeding the SSE for the plants in the Central and Eastern United States is less than 2%, with values ranging from a low of 0.1% to a high of 6%.

It is important to remember that structures, systems and components are required to have “adequate margin,” meaning that they must continue be able withstand shaking levels that are above the plant’s design basis.

**13) Which reactors are along coastal areas that could be affected by a tsunami?**

Many nuclear plants are located in coastal areas that could potentially be affected by a tsunami. Two nuclear plants, Diablo Canyon and San Onofre, are on the Pacific Coast, which is known to have a tsunami hazard. Two nuclear plants on the Gulf Coast, South Texas and Crystal River, could also be affected by tsunami. There are many nuclear plants on the Atlantic Coast or on rivers that may be affected by a tidal bore resulting from a tsunami. These include St. Lucie, Turkey Point, Brunswick, Oyster Creek, Millstone, Pilgrim, Seabrook, Calvert Cliffs, Salem/Hope Creek, and Surry. Tsunami on the Gulf and Atlantic Coasts occur, but are very rare. Generally the flooding anticipated from hurricane storm surge exceeds the flooding expected from a tsunami for nuclear plants on the Atlantic and Gulf Coast. Regardless, all nuclear plants are designed to withstand a tsunami.

#### **14) What is magnitude anyway? What is the Richter Scale? What is intensity?**

An earthquake's magnitude is a measure of the strength of the earthquake as determined from seismographic observations. Magnitude is essentially an objective, quantitative measure of the size of an earthquake. The magnitude can be expressed in various ways based on seismographic records (e.g., Richter Local Magnitude, Surface Wave Magnitude, Body Wave Magnitude, and Moment Magnitude). Currently, the most commonly used magnitude measurement is the Moment Magnitude,  $M_w$ , which is based on the strength of the rock that ruptured, the area of the fault that ruptured, and the average amount of slip. Moment magnitude is, therefore, a direct measure of the energy released during an earthquake. Because of the logarithmic basis of the scale, each whole number increase in magnitude

represents a tenfold increase in measured amplitude; as an estimate of energy, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value.

The Richter magnitude scale was developed in 1935 by Charles F. Richter of the California Institute of Technology and was based on the behavior of a specific seismograph that was manufactured at that time. The instruments are no longer in use and the magnitude scale is, therefore, no longer used in the technical community. However, the Richter Scale is a term that is so commonly used by the public that scientists generally just answer questions about "Richter" magnitude by substituting moment magnitude without correcting the misunderstanding.

The intensity of an earthquake is a qualitative assessment of effects of the earthquake at a particular location. The intensity assigned is based on observed effects on humans, on human-built structures, and on the earth's surface at a particular location. The most commonly used scale in the US is the Modified Mercalli Intensity (MMI) scale, which has values ranging from I to XII in the order of severity. MMI of I indicates an earthquake that was not felt except by a very few, whereas MMI of XII indicates total damage of all works of construction, either partially or completely. While an earthquake has only one magnitude, intensity depends on the effects at each particular location.

#### **15) How do magnitude and ground motion relate to each other?**

The ground motion experienced at a particular location is a function of the magnitude of the earthquake, the distance from the fault to the location of interest, and other elements such as the geologic materials through which the waves pass.

#### **16) What is Generic Issue 199 about?**

GI-199 investigates the safety and risk implications of updated earthquake-related data and models. These data and models suggest that the probability for earthquake ground motion above the seismic design basis for some nuclear plants in the Central and Eastern United States, although is still low, is larger than previous estimates.

#### **17) Does GI-199 provide rankings of US nuclear plants in terms of safety?**

The NRC does not rank nuclear plants by seismic risk. The objective of the GI-199 Safety/Risk Assessment was to perform a conservative, screening-level assessment to evaluate if further investigations of seismic safety for operating reactors in the central and eastern US (CEUS) are warranted, consistent with NRC directives. The results of the GI-199 safety risk assessment

should not be interpreted as definitive estimates of plant-specific seismic risk because some analyses were very conservative making the calculated risk higher than in reality. The nature of the information used (both seismic hazard data and plant-level fragility information) make these estimates useful only as a screening tool.

**18) What are the current findings of GI-199?**

Currently operating nuclear plants in the US remain safe, with no need for immediate action. This determination is based on NRC staff reviews of updated seismic hazard information and the conclusions of the first stage of GI-199. Existing nuclear plants were designed with considerable margin to be able to withstand the ground motions from the “deterministic” or “scenario earthquake” that accounted for the largest earthquakes expected in the area around the plant. The results of the GI-199 assessment demonstrate that the probability of exceeding the design basis ground motion may have increased at some sites, but only by a relatively small amount. In addition, the probabilities of seismic core damage are lower than the guidelines for taking immediate action. Although there is not an immediate safety concern, the NRC is focused on assuring safety during even very rare and extreme events. Therefore, the NRC has determined that assessment of updated seismic hazards and plant performance should continue.

**19) What do you mean by “increased estimates of seismic hazards” at nuclear plant sites?**

*Seismic hazard* (earthquake hazard) represents the chance (or probability) that a specific level of ground motion could be observed or exceeded at a given location. Our estimates of seismic hazard at some Central and Eastern United States locations have changed based on results from recent research, indicating that earthquakes occurred more often in some locations than previously estimated. Our estimates of seismic hazard have also changed because the models used to predict the level of ground motion, as caused by a specific magnitude earthquake at a certain distance from a site, changed. The increased estimates of seismic hazard at some locations in the Central and Eastern United States were discussed in a memorandum to the Commission, dated July 26, 2006. (The memorandum is available in the NRC Agencywide Documents Access and Management System [ADAMS] under Accession No. ML052360044).

**20) Does the Seismic Core Damage represent a measurement of the risk of radiation release or only the risk of core damage (not accounting for additional containment)?**

Seismic core damage frequency is the probability of damage to the core resulting from a seismic initiating event. It does not imply either a meltdown or the loss of containment, which would be required for radiological release to occur. The likelihood of radiation release is far lower.

**21) Where can I get current information about Generic Issue 199?**

The public NRC Generic Issues Program (GIP) website (<http://www.nrc.gov/about-nrc/regulatory/gen-issues.html>) contains program information and documents, background and historical information, generic issue status information, and links to related programs. The latest Generic Issue Management Control System quarterly report, which has regularly updated GI-199 information, is publicly available at <http://www.nrc.gov/reading-rm/doc-collections/generic-issues/quarterly/index.html>. Additionally, the US Geological Survey provides data and results that are publicly available at <http://earthquake.usgs.gov/hazards/products/conterminous/2008/>.

**22) Could an accident sequence like the one at Japan's Fukushima Daiichi nuclear plants happen in the US?**

It is difficult to answer this question until we have a better understanding of the precise problems and conditions that faced the operators at Fukushima Daiichi. We do know, however, that Fukushima Daiichi Units 1-3 lost all offsite power and emergency diesel generators. This situation is called "station blackout." US nuclear power plants are designed to cope with a station blackout event that involves a loss of offsite power and onsite emergency power. The Nuclear Regulatory Commission's detailed regulations address this scenario. US nuclear plants are required to conduct a "coping" assessment and develop a strategy to demonstrate to the NRC that they could maintain the plant in a safe condition during a station blackout scenario. These assessments, proposed modifications to the plant, and operating procedures were reviewed and approved by the NRC. Several plants added additional AC power sources to comply with this regulation.

In addition, US nuclear plant designs and operating practices since the terrorist events of September 11, 2001, are designed to mitigate severe accident scenarios such as aircraft impact, which include the complete loss of offsite power and all on-site emergency power sources.

US nuclear plant designs include consideration of seismic events and tsunamis'. It is important not to extrapolate earthquake and tsunami data from one location of the world to another when evaluating these natural hazards. These catastrophic natural events are very region- and location-specific, based on tectonic and geological fault line locations.

**From:** Akstulewicz, Brenda  
**To:** [gpuglisi@american.edu](mailto:gpuglisi@american.edu)  
**Subject:** Eliot's Speaking Engagement Monday  
**Date:** Saturday, March 19, 2011 11:37:00 AM

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Hello Gemma,

I hope this note finds you well.

Eliot has asked me to contact you to find out the following for Monday:

- When do you need him
- How long
- Building name and room number
- What is the best way to get in touch with you on Monday

There is a chance he may need to cancel his speaking engagement on Monday. He is hoping this not the case, but given the current events in Japan he may need have urgent NRC business to attend to.

As soon as he knows one way or the other, Eliot or I will get in touch with you.

Thanks,  
Brenda

**Brenda Akstulewicz**  
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ABI/94

## Riley (OCA), Timothy

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**From:** Riley (OCA), Timothy  
**Sent:** Saturday, March 19, 2011 5:29 PM  
**To:** Powell, Amy  
**Subject:** RE: When/if you have time

Amy,

No worries today. USAID call went well, one question for NRC: Is it safe to travel to Sendai (to evacuate)? No change to PARs, eg Sendai is outside of recommended EZ, so we have no recommendations concerning Sendai. No USAID call tomorrow.

Today's OCA call was fine -after the frustration of Verizon not having a slot reserved for us. (They wouldn't let me add weekend conf calls without changing call-in number/passcode, so I made alternate arrangements through Ops Center.)

Here are my notes from the call (showing as much detail as possible in case it helps scope future briefings)

I made public announcements regarding: Monday's public meeting, new FAQ's available on NRC.gov

Bruce Boger provided background of NRC response activities: 10 personnel in Tokyo. 1 returning to US, 1 en-route to substitute. Tepco has connected some power lines to some units and is working towards starting up plant cooling equipment. Japan has declared Ministry of Defense has lead in response. An event notice was issued by INPO to industry regarding reviews that should be conducted at plants; NRC has issued an information notice to licensees to inform them of forthcoming follow-up inspections. He then went through a unit by unit status update (30 seconds total).

Q&A:

Michal Freedhoff: What can you tell us about overflight info and the radiation readings at the site?

Don Cook: Most current data is 18 hours old; flights run every ~12 hours, but processing/communication lags are present. Data shows radiation elevated in the NW quadrant from the plant extending outward 30km (~19miles).

Dos rates are 20-40 millirem/hour in that quadrant.

MF: Is it possible to determine which reactor is emitting which radiation type or volume? What about dose rates at plant?

DC: Overflight info can't determine which reactor is emitting: overflights are not occurring directly over reactors (to limit US personnel exposure). NRC doesn't have current readings of dose rates at plant. Tepco reported readings 3 days ago, they were x at Unit 3, y at Unit 4.

Mary Frances Repko: Industry reported to be reconnecting power to Units 1 & 2. What are the implications?

Bruce Boger: Connecting electricity may allow use of cooling equipment ...and prevent further damage.

MR: Will these plants be used again?

BB: In my personal opinion, no.

MF: What is the difference b/n using sea water injection and fresh water cooling systems?

BB: Some concerns have been raised because sea water is corrosive, including to the pumps performing the seawater injection. May be corrosive to equipment, but cooling is the priority.

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

From: Powell, Amy  
Sent: Saturday, March 19, 2011 4:44 PM  
To: Riley (OCA), Timothy  
Subject: When/if you have time

Today's call must have been a hit - Michal applauded and another staffer asked for a transcript (told him we were not transcribing). When you (if you) get a chance, would you hit the highlights for me?

Thx - hanging in there?

AB/95

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

Sent from my Blackberry

## Riley (OCA), Timothy

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**From:** Riley (OCA), Timothy  
**Sent:** Saturday, March 19, 2011 7:43 PM  
**To:** LIA12 Hoc  
**Subject:** FW: USAID 2pm Call cancelled for 3/20/11

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**From:** Riley (OCA), Timothy  
**Sent:** Saturday, March 19, 2011 5:34 PM  
**To:** Schmidt, Rebecca; Shane, Raeann  
**Subject:** USAID 2pm Call cancelled for 3/20/11

Today's USAID call was again sparsely attended and without significant updates. Jeff Lynch (the Liaison Team leader on duty) served as NRC rep on the call.

We presented that:

- NRC members continue operating in coordination w/USAID out of Tokyo
- NRC will hold public meeting at Rockville, HQ on Monday regarding NRC response to ongoing nuclear event in Japan. Event info @ nrc.gov
- No change to Protective Action Recommendations

One question to NRC in Q&A: Is it safe to travel to Sendai, constituent trying to evacuate, afraid of radiation in Sendai. Jeff Temple reiterated that there were no updates to the Protective Action Recommendations and that Sendai is outside of the Evacuation Zone.

No call on Sunday, given light attendance and lack of significant updates.

## Riley (OCA), Timothy

---

**From:** Schmidt, Rebecca  
**Sent:** Sunday, March 20, 2011 11:14 AM  
**To:** Pederson, Cynthia  
**Cc:** Riley (OCA), Timothy; Powell, Amy; Droggitis, Spiros  
**Subject:** FW: Invitation to a Forum on March 25th Chicago, IL  
**Attachments:** image001.png; image002.png; image003.png; image004.png; Invitation Letter Jaczko.pdf

Here you go. We will follow up when we know who the witnesses will be. Thanks for volunteering!

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**From:** Riley (OCA), Timothy  
**Sent:** Friday, March 18, 2011 8:30 PM  
**To:** Schmidt, Rebecca  
**Cc:** Powell, Amy  
**Subject:** FW: Invitation to a Forum on March 25th Chicago, IL

Becky,  
Attached is the hardcopy of invitation to attend IL Forum from Senators Durbin and Kirk.

---

**From:** Hunt, Jasmine (Durbin) [[mailto:Jasmine\\_Hunt@durbin.senate.gov](mailto:Jasmine_Hunt@durbin.senate.gov)]  
**Sent:** Friday, March 18, 2011 8:28 PM  
**To:** Riley (OCA), Timothy; Powell, Amy  
**Cc:** Neimeyer, Sarah (Durbin); Walter, Sarah (Kirk)  
**Subject:** Invitation to a Forum on March 25th Chicago, IL

Hello,

Senators Durbin and Kirk would like to invite Chairman Jaczko to a public forum on Friday, March 25<sup>th</sup> in Chicago, IL to discuss the safety of the nuclear power plants in Illinois. They would like to hear his thoughts on how U.S. nuclear standards differ from those in Japan. The forum will be in a 'hearing' style format with questions for the Senators following a short opening statement from all the participants on the panel. Please let me know if you will be able to attend.

Bests,  
Jasmine Hunt

Jasmine N. Hunt

Office of Senator Richard J. Durbin  
Assistant Majority Leader  
711 Senate Hart Office Building  
[jasmine\\_hunt@durbin.senate.gov](mailto:jasmine_hunt@durbin.senate.gov)  
202.224.2152

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ABI 97

**Riley (OCA), Timothy**

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**From:** Joseph, Avenel [Avenel.Joseph@mail.house.gov]  
**Sent:** Sunday, March 20, 2011 4:08 PM  
**To:** Powell, Amy; Weil, Jenny; Riley (OCA), Timothy; Freedhoff, Michal; Fischhoff, Ilya  
**Subject:** Release protection guidelines

Hi all,  
Today on the NRC 3pm call there was talk of setting up a meeting or conference call to explain further the model assumptions made for the development of NRC's radiation release protection guidelines.  
I wasn't able to chime in on time, but our office is also interested in attending, so please keep us in the planning loop.

Thanks,

AJ

Avenel Joseph, M.S., Ph.D.  
Office of Congressman Edward J. Markey  
2108 Rayburn House Office Building  
202-225-2836

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Sent via BlackBerry

AB/98

## Riley (OCA), Timothy

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**From:** Shane, Raeann  
**Sent:** Sunday, March 20, 2011 5:43 PM  
**To:** OCA Distribution  
**Subject:** Sunday 3/20 3:00 Congressional Staff briefing summary

Today's conference call went well. Eric Leeds took the lead and covered the reactor information and Don Cool participated for the radiation/dose modeling information.

We had staffers from:

Congressman Markey – Michal and Avenel  
Congressman Hoyer – Mary Frances  
EPW majority and minority – Annie, but I'm not sure who the majority person was, they did not ask any questions and I missed the beginning of the call  
Lieberman – Chris Griffin  
One other office that I did not get.

There was some confusion over the call in phone number so I was trying to find the call in number when Eric realized he had it and began the call without me at 3:00.

Summary of Questions:

Lieberman's office asked:

Q: Is water reaching the spent fuel pool? A: we are not sure

Q: Is our 50 mile evacuation recommendation still good? A: Yes, we are staying with it for now until we get better dose numbers.

Q: Is Japan still at 20km? A: Yes.

Q: Can we get a follow-up briefing on how the dose modeling is done. A: OCA will work to set up a phone call or briefing. (Annie, Chris Griffin interested and Chris thinks Jonathan Epstein would want to be on it too)

EPW/Inhofe:

Q: Do they have instrumentation in the SFP that could work if they get power? A: We are not sure what condition it is in. It probably has been damaged by the explosions.

Q: Can you talk about the scenarios you put out with the press release? A: We had to make assumptions, the calculations are conservative. You have to plan for what could happen, not what is happening currently. We are not getting information from Japan that would let us do better modeling.

Q: How could you get 100% release of activity in the SFP? A: You would not. Some would remain in the pool. Our models take that into account. If we had used the assumption that 100% was released the numbers we put out would have been much much higher.

Markey:

Q: Why is it taking so long to get the power going again? A: They have multiple challenges including the damage from the earthquake/tsunami and the high dose rates in the plant.

Q: Would you be getting better information if this were happening in the US? A: Yes, we practice this with our licensees and the states all the time. The DOE and states would be taking measurements and the licensee would be doing surveys. We know TEPCO is doing surveys but we do not have the information. Q: Why won't they give it to you? A: We keep asking.

Q: How are the ariel measurements taken? A: They are flying in grids. If they get to an area with a dose rate of 0.5 R/hr they have to turn back. They have not been flying over the plant because the dose is too high. They are flying North, South, and West of the plant.

Hoyer:

Q: Can you talk more about the Industry Consortium? How will this be different? A: They will have better access to Ministry of Defense and it can be a better coordinated response.

Q: Is there precedence for this with other natural disasters? A: We are not sure.

1 IOU. They want a follow-up briefing on the radiation/dose modeling. Don Cool could do it or potentially Cyndi Jones, Trish or Vince Holahan.

**Riley (OCA), Timothy**

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**From:** Droggitis, Spiros  
**Sent:** Monday, March 21, 2011 12:35 PM  
**To:** OCA Distribution  
**Subject:** FW: Prepared Remarks for Commission Meeting Monday, March 21, 2011  
**Attachments:** 11-054.docx

Just sent this out to Japan distribution

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**From:** Droggitis, Spiros  
**Sent:** Monday, March 21, 2011 12:33 PM  
**To:** Droggitis, Spiros  
**Subject:** Prepared Remarks for Commission Meeting Monday, March 21, 2011

**PREPARED REMARKS FOR COMMISSION MEETING  
MONDAY, MARCH 21, 2011**

Good morning. The Commission meets today to discuss the tragic events in Japan and consider possible actions we may take to verify the safety of the nuclear facilities that we regulate in the United States. This meeting will—without a doubt—be one of the most heavily watched meetings in the history of this agency.

People across the country and around the world who have been touched by the magnitude and scale of this disaster are closely following the events in Japan, and the repercussions in this country and in many other countries. I would first like to offer my condolences to all those who have been affected by the earthquake and tsunami in Japan. Our hearts go out to all who have been dealing with the aftermath of these natural disasters, and we are mindful of the long and difficult road they will face in recovering. We know that the people of Japan are resilient and strong, and we have every confidence that they will come through this difficult time and move forward, with resolve, to rebuild their vibrant country.

I believe I speak for all Americans when I say that we stand together with the people of Japan at this most difficult and challenging time. The NRC is a relatively small agency, with approximately 4000 staff, but we play a critical role in protecting the American people and the environment. We have inspectors who work full-time at every nuclear plant in the country, and we are proud to have world-class scientists, engineers and professionals representing nearly every discipline.

Since Friday, March 11, when the earthquake and tsunami struck, the NRC's headquarters Operations Center has been operating on a 24-hour basis to monitor and analyze events at nuclear power plants in Japan. At the request of the Japanese government, and through the United States Agency for International Development (USAID), the NRC sent a team of its technical experts to provide on-the-ground support, and we have been in continual contact with them. And, within the United States, the NRC has been working closely with other Federal agencies as part of our government's response to the situation.

We have a responsibility 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 the resulting nuclear emergency in Japan. Beginning to examine all available

information is an essential part of our effort to analyze the event and understand its impact on Japan and implications for the United States. Our focus is always on keeping plants and radioactive materials in this country safe and secure.

As this immediate crisis in Japan comes to an end, we will look at any information we can gain from the event and see if there are changes we need to make, to further protect the public. 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.

On behalf of the Commission, I want to thank all of our staff for maintaining their focus on our essential safety and security mission throughout these difficult days. I want to acknowledge their tireless efforts and their critical contributions to the U.S. response to assist Japan. In spite of the evolving situation, the long hours, and the intensity of efforts over the past week, staff has approached their responsibilities with dedication, determination and professionalism, and I am incredibly proud of their efforts.

The American people also can be proud of the commitment and dedication within the Federal workforce, which is exemplified by our staff every day. Before we begin our meeting with Mr. Borchardt's presentation, would any of my fellow Commissioners like to make opening comments?

###

News releases are available through a free *listserv* subscription at the following Web address: <http://www.nrc.gov/public-involve/listserver.html>. The NRC homepage at [www.nrc.gov](http://www.nrc.gov) also offers a SUBSCRIBE link. E-mail notifications are sent to subscribers when news releases are posted to NRC's website.

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Info on Briefing - ABC  
**Date:** Monday, March 21, 2011 12:37:00 PM

---

Chris Brouwer  
ABC World News Tonight  
212-456-3698  
[Christine.c.brouwer@abc.com](mailto:Christine.c.brouwer@abc.com)  
Bill's comments at briefing this morning.

**Brenda Akstulewicz**  
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AB/101.

**From:** [Akstulewicz, Brenda](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** Info Request - Wall Street Journal  
**Date:** Monday, March 21, 2011 3:19:00 PM

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Madeline Farbman

WSJ

212-416-3773

[Madeline.farbman@wsj.com](mailto:Madeline.farbman@wsj.com)

Info on converting radiation measurements.

**Brenda Akstulewicz**

Administrative Assistant

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301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/102

## **Riley (OCA), Timothy**

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**From:** Droggitis, Spiros  
**Sent:** Monday, March 21, 2011 3:27 PM  
**To:** Riley (OCA), Timothy  
**Subject:** Re: Daily calls

Is Don on? He could answer these radiation questions.

---

**From:** Riley (OCA), Timothy  
**To:** Droggitis, Spiros  
**Sent:** Mon Mar 21 14:56:30 2011  
**Subject:** RE: Daily calls

Going back to original plan: Don Cool will be available via PMT office. I will call in as participant and monitor call. I will run next door (I'm in EOC) if Brian or other leaders call for Don to weigh in on something.

---

**From:** Droggitis, Spiros  
**Sent:** Monday, March 21, 2011 2:47 PM  
**To:** Riley (OCA), Timothy; Schmidt, Rebecca  
**Cc:** Shane, Raeann  
**Subject:** RE: Daily calls

Multiple leaders are allowed. Please call in as leader. Brian Sheron will lead the briefing and Raeann and I will call from here.

---

**From:** Riley (OCA), Timothy  
**Sent:** Monday, March 21, 2011 2:45 PM  
**To:** Schmidt, Rebecca  
**Cc:** Droggitis, Spiros  
**Subject:** Daily calls

Becky,

I took the USAID call at 2pm and, as a result, missed the 2pm TA brief on the Public Website, if it occurred as planned. Amy had asked that I attend; I'll reach out to OIS to try to get an idea of what was discussed today.

Separately, Don Cool and I will join today's 3pm call from his office (TWFN). Shall we call in to the leader line, or the participant line? I don't know if multiple leaders are allowed...

Tim

AB/103

**Riley (OCA), Timothy**

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**From:** Shane, Raeann  
**Sent:** Monday, March 21, 2011 4:30 PM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: distribution list updates?

I have not had any new requests to be added

---

**From:** Riley (OCA), Timothy  
**Sent:** Monday, March 21, 2011 3:57 PM  
**To:** Powell, Amy; Decker, David; Droggitis, Spiros; Dacus, Eugene; Weil, Jenny; Schmidt, Rebecca; Shane, Raeann  
**Subject:** distribution list updates?

Please send me additional contact information for the Japan distribution list. I will update it shortly and send it out.

AS/ 104

**Riley (OCA), Timothy**

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**From:** Riley (OCA), Timothy  
**Sent:** Monday, March 21, 2011 5:15 PM  
**To:** Wittick, Brian  
**Subject:** Staff support for briefing on Quad Cities

Brian,

Can I get staff assistance to brief staff from the office of Congressman Schilling (R-IL)? The Representative will not be present, and they are not asking for Japan-related information (directly). The staffer would like a briefing on NRC, how we regulate, and an overview of Quad Cities 1&2 (issues, age, spent fuel storage) etc.

If at all possible, they would like the briefing late this week. I understand this will be difficult to accommodate, please let me know what would be possible.

Thank you,

Tim

AS/105

**Riley (OCA), Timothy**

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**From:** Riley (OCA), Timothy  
**Sent:** Monday, March 21, 2011 6:50 PM  
**To:** marty.gelfand@mail.house.gov  
**Subject:** NRC: Update regarding your request to view Emergency Plans for Davis-Besse and Perry

Marty,

As I discussed with you earlier today, I have communicated your request (to review the Emergency Preparedness Plans for Davis-Besse and Perry nuclear power plants) to FEMA Region V, asking that they contact your office. FEMA is responsible for determining the adequacy of offsite plans and preparedness, so I believe they are best able to address your concerns. Please let me know if you are not contacted by Wednesday.

Separately, I have also spoken Carol O'Claire of the Ohio Department of Health – department of Radiation Protection. She may be able to provide the documents for your review, if FEMA can't. Please let me know if you have any questions,

Tim Riley

AB/ 106

## **Riley (OCA), Timothy**

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**From:** Droggitis, Spiros  
**Sent:** Tuesday, March 22, 2011 9:26 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Answers to Congressional Staff Questions

Thanks. Becky is going to consult with Eliot about this. I think she would like to get out of it. Stay tuned.

---

**From:** Riley (OCA), Timothy  
**Sent:** Tuesday, March 22, 2011 9:19 AM  
**To:** Droggitis, Spiros  
**Subject:** RE: Answers to Congressional Staff Questions

Holly asked how we were staffing the EOC. I think she's just trying to match our plan and not get pulled into offering more staffing than necessary.

---

**From:** Droggitis, Spiros  
**Sent:** Tuesday, March 22, 2011 9:18 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Answers to Congressional Staff Questions

Who's asking from OPA? Becky wants to know.

---

**From:** Riley (OCA), Timothy  
**Sent:** Tuesday, March 22, 2011 9:11 AM  
**To:** Droggitis, Spiros  
**Subject:** RE: Answers to Congressional Staff Questions

Spiros,

Do you know what the manning requirements will be for EOC past Friday? I'm asking on behalf of OPA, who is trying to put together a staffing plan. Do you know if there are any plans to decrease staffing?

LT Team Leader said he has seen projections for staffing 24/7 through mid-April. Is that worst-case?

---

**From:** Droggitis, Spiros  
**Sent:** Tuesday, March 22, 2011 8:07 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Answers to Congressional Staff Questions

I'll check with Raeann. How are things over there?

---

**From:** Riley (OCA), Timothy  
**Sent:** Tuesday, March 22, 2011 8:03 AM  
**To:** Droggitis, Spiros  
**Subject:** RE: Answers to Congressional Staff Questions

I think I was running to find Don when he asked his questions. Perhaps it was Ilya Fischhoff?

---

**From:** Droggitis, Spiros  
**Sent:** Tuesday, March 22, 2011 8:02 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: Answers to Congressional Staff Questions

Do you remember the young man from Markey's office? I think he asked about Sacramento.

---

**From:** Riley (OCA), Timothy  
**Sent:** Tuesday, March 22, 2011 7:56 AM  
**To:** Droggitis, Spiros  
**Subject:** RE: Answers to Congressional Staff Questions

Jaime Shimek (Sen. Murray's office) asked about the WA detection info. (Sensors at the Pacific Northwest National Labs(?) had detected faint traces or radioactivity.  
I found the DOE report that contained the info and verified that we don't have more current information.

---

**From:** Droggitis, Spiros  
**Sent:** Tuesday, March 22, 2011 7:50 AM  
**To:** Riley (OCA), Timothy  
**Subject:** FW: Answers to Congressional Staff Questions

Tim: These look ok? Who other than Annie and Avenel asked questions, do you remember?

---

**From:** Sheron, Brian  
**Sent:** Monday, March 21, 2011 5:54 PM  
**To:** Droggitis, Spiros  
**Subject:** Answers to Congressional Staff Questions

- 1.) Request for doses in millirem.

Don Cool responded and explained that we could not give doses in millirem because it requires additional assumptions on uptake, etc. However, he said doses would be small fractions of PAGs

- 2.) What was the basis for concluding that the core debris in the unit 4 SFP would not ablate the concrete floor?

Basis was preliminary calculations run with the MELCOR code that showed temperatures did not reach levels that would cause ablation. However, further calculations are being performed.

- 3.) What is the half-life of Xenon-133?

Don Cool provided the response that it is 2.2 days.

- 4.) Workers were evacuated at unit #3 due to high radiation. Is this true?

At 3:50 pm Japan time yesterday, a puff of smoke or steam was released from unit #3. We do not know if it contained increased radiation, and we believe the workers were evacuated as a precautionary measure.

- 5.) Can you provide the Sacramento radiation readings in millirem?

Don Cool responded and explained that we could not give doses in millirem because it requires additional assumptions on uptake, etc. However, he said doses would be small fractions of PAGs

- 6.) Smoke was seen from units 2 & 3. Do we know what that was?

We believe these events were not simultaneous but separated by several days. The smoke or steam from unit #3 is discussed in item #4 above. We believe the smoke or steam seen at unit #2 was released when TEPCO cut a hole in the unit #2 reactor building siding.

**From:** [Akstulewicz, Brenda](#)  
**To:** [ADAMS IM](#)  
**Subject:** ML110800155  
**Date:** Tuesday, March 22, 2011 9:32:00 AM  
**Attachments:** [11-054.pdf](#)  
**Importance:** High

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Greetings,

Please replace the subject document in ADAMS with the updated version attached. The new version reflects a change in the title.

Thanks,  
Brenda

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/108

## Riley (OCA), Timothy

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**From:** Riley (OCA), Timothy  
**Sent:** Tuesday, March 22, 2011 9:32 AM  
**To:** Hunt, Jasmine (Durbin)  
**Subject:** RE: NRC Speaker: Cindy Peterson

Thank you for catching that. It is Pederson, but until now I had been spelling her name with a t. Making a note of that.  
Thanks,  
Tim

---

**From:** Hunt, Jasmine (Durbin) [[mailto:Jasmine\\_Hunt@durbin.senate.gov](mailto:Jasmine_Hunt@durbin.senate.gov)]  
**Sent:** Tuesday, March 22, 2011 9:30 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: NRC Speaker: Cindy Peterson

Quick question, is I Pederson or Peterson? I just want to be sure for the hearing.

---

**From:** Riley (OCA), Timothy [<mailto:Timothy.RileyOCA@nrc.gov>]  
**Sent:** Tuesday, March 22, 2011 9:26 AM  
**To:** Hunt, Jasmine (Durbin)  
**Cc:** Schmidt, Rebecca  
**Subject:** RE: NRC Speaker: Cindy Peterson

Jasmine,  
I've attached a brief biography for Cindy Peterson. We'll work to get a written statement as soon as possible.

Thank you,  
Tim

---

**From:** Hunt, Jasmine (Durbin) [[mailto:Jasmine\\_Hunt@durbin.senate.gov](mailto:Jasmine_Hunt@durbin.senate.gov)]  
**Sent:** Tuesday, March 22, 2011 8:57 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: NRC Speaker: Cindy Peterson

Hi Tim,

We are glad that Ms. Peterson will be able to attend the briefing this Friday and speak about the difference in licensing requirements for US and Japanese nuclear facilities. If at all possible, could you please send me the written copy of his opening statement by Wednesday? A written statement is not required, but would be helpful on our end.

Additionally, could you please send me a brief biography of Ms. Peterson?

Thank you for all of your help so far.

Bests,  
Jasmine

## Riley (OCA), Timothy

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**From:** Riley (OCA), Timothy  
**Sent:** Tuesday, March 22, 2011 9:41 AM  
**To:** Hunt, Jasmine (Durbin)  
**Subject:** RE: NRC Speaker: Cindy Peterson

Jasmine,

Just a minor note. Cindy will be able to describe US licensing requirements and the US regulatory structure charged with ensuring safety of US plants, but I don't know that she'll be able to give details regarding the Japanese system. As the NRC seeks information and understanding of the Fukushima event, we'll certainly increase our knowledge of Japanese oversight, but this will take time. She will be able to speak to why the NRC has confidence in the safety and security of US plants, even after the events in Japan, which I think is at the crux of your inquiry.

Again, we'll get you the written statement as soon as possible, but if you need any additional information in the mean time, please let me know.

Thank you,  
Tim

---

**From:** Hunt, Jasmine (Durbin) [[mailto:Jasmine\\_Hunt@durbin.senate.gov](mailto:Jasmine_Hunt@durbin.senate.gov)]  
**Sent:** Tuesday, March 22, 2011 8:57 AM  
**To:** Riley (OCA), Timothy  
**Subject:** RE: NRC Speaker: Cindy Peterson

Hi Tim,

We are glad that Ms. Peterson will be able to attend the briefing this Friday and speak about the difference in licensing requirements for US and Japanese nuclear facilities. If at all possible, could you please send me the written copy of his opening statement by Wednesday? A written statement is not required, but would be helpful on our end.

Additionally, could you please send me a brief biography of Ms. Peterson?

Thank you for all of your help so far.

Bests,  
Jasmine

---

**From:** Riley (OCA), Timothy [<mailto:Timothy.RileyOCA@nrc.gov>]  
**Sent:** Monday, March 21, 2011 6:36 PM  
**To:** Hunt, Jasmine (Durbin)  
**Subject:** NRC Speaker: Cindy Peterson

Jasmine,

Becky just let me know that the speaker will most likely be Cindy Peterson, Deputy Regional Administrator for NRC Region III. She's a senior leader in our organization with extensive knowledge of the NRC activities in Illinois.

I'll work with her to get the written statement to you shortly.

Thank you,  
Tim Riley

AB/110

**From:** [Akstulewicz, Brenda](#)  
**To:** [Quesenberry, Jeannette](#)  
**Subject:** FW: Senate Hearing Testimony from 3/16  
**Date:** Tuesday, March 22, 2011 11:01:00 AM

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Now, I'm sorry to pass the bugging on to you, Jeanette!

---

**From:** Akstulewicz, Brenda  
**Sent:** Tuesday, March 22, 2011 11:01 AM  
**To:** Belmore, Nancy  
**Subject:** Senate Hearing Testimony from 3/16

Hi Nancy,

I have a reporter who is bugging me for the senate testimony on 3/16. Do you if/when this will be available?

Sorry to pass the bugging on to you!

Thanks,  
Brenda

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ III

**From:** [Akstulewicz, Brenda](#)  
**To:** [Brenner, Eliot](#); [Hayden, Elizabeth](#)  
**Cc:** [Shannon, Valerie](#)  
**Subject:** FW: Commissioner Magwood's Opening Statement at March 21, Commission Briefing on NRC Response to Recent Events in Japan  
**Date:** Tuesday, March 22, 2011 12:16:00 PM  
**Attachments:** [WDM japan event public meeting opening statement March 21 2011.docx](#)  
[ML110800637.ADC](#)

---

Attached are Comm. Magwood's opening remarks from yesterday. Should I post them as a press release as I did the Chairman's or as a speech like I would a presentation, etc.?

---

**From:** Crawford, Carrie  
**Sent:** Monday, March 21, 2011 5:00 PM  
**To:** Akstulewicz, Brenda; Shannon, Valerie  
**Cc:** Bupp, Margaret  
**Subject:** Commissioner Magwood's Opening Statement at March 21, Commission Briefing on NRC Response to Recent Events in Japan

Ladies:

Please see Commissioner Magwood's Opening Statement presented this morning during the Commission briefing. Please process and send to the WEB for posting. Please also notify me once the statement is posted.

Thanks,  
Carrie

AB/ 112

**OPENING STATEMENT OF  
COMMISSIONER MAGWOOD**

**NRC RESPONSE TO EVENTS IN JAPAN**

**PUBLIC MEETING**

**MARCH 21, 2011**

I have many friends and colleagues in Japan and I have been in touch with several people over the last week and a half. I've heard from friends in Tokyo worried about radiation and others in the north who are dealing with food and gasoline shortages. Everyone in Japan is enduring continuing aftershocks, anxiety about the Fukushima Daiichi plant, difficulties in communications, and uncertainty about what will happen next.

One friend in the Mito area lost all utilities for several days after the earthquake and is still waiting for water to be restored. But in the aftermath of the earthquake, she is making new friends as people bond together to help and comfort one another and make the best of a difficult situation. She even found a kind neighbor who owns a well and has been able to make daily trips to fetch water.

I'm sure there are thousands of examples of people coming together as a community, moving forward with resilience. The scale of the tragedy is truly staggering and the toll in lives and property terrible but Japan will recover. And Japan does not stand alone. We in the U.S. are close friends to the Japanese people and I am very proud of how the American people, their government, and the NRC in particular have risen to the occasion to provide assistance during this crisis. The NRC staff has demonstrated both its expertise and its selflessness over the last 10 days and I applaud their outstanding efforts.

Today, the Commission will receive an update on the nuclear situation in Japan, our response, and our efforts to understand what has happened. There will be important lessons learned from the events at the Fukushima Daiichi plant and it is essential that we identify them and respond to them effectively. This meeting will be, I expect, the first of many as the Commission engages the issues we must address to ensure that the safety of U.S. nuclear power plants can be assured in the face of catastrophic events such as we have seen in Japan.

**Riley (OCA), Timothy**

---

**From:** Droggitis, Spiros  
**Sent:** Tuesday, March 22, 2011 2:43 PM  
**To:** Shane, Raeann; Schmidt, Rebecca; Weil, Jenny; Decker, David; Powell, Amy; Riley (OCA), Timothy; Dacus, Eugene  
**Subject:** RE: USAID Call

Good precedent.

---

**From:** LIA12 Hoc  
**Sent:** Tuesday, March 22, 2011 2:41 PM  
**To:** Shane, Raeann; Droggitis, Spiros; Schmidt, Rebecca; Weil, Jenny; Decker, David; Powell, Amy; Riley (OCA), Timothy; Dacus, Eugene  
**Subject:** USAID Call

Participated in the daily 2:00 p.m. UASID congressional staff call. Jeff Temple provided update on NRC activities. There were no questions for the NRC. USAID announced that the frequency of the call will be reduced. The next call is scheduled for Thursday.

ABI 113

## Riley (OCA), Timothy

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**From:** LIA12 Hoc  
**Sent:** Tuesday, March 22, 2011 3:07 PM  
**To:** Schmidt, Rebecca; Powell, Amy; Riley (OCA), Timothy; Droggitis, Spiros; Shane, Raeann; Decker, David; Dacus, Eugene; Weil, Jenny  
**Subject:** FW: Can you please send me

FYI

---

**From:** LIA02 Hoc  
**Sent:** Tuesday, March 22, 2011 3:00 PM  
**To:** LIA12 Hoc  
**Cc:** Droggitis, Spiros  
**Subject:** FW: Can you please send me

FYI

---

**From:** Shaffer, Mark R [<mailto:ShafferMr@state.gov>]  
**Sent:** Tuesday, March 22, 2011 2:58 PM  
**To:** LIA02 Hoc  
**Cc:** Schwartzman, Jennifer  
**Subject:** RE: Can you please send me

Sen. Saxby Chambliss (R-GA); Sen. Tom Coburn (R-OK); Sen. Dan Coats (R-IN); Sen. Richard Burr (R-NC); and Cong. Mike Rogers (R-MI).

They were here in Vienna to talk to folks at CTBTO and met with Ambassador Davies. AMBO briefed them on the full suite of International Organizations that UNVIE looks after. During the meeting, apparently a few questions came up about the Japan disaster. Ambassador Davies called me into the conference room and asked me to provide a brief overview of the situation. I gave them a quick summary of the plant status and outlook for the future, and then fielded a few questions from each of the distinguished guests. I think it went well. They seemed satisfied.

This email is UNCLASSIFIED.

---

**From:** LIA02 Hoc [<mailto:LIA02.Hoc@nrc.gov>]  
**Sent:** Tuesday, March 22, 2011 6:35 PM  
**To:** Shaffer, Mark R  
**Subject:** Can you please send me

The names of the Senators again? OCA wants to see. I scribbled them down but they don't recognize the last one (Roberts?) Thanks!

AB / 114

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Frederick News Post - Info  
**Date:** Tuesday, March 22, 2011 3:42:00 PM

---

Frederick News Post  
Blair Ames  
240-215-8623  
Information on nuclear materials database

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI / 115

**From:** [Akstulewicz, Brenda](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** Info - Greenwire  
**Date:** Tuesday, March 22, 2011 4:07:00 PM

---

Hannah  
Greenwire  
202-446-0468  
Background information on chmn.

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Follow up Info - Bloomberg  
**Date:** Tuesday, March 22, 2011 4:16:00 PM

---

Joe Richter  
Bloomberg  
202-624-1872  
spoke w/Roger yesterday wants info on fire safety

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ 116

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Info - TV Asahi - URGENT!  
**Date:** Tuesday, March 22, 2011 4:35:00 PM

---

Takanori Issiki  
TV Asahi  
212-644-6300  
have we issued reports on risk at nuclear plants in us

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/117

## Riley (OCA), Timothy

---

**From:** Van Etten, John [John.VanEtten@mail.house.gov]  
**Sent:** Tuesday, March 22, 2011 6:43 PM  
**To:** Dacus, Eugene  
**Cc:** Schmidt, Rebecca; Powell, Amy; Riley (OCA), Timothy; Droggitis, Spiros; Sadlosky, Dan  
**Subject:** Re: Briefing

Thanks, Gene, for your prompt assistance. I hope the procedure goes smoothly and you recover quickly. I look forward to working directly with your colleagues. Best, John

-----  
Sent using BlackBerry

---

**From:** Dacus, Eugene <Eugene.Dacus@nrc.gov>  
**To:** Van Etten, John  
**Cc:** Schmidt, Rebecca <Rebecca.Schmidt@nrc.gov>; Powell, Amy <Amy.Powell@nrc.gov>; Riley (OCA), Timothy <Timothy.RileyOCA@nrc.gov>; Droggitis, Spiros <Spiros.Droggitis@nrc.gov>  
**Sent:** Tue Mar 22 18:33:48 2011  
**Subject:** RE: Briefing

John,

Got it. I've informed my director and colleagues of the congresswoman's request and the ball is rolling. Unfortunately, I'm having a medical procedure done in the morning and may not be able to come in tomorrow. So, someone else will be working with you initially to finalize the briefing. I will however contact as soon as I can.

Regards

Gene

---

**From:** Van Etten, John [mailto:John.VanEtten@mail.house.gov]  
**Sent:** Tuesday, March 22, 2011 5:38 PM  
**To:** Dacus, Eugene  
**Cc:** Sadlosky, Dan  
**Subject:** Briefing

Eugene-

The Congresswoman has asked that we arrange a phone briefing between her and representatives of the NRC regarding the current status of the Japanese nuclear plants, any lessons learned and how they will be applied to Indian Point, and the process for examining Japan's experience and updating the regulatory requirements for domestic nuclear power facilities. The Congresswoman is available by phone both tomorrow and Thursday. We appreciate your assistance in arranging this meeting. Let us know if there is anything we can do to help.

Best,  
John

John D. Van Etten  
Office of Congresswoman Nan Hayworth, M.D.  
U.S. House of Representatives

ABI 118

1440 Longworth House Office Building  
Washington, DC 20515  
Phone: (202) 225-5441

## Riley (OCA), Timothy

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**From:** Mitlyng, Viktoria  
**Sent:** Wednesday, March 23, 2011 9:03 AM  
**To:** Mitlyng, Viktoria; Pederson, Cynthia; West, Steven; Reynolds, Steven; Boland, Anne; Lara, Julio; Riemer, Kenneth; Ring, Mark; Riemer, Kenneth  
**Cc:** Riley (OCA), Timothy; Barker, Allan; Logaras, Herral; Heck, Jared  
**Subject:** on obama's ties to exelon  
**Attachments:** image003.gif; image004.gif; image005.gif

More: Obama's ties with Exelon:

# Bloomberg

[Print Back to story](#)

## Nuclear Illinois Helped Shape Obama View on Energy in Dealings With Exelon

*By John McCormick - Mar 23, 2011*

If Illinois were a country, it would have the world's 12th-largest number of nuclear power reactors, behind China and ahead of Sweden. No other U.S. state generates more energy through fission.

Exelon Corp. (EXC), which operates all 11 of the state's reactors, is no stranger to President Barack Obama. The Chicago-based company has served as a source of campaign contributions and also created environmental and political challenges to navigate.

Even as his administration reviews all U.S. reactors following the March 11 earthquake and tsunami that triggered radiation leaks from a crippled Japanese plant, Obama last week called nuclear power an "important part" of his energy agenda. That mirrors the balancing act he displayed in his adopted home state, which generates more than a tenth of U.S. nuclear power.

"It's a large part of our power generation," said Senator Mark Kirk, a Republican who won Obama's old seat in November. "And we have more waste than any other state."

Obama's relationship with Exelon, the nation's largest U.S. nuclear power producer, led his top 2008 Democratic primary opponent, then-Senator Hillary Clinton of New York, to charge that he had "cut some deals" with the industry.

### Political Concerns

His experience also reflects his handling of political concerns in 2005-2006 from radioactive tritium leaks at Illinois reactors. And it includes battles over disposal of nuclear waste, an issue Kirk is raising following the Japanese disaster.

"We need to get nuclear waste away from Lake Michigan," Kirk, 51, said. "The United States needs a permanent nuclear waste storage solution, and that's overwhelmingly Yucca." The Obama administration

announced in February 2009 that it wouldn't move forward on a proposed storage center at Yucca Mountain in Nevada.

Democrat Dick Durbin, the state's senior senator, and Kirk plan a Chicago briefing March 25 to review the safety of Illinois reactors and address waste storage with Exelon representatives.

Obama's 2012 budget calls for an additional \$36 billion in U.S. loan guarantees for new nuclear power plants.

"The administration's energy priorities are based solely on how best to build a 21st century, clean energy economy," White House spokesman Clark Stevens said yesterday in a statement. "That policy is not about picking one energy source over another."

The existing 104 reactors in the U.S. provide about 20 percent of the nation's electricity. Those in Illinois provide about half the state's power.

## **Campaign Accusation**

Obama's Exelon ties came under fire as he campaigned for the Democratic nomination for president in 2008.

"Senator Obama has some questions to answer about his dealings with one of his largest contributors, Exelon, a big nuclear power company," said Clinton, then his party primary opponent and now his secretary of state. "Apparently he cut some deals behind closed doors to protect them from full disclosure."

The Washington Post at the time reported that Clinton stretched the truth, although it also said Obama had "exaggerated his legislative accomplishments" as a nuclear- industry watchdog.

Obama also offered assurances to Nevadans on waste storage during the 2008 campaign.

## **'Independent Judgment'**

"I will bring to this issue not just independent judgment and careful deliberation, but a personal appreciation that comes from my own experience of living in the back yard of hazardous nuclear materials," Obama wrote in a May 2007 letter to the editor of the Las Vegas Review-Journal.

Exelon and its employees were the seventh-largest source of campaign money for Obama, 49, during his four-year Senate career, contributing at least \$71,850, according to the Washington-based Center for Responsive Politics.

When he ran for president, the company's employees gave at least \$200,000, and board member John Rogers Jr., chairman of Chicago-based Ariel Investments LLC, was a top Obama fundraiser.

Exelon "actively engages in the political process and supports candidates from both parties who we believe will support sensible energy policies," company spokeswoman Judith Rader said yesterday in a statement.

## **Legislative Role**

Obama's legislative involvement with nuclear energy started after Exelon issued a December 2005 news release that said it had detected "higher than normal concentrations" of tritium in an underground pipe inside the boundary of a plant it operated in Braidwood, about 60 miles (97 kilometers) southwest of Chicago.

Tritium, a radioactive form of hydrogen and a byproduct of nuclear power generation that in large doses can increase cancer risk, was found days later in a home's drinking water well near the plant, although levels didn't exceed safety standards.

Two months later, Exelon announced tritium leaks had been found at two more nuclear power plant sites in Illinois. One of those, a plant located in Grundy County, about 60 miles southwest of Chicago, has the Mark 1 design, developed by General Electric Co. (GE) in the 1960s and used at the Fukushima Dai- Ichi plant in Japan.

On March 1, 2006, Obama introduced legislation that would have required utilities to notify federal nuclear regulators as well as state and county officials whenever there was "an unplanned release of fission products in excess of allowable limits."

Exelon and other industry interests said they were already doing more reporting voluntarily and the measure wasn't needed. A modified version of it never became law.

Two top former Obama aides, onetime senior adviser David Axelrod and ex-White House Chief of Staff Rahm Emanuel, had business dealings with Exelon earlier in their careers.

Emanuel, who left the administration to successfully run for mayor of Chicago, worked on the \$8.2 billion merger that created Exelon in 2000. Axelrod, currently helping run Obama's re-election bid, had ownership in a consulting business that had Exelon as a client before he joined the White House in 2009.

To contact the reporter on this story: John McCormick in Chicago at [jmccormick16@bloomberg.net](mailto:jmccormick16@bloomberg.net).

To contact the editor responsible for this story: Mark Silva in Washington at [msilva34@bloomberg.net](mailto:msilva34@bloomberg.net).

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**From:** Mitlyng, Viktoria

**Sent:** Wednesday, March 23, 2011 7:59 AM

**To:** Pederson, Cynthia; West, Steven; Reynolds, Steven; Boland, Anne; Lara, Julio; Riemer, Kenneth; Ring, Mark; Riemer, Kenneth

**Cc:** Riley (OCA), Timothy; Barker, Allan; Logaras, Harral; Heck, Jared

**Subject:** announcement of friday forum

[www.chicagotribune.com/news/chi-ap-il-illinois-nuclearp,0,6159486.story](http://www.chicagotribune.com/news/chi-ap-il-illinois-nuclearp,0,6159486.story)

**chicagotribune.com**

**Durbin, Kirk to host forum on Ill. nuclear safety**

By TAMMY WEBBER

Associated Press

8:10 PM CDT, March 22, 2011

## CHICAGO

### Advertisement

Illinois Sens. Dick Durbin and Mark Kirk have asked federal and state nuclear experts to attend a forum to discuss the safety of the state's nuclear reactors and whether Illinois is prepared for an emergency, citing Japan's still-unfolding crisis.

Officials from the Nuclear Regulatory Commission, the Illinois Emergency Management Agency, Exelon Corp. and environmental groups say they plan to attend the meeting Friday at the Dirksen Federal Building in Chicago.

"I have no reason to believe we have a particular concern (in Illinois), but what happened in Japan, I think, is fair warning that we ought to periodically review this," Durbin said Tuesday.

Some watchdog and environmental groups, however, have said they're concerned that four of the state's 11 reactors -- at the Dresden and Quad City generating plants -- are of the same design and about the same age as those involved in Japan's nuclear crisis.

Dave Kraft, director of the Nuclear Energy Information Service, an Illinois watchdog group, said the Mark I boiling-water reactors are flawed because spent fuel rods are stored above the reactor containment chamber instead of at ground level, and the containment system around the reactor is too small and could allow pressure to build quickly in the event of an emergency.

The head of the Illinois Environmental Law and Policy Center, Howard Learner, said he is concerned about plans by Exelon to "uprate" or rev up the amount of electricity generated by the Mark I reactors, all of which already are more than 40 years old.

"It's time for Exelon and the Nuclear Regulatory Commission to hit the pause button and go back and carefully reassess the risks and rewards," squeezing more power from the plants, Learner said. "I'm not throwing stones at the nuclear plants, but it would be prudent and wise at this point."

President Barack Obama has called on the NRC to review the nation's nuclear plant safety and Illinois Gov. Pat Quinn said the state also will conduct a "full-scale" review. Quinn also wants to increase the annual fees Exelon pays to Illinois -- currently pays about \$20 million annually -- to ensure the state Emergency Management Agency has what it needs to oversee safety at the plants.

Illinois has six nuclear plants, with a total of 11 reactors, more than any other state in the U.S. In addition to NRC inspectors, the state has a on-site inspect for each plant.

Although the chance of an earthquake as large as the one that rocked Japan is remote and a tsunami all but impossible in Illinois, Kraft said he is not sure the state's reactors could withstand something like an airplane crash.

Exelon spokesman Marshall Murphy said all the company's reactors are safe and built to withstand natural and potential manmade disasters, and that the uprating also is safe.

But that doesn't mean the company won't learn from the events that are unfolding in Japan, he said.

"There will be an opportunity to learn more from Japan ... and we will apply (those lessons) if we need to,"

Murphy said.

----

Associated Press writer Deanna Bellandi contributed to this report.

AP-WF-03-23-11 0406GMT

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Viktoria Mitlyng  
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US Nuclear Regulatory Commission  
Region III  
Lisle, IL 60532  
Tel 630/829-9662  
Fax 630/515-1026  
e-mail: viktoria.mitlyng@nrc.gov

## Riley (OCA), Timothy

---

**From:** Heck, Jared  
**Sent:** Wednesday, March 23, 2011 10:29 AM  
**To:** Pederson, Cynthia; Mitlyng, Viktoria; West, Steven; Reynolds, Steven; Boland, Anne; Lara, Julio; Riemer, Kenneth; Ring, Mark; Riemer, Kenneth  
**Cc:** Riley (OCA), Timothy; Barker, Allan; Logaras, Harral  
**Subject:** RE: REQUEST : announcement of friday forum  
**Attachments:** Riverkeeper Brief.pdf; image001.gif; image002.gif

Cindy,

In 2003, the NRC filed a brief in Federal court, which, among other things, summarized the steps the agency had taken with respect to aircraft and security post-9/11. The court case arose from challenges to security at Indian Point.

The brief is publicly-available and was cleared by the Commission and OGC. If you open the attachment and read the "Factual Background" section of the brief, pages 18-27 using the Adobe .pdf page numbering, you may find some useful statements. The brief references the fact that NRC undertook aircraft-impact studies and imposed compensatory measures to mitigate the effects of large explosions and fires (B.5.b). It also notes that actions have been taken by other agencies to increase aviation security and protect airspace.

Jared K. Heck  
Regional Counsel &  
Government Liaison Team Leader  
NRC Region III  
Tel. 630-829-9653  
Fax 630-515-1096

---

**From:** Pederson, Cynthia  
**Sent:** Wednesday, March 23, 2011 8:03 AM  
**To:** Mitlyng, Viktoria; West, Steven; Reynolds, Steven; Boland, Anne; Lara, Julio; Riemer, Kenneth; Ring, Mark; Riemer, Kenneth  
**Cc:** Riley (OCA), Timothy; Barker, Allan; Logaras, Harral; Heck, Jared  
**Subject:** REQUEST : announcement of friday forum  
**Importance:** High

A few thoughts based on the comments below:

I believe I already asked for info on whether the spent fuel pools are elevated or not for the chart.  
New request: how big have the uprates been for each plant (%)  
New: What can I say to the question of "Can the plants withstand an airplane crash?"

Thanks.

---

**From:** Mitlyng, Viktoria  
**Sent:** Wednesday, March 23, 2011 7:59 AM  
**To:** Pederson, Cynthia; West, Steven; Reynolds, Steven; Boland, Anne; Lara, Julio; Riemer, Kenneth; Ring, Mark; Riemer, Kenneth  
**Cc:** Riley (OCA), Timothy; Barker, Allan; Logaras, Harral; Heck, Jared  
**Subject:** announcement of friday forum

**chicagotribune.com**

## **Durbin, Kirk to host forum on Ill. nuclear safety**

By TAMMY WEBBER

Associated Press

8:10 PM CDT, March 22, 2011

CHICAGO

### Advertisement

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But that doesn't mean the company won't learn from the events that are unfolding in Japan, he said.

"There will be an opportunity to learn more from Japan ... and we will apply (those lessons) if we need to," Murphy said.

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Associated Press writer Deanna Bellandi contributed to this report.

AP-WF-03-23-11 0406GMT

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Fax 630/515-1026  
e-mail: viktoria.mitlyng@nrc.gov

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Interview - BBC London  
**Date:** Wednesday, March 23, 2011 12:23:00 PM

---

James Cowling

BBC London

44 207 557 3667

[james.cowling@bbc.co.uk](mailto:james.cowling@bbc.co.uk)

Wants to speak with a commissioner on the briefing tomorrow

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



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**Riley (OCA), Timothy**

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**From:** Barker, Allan  
**Sent:** Wednesday, March 23, 2011 1:51 PM  
**To:** Rosales-Cooper, Cindy  
**Cc:** Heck, Jared; Logaras, Harral; Riley (OCA), Timothy; Foggie, Kirk; Abrams, Charlotte; Fragoyannis, Nancy; Ring, Mark  
**Subject:** RE: Chinese Nationals to Visit Dresden

Cindy,

Thanks so much for the support! I have copied the DRP Branch Chief for Dresden to communicate your guidance.

Thanks again.....Allan

---

**From:** Rosales-Cooper, Cindy  
**Sent:** Wednesday, March 23, 2011 11:35 AM  
**To:** Barker, Allan  
**Cc:** Heck, Jared; Logaras, Harral; Riley (OCA), Timothy; Foggie, Kirk; Abrams, Charlotte; Fragoyannis, Nancy  
**Subject:** RE: Chinese Nationals to Visit Dresden

Hello Allan,  
Kirk Foggie is now the OIP Desk Officer for China. I am now in NRO.  
Kirk is currently in Japan as one of the NRC team members supporting the Japanese regulator, NISA.  
Because of the Japanese emergency, OIP asked me to cover China until Kirk returns.

Thank you for notifying us of the Chinese visitors. I've copied Nancy Fragoyannis on this email as she has purview of what areas the Chinese should not be allowed in at the plant as well as information regarding proper disclosure of the visitors with other federal agencies.

The resident inspectors should feel free to describe their role as the NRC resident inspector at the site, the interface between them (NRC) and the utility, general information about the ROP, etc. but should not offer site specific information if asked.

Hope this helps,

*Cindy E. Rosales-Cooper*  
Technical Assistant for International Activities  
Office of New Reactors  
(301) 415-1168

---

**From:** Barker, Allan  
**Sent:** Wednesday, March 23, 2011 12:00 PM  
**To:** Rosales-Cooper, Cindy  
**Cc:** Heck, Jared; Logaras, Harral; Riley (OCA), Timothy  
**Subject:** Chinese Nationals to Visit Dresden

Cindy,

I wanted to share the following information from our resident staff at the Dresden Station.

AB/122

- On March 28, Exelon plans to host 11 Chinese Nationals and 9 support personnel from the China National Nuclear Corporation (CNNC) as visitors to the Dresden Station. Exelon and China have been working on a cooperative support agreement. The purpose of the visit is to observe the site and meet with Dresden personnel.

I am sharing this information to you as the OIP desk officer. If you need any additional information please contact me at (630) 829-9660. Also, if you could provide guidance to our resident inspectors on their approach if requested to interface with these visitors that would be most appreciated.

Thanks.....Allan

**Riley (OCA), Timothy**

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**From:** Shane, Raeann  
**Sent:** Wednesday, March 23, 2011 6:37 PM  
**To:** Riley (OCA), Timothy; Schmidt, Rebecca; Droggitis, Spiros; Powell, Amy; Dacus, Eugene; Weil, Jenny  
**Subject:** OPS center news

About the only thing that is going on down here is discussion that NRC is going to issue an Information Notice asking our licensees to start voluntarily reporting radiation measurements that may be attributable to the plume from Japan. I'm sure that will generate more calls, but hopefully they will start putting those readings on the sitrep. I guess we did a similar thing after Chernobyl.

**Riley (OCA), Timothy**

---

**From:** Fischhoff, Ilya [Ilya.Fischhoff@mail.house.gov]  
**Sent:** Thursday, March 24, 2011 10:10 AM  
**To:** Riley (OCA), Timothy  
**Subject:** number of days of KI supply

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Hi Tim,

Could you please tell me how many days' supply of potassium iodide NRC provides to states that have requested/received it for the EPZs? Thanks!

Ilya

## Riley (OCA), Timothy

---

**From:** Powell, Amy  
**Sent:** Thursday, March 24, 2011 10:51 AM  
**To:** 'Annie\_Caputo@epw.senate.gov'; Dedrick, Kathy (EPW); 'laura\_haynes@carper.senate.gov'; brian\_clifford@barrasso.senate.gov; Baran, Jeff; Dotson, Greg; Pinkele, Abigail; Marshall, John; McCarthy, David; maryam.brown@mail.house.gov; chris.sarley@mail.house.gov; Beckerman, Michael; Clapp, Doug (Appropriations); Apostolou, Carrie (Appropriations); Blair, Rob; 'taunja.berquam@mail.house.gov'  
**Subject:** Tasking memo to NRC staff re: review following events in Japan

Below is a link to the tasking memo to NRC staff, following the Commission's vote, on proceeding with a review following the events in Japan:

<http://www.nrc.gov/reading-rm/doc-collections/commission/comm-secy/2011/2011-0002comgbi-srm.pdf>

The memo directs NRC staff to establish a senior level agency task force to conduct a methodical and systematic review of our 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. The review should address the following near term and then longer term objectives.

The complete voting record leading to this memo is posted at <http://www.nrc.gov/reading-rm/doc-collections/commission/comm-secy/2011/>

Amy

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

AB/125

**Riley (OCA), Timothy**

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**From:** Powell, Amy  
**Sent:** Thursday, March 24, 2011 11:43 AM  
**To:** Speiser, Herald  
**Cc:** Quesenberry, Jeannette; Belmore, Nancy; Riley (OCA), Timothy  
**Subject:** RE: Congressional correspondence

Herald -

SECY has ticketed all the letters received since March 10 related to events in Japan and is likely the best one stop shopping on that.

Amy

---

**From:** Speiser, Herald  
**Sent:** Thursday, March 24, 2011 11:37 AM  
**To:** Powell, Amy  
**Cc:** Quesenberry, Jeannette; Belmore, Nancy  
**Subject:** Congressional correspondence

Would it be possible to get copies of all the congressional letters we've gotten since March 10? Alternately, is there a running list I could check against to make sure we have copies of everything? If you think I should ask SECY for this, please let me know.

Thanks

Herald

*Herald M. Speiser - (301) 415-1830  
Administrative Assistant  
Office of the Chairman  
Nuclear Regulatory Commission  
11555 Rockville Pike  
Mailstop: O-16G4  
Rockville, MD 20852*

AB/126

## Riley (OCA), Timothy

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**From:** Droggitis, Spiros  
**Sent:** Thursday, March 24, 2011 12:16 PM  
**To:** Ilya.Fischhoff@mail.house.gov  
**Cc:** Riley (OCA), Timothy  
**Subject:** KI  
**Attachments:** image001.gif

Ilya: Tim asked that I provide an answer to your KI question. Our KI section on the website says:

### **Why is KI only being provided to the 10-mile EPZ around nuclear power plants?**

The population closest (within the 10 mile EPZ) to the nuclear power plant are at greatest risk of exposure to radiation and radioactive materials. The purpose of radiological emergency preparedness is to protect people from the effects of radiation exposure after an accident at a nuclear power plant. Evacuation is the most effective protective measure in the event of a radiological emergency because it protects the whole body (including the thyroid gland and other organs) from all radionuclides and all exposure pathways. However, in situations when evacuation is not feasible, in-place sheltering is substituted as an effective protective action. In addition, administering potassium iodide is a reasonable, prudent, and inexpensive supplement to both evacuation and sheltering. When the population is evacuated out of the area, and potentially contaminated foodstuffs are interdicted, the risk from further radioactive iodine exposure to the thyroid gland is essentially eliminated.

... TOP

### **Why is the NRC only providing two KI tablets per person?**

The tablets are to be used, if necessary, to supplement evacuation or sheltering. After individuals have evacuated the area, then they will no longer be exposed to significant quantities of radioiodines. The KI tablets, if taken at the appropriate dosage and time, block the thyroid gland, preventing uptake of radioactive iodine. Any radioactive iodine taken into the body after consumption of KI will be rapidly removed from the body. The two tablets will protect the thyroid gland for approximately 48 hours.

I understand States actually get more than the two per individual for example because school kids are considered in the population count not only at school, but as home as well.

**From:** [Akstulewicz, Brenda](#)  
**To:** [WebContractor Resource](#); [WebWork Resource](#)  
**Cc:** [Herr, Linda](#)  
**Subject:** Comm. Ostendorff's Statement  
**Date:** Thursday, March 24, 2011 1:28:00 PM  
**Attachments:** [CommOstendorffRemarks 3-21-11.docx](#)

---

Good Afternoon,

Attached are Commissioner Ostendorff's remarks from Monday's meeting. Please post to the Commissioner's website as soon as possible.

Thank you,  
Brenda

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ 128

**OPENING STATEMENT OF  
NRC COMMISSIONER WILLIAM C. OSTENDORFF**

**PUBLIC MEETING ON THE EVENTS IN JAPAN**

**MARCH 21, 2011**

Good morning. This is a vitally important meeting for the Commission and the country.

First, I want to extend my deepest sympathies to the people of Japan. The consequences and loss of life from the earthquake and tsunami are simply devastating. I am fully mindful of the valiant efforts of the workers and first responders at the Fukushima site who have directly faced the challenges of this tragic event. Our thoughts and prayers are with all.

Let me also commend and thank the Chairman, the EDO, and the NRC staff for their efforts to date in supporting the NRC's monitoring and assistance associated with events in Japan. I appreciate the hard work going on 24/7 at the NRC Operations Center since March 11. I have been impressed with the technical competence and professionalism demonstrated by the NRC staff.

I am also grateful for the highly competent team of NRC experts dispatched to assist our Japanese friends. While dismayed by the tragedy, at the same time as a Commissioner I am extraordinarily proud of the commitment of the NRC team to proactively provide assistance to Japan.

The events that have unfolded at the Fukushima Daiichi nuclear power plant over the last 10 days are stark and have caused me to deeply reflect on my responsibilities as a regulator of the US nuclear industry. On one hand, I believe that our existing licensing and oversight activities assure us that the 104 commercial nuclear power plants in this country are safe. On the other hand, I know that we must (and most certainly will) conduct a thoughtful and rationale examination of the NRC's regulatory framework with the information and lessons learned resulting from the incidents in Japan. I do not think the NRC can wait until every lesson learned is identified before starting this important work. Rather, I believe it is appropriate for the NRC to conduct a timely and focused review of our regulatory framework in the key areas relevant to what we know-and will come to know as lessons emerge- about what happened at the Fukushima site. [While we will hear shortly from the NRC staff on this topic, I believe that topics such as beyond design basis events and severe accident mitigation are potential areas that might receive focused attention].

I was also encouraged that the US nuclear industry has taken some proactive steps to verify and walk down capabilities at their sites. It will be important that the NRC remains engaged with the industry on the follow up activities related to this unprecedented event in Japan.

As we head down this path, I know that we all must be mindful of the challenges ahead. As stated by the Chairman several times in recent days, we need to conduct a thoughtful and systematic review. And, we need to do this in a way that clearly and effectively communicates to the American people what this event means for the safety of commercial nuclear power plants in the United States.

Thank you.

## Riley (OCA), Timothy

---

**From:** Droggitis, Spiros  
**Sent:** Thursday, March 24, 2011 1:35 PM  
**To:** Temple, Jeffrey; Riley (OCA), Timothy; Powell, Amy; LIA08 Hoc  
**Subject:** RE: Daily status report

Jeff: Rani showed me how to close it out this morning, which I did. If I did not do it correctly, please modify as appropriate. Thanks, Spiros

---

**From:** Temple, Jeffrey  
**Sent:** Thursday, March 24, 2011 1:33 PM  
**To:** Riley (OCA), Timothy; Powell, Amy; LIA08 Hoc; Droggitis, Spiros  
**Subject:** RE: Daily status report

Thanks Tim. Appreciate the help with this. Spiros and others filled me in last night about how we are handling this. There is a task tracker assigned to us that I can now close out. Jeff

---

**From:** Riley (OCA), Timothy  
**Sent:** Wednesday, March 23, 2011 5:46 PM  
**To:** Powell, Amy; Temple, Jeffrey; LIA08 Hoc; Droggitis, Spiros  
**Subject:** FW: Daily status report

Jeff,  
See below the resolution to the daily status reports. We will be getting a "feed" of these reports via LIA07 each morning and will send them to a limited distribution.  
Let me know if you have any questions or concerns,  
Thanks,

Timothy Riley  
Congressional Affairs Officer  
U. S. Nuclear Regulatory Commission  
Office of Congressional Affairs  
Phone: 301-415-8492  
Blackberry: 202-510-8672

---

**From:** Droggitis, Spiros  
**Sent:** Wednesday, March 23, 2011 12:53 PM  
**To:** Sheron, Brian  
**Cc:** Riley (OCA), Timothy  
**Subject:** FW: Daily status report

Brian: Today at the Chairman's direction, we initiated sending out just the attached to our oversight and appropriations contacts. Just so you will know for the 3:00 call. We have made arrangements with the ET/Ops Center to send out these daily reports taken from the morning sitrep. Some had wanted the sitreps, this is what the Chairman agreed to provide. We can talk about it before the call. Thanks, Spiros

---

**From:** Schmidt, Rebecca  
**Sent:** Wednesday, March 23, 2011 12:43 PM  
**To:** [Bettina\\_Poirier@epw.senate.gov](mailto:Bettina_Poirier@epw.senate.gov); [Kathy\\_Dedrick@epw.senate.gov](mailto:Kathy_Dedrick@epw.senate.gov); [ruth\\_vanmark@epw.senate.gov](mailto:ruth_vanmark@epw.senate.gov); [Annie\\_Caputo@epw.senate.gov](mailto:Annie_Caputo@epw.senate.gov); [laura\\_haynes@carper.senate.gov](mailto:laura_haynes@carper.senate.gov); [Brian\\_Clifford@barrasso.senate.gov](mailto:Brian_Clifford@barrasso.senate.gov); [michael.beckerman@mail.house.gov](mailto:michael.beckerman@mail.house.gov); [jeff.baran@mail.house.gov](mailto:jeff.baran@mail.house.gov); [maryam.brown@mail.house.gov](mailto:maryam.brown@mail.house.gov); [JohnM@mail.house.gov](mailto:JohnM@mail.house.gov); [david.mccarthy@mail.house.gov](mailto:david.mccarthy@mail.house.gov); [abigail.pinkele@mail.house.gov](mailto:abigail.pinkele@mail.house.gov);

[taunja.berquam@mail.house.gov](mailto:taunja.berquam@mail.house.gov); [Rob.Blair@mail.house.gov](mailto:Rob.Blair@mail.house.gov); [Doug.Clapp@appro.senate.gov](mailto:Doug.Clapp@appro.senate.gov);  
[Carrie.Apostolou@appro.senate.gov](mailto:Carrie.Apostolou@appro.senate.gov)

**Cc:** OCA Distribution

**Subject:** Daily status report

In an effort to keep you informed, attached please find the [NRC Emergency Operations Center Status Report Update](#) on the status of the Fukushima Daiichi and Fukushima Daini sites in Japan. Please keep in mind that this report is based on NRC's current understanding of the ongoing situation in Japan and is marked "Official Use Only". We request that you treat the information accordingly. We intend to provide you this status report daily. Note there is limited distribution. Please let us know if you have any questions.

Rebecca Schmidt  
Director of Congressional Affairs  
Nuclear Regulatory Commission

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** IG report  
**Date:** Thursday, March 24, 2011 2:10:00 PM

---

Shannon Bond  
Financial Times  
212 641 6322  
IG report

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/130'

## Riley (OCA), Timothy

---

**From:** Logaras, Harral  
**Sent:** Thursday, March 24, 2011 2:39 PM  
**To:** Turtil, Richard  
**Cc:** Virgilio, Rosetta; Easson, Stuart; McNamara, Nancy; Tift, Doug; Trojanowski, Robert; Woodruff, Gena; Barker, Allan; Maier, Bill; Heck, Jared; Riley (OCA), Timothy  
**Subject:** RE: State requests for Meetings with NRC/NRC participation

Rich,

Thanks for your message. The Region III States (Ohio, Indiana, Illinois, Iowa, Minnesota, Wisconsin, Michigan and *Missouri*) have NOT requested a meeting or briefing following the events in Japan.

Sincerely,

Harral Logaras  
U. S. NRC Region III  
Regional Government Liaison  
630-829-9659

**Link to the Award Winning NRC Information Digest** <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/v22/sr1350v22.pdf>

**Link to NRC Fact Sheets and Brochures** <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/>

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**From:** Turtil, Richard  
**Sent:** Thursday, March 24, 2011 10:28 AM  
**To:** McNamara, Nancy; Tift, Doug; Trojanowski, Robert; Woodruff, Gena; Barker, Allan; Logaras, Harral; Maier, Bill  
**Cc:** Virgilio, Rosetta; Easson, Stuart  
**Subject:** State requests for Meetings with NRC/NRC participation

RSLOs,

We'd like to keep track of State requests for Regional participation in meetings, briefings, etc., following the events in Japan. Please either complete the attached xcel sheet, or provide information (State, Request, Date, Contact, Meeting Participants, Status) directly to Stuart Easson ([Stuart.Easson@nrc.gov](mailto:Stuart.Easson@nrc.gov)) who will maintain a database on this. As an example, the NY meeting, and others, are populated in the attached.

The database will be stored in a SharePoint directory in order to provide everyone the ability to view the information. Link to location will be provided.

Thanks. Rich

***Richard Turtil, Chief***

***Intergovernmental Liaison Branch***

***Office of Federal and State Materials and Environmental Management Programs***

***U.S. Nuclear Regulatory Commission***

***301-415-2308***

***800-368-5642***

**From:** Akstulewicz, Brenda  
**To:** Steger (Tucci), Christine  
**Cc:** Harrington, Holly; Shannon, Valerie  
**Subject:** Availability for Tomorrow  
**Date:** Thursday, March 24, 2011 3:54:00 PM

---

Hi Christine,

Are you available to join us in OPA tomorrow?

Thanks,

Brenda

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ 132

**From:** [McIntyre, David](mailto:McIntyre, David)  
**To:** [Gilfillan.Brendan@epamail.epa.gov](mailto:Gilfillan.Brendan@epamail.epa.gov); [Harrington, Holly](mailto:Harrington, Holly)  
**Cc:** [Andy.Adora@epamail.epa.gov](mailto:Andy.Adora@epamail.epa.gov)  
**Subject:** RE: LA Times story  
**Date:** Friday, March 25, 2011 12:40:19 PM

---

Other than the "I believe" at the beginning of my quote, I think we're okay with the part relating to the plants. I could have been more definitive, I guess.

---

**David McIntyre**  
**Public Affairs Officer**  
**U.S. Nuclear Regulatory Commission**  
(301) 415-8206 (direct)  
(202) 657-7096 (mobile)  
*Protecting People & the Environment*

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

From: [Gilfillan.Brendan@epamail.epa.gov](mailto:Gilfillan.Brendan@epamail.epa.gov) [mailto:[Gilfillan.Brendan@epamail.epa.gov](mailto:Gilfillan.Brendan@epamail.epa.gov)]  
Sent: Friday, March 25, 2011 12:38 PM  
To: [Harrington, Holly](mailto:Harrington, Holly); [McIntyre, David](mailto:McIntyre, David)  
Cc: [Andy.Adora@epamail.epa.gov](mailto:Andy.Adora@epamail.epa.gov)  
Subject: LA Times story

Hey Holly/David -

We're getting some follow-ups on the LA Times story, which is below. I'm working with our experts to push back hard on the parts about our RadNet network - but wanted to check in with you on questions about early warning systems at domestic nuke plants.

Do you all have any pushback on that point in the story?

Thanks.

- Brendan

Glitches hamper radiation warning system in California  
Half of the 12 EPA detectors in California have problems that could delay alerts.

By Jack Dolan and Rong-Gong Lin II, Los Angeles Times

ABI 133

March 25, 2011

## Reporting from Sacramento and Los Angeles

The federal government's radiation alert network in California is not fully functional, leaving the stretch of coast between Los Angeles and San Francisco without the crucial real-time warning system in the event of a nuclear emergency.

Six of the Environmental Protection Agency's 12 California sensors — including the three closest to the Diablo Canyon nuclear power plant near San Luis Obispo — are sending data with "anomalies" to the agency's laboratory in Montgomery, Ala., said Mike Bandrowski, manager of the EPA's radiation program.

The problem delays from 30 minutes to several hours the updating of a database that would be critical for warning the public in case of a sudden radiation danger from air wafting to the United States from a foreign country, for example, or from a radiation leak at a domestic nuclear facility.

The lag has not been a concern during the Japanese nuclear crisis because the minuscule amounts of radiation that have reached California have posed no threat to human health, and the plume of irradiated air from Japan is so widespread that other equipment from Washington to Los Angeles has been able to monitor it in real time, Bandrowski said.

The agency's critics, however, say the weakness in the EPA system could pose a public health concern.

"The unreliability of the EPA monitoring effort revealed by this event raises troubling questions about whether Californians would receive timely warning to evacuate, or take other protective actions, in case of a nuclear accident here," said Dan Hirsch, a nuclear policy lecturer at UC Santa Cruz and president of the Committee to Bridge the Gap, an anti-nuclear group.

The troubled transmissions are part of the federal RadNet system, which is "designed to protect the public by notifying scientists, in near real time, of elevated levels of radiation so they can determine whether protective action is required," according to a recent press release from the agency.

Without immediate information from RadNet, state and local emergency managers would be dependent on the private owners of nuclear power facilities to alert them in the first hours of a dangerous radiation leak from a domestic source.

"I believe the utilities monitor the sensors; they're good about reporting things," said David McIntyre, a spokesman for the Nuclear Regulatory Commission, which oversees nuclear reactors in the U.S. He added that federal regulations require nuclear plant operators to report small problems that could lead to a release of radiation, so it's unlikely such an event would come as a surprise.

Paul Flake, a spokesman for Pacific Gas & Electric's Diablo Canyon plant, said late Thursday that he did not have details at hand about the company's monitoring system and warning protocols.

Tokyo Electric Power Co., which runs the stricken Fukushima nuclear power plant in Japan, was widely criticized for failing to provide timely, accurate data about the pending danger to the Japanese government, which was reliant on the company for such information.

"There's a natural reluctance to reporting something embarrassing," said Arjun Makhijani, president of the Institute for Energy and Environmental Research.

The California Department of Public Health maintains two of its own sensors at each of the state's nuclear power plants — at Diablo Canyon and at San Onofre near San Clemente — but data from those devices are collected every 48 hours, said Jordan Scott, a spokesman with the California Emergency Management Agency. Before the accident in Japan, data was collected once a week, Scott said.

There are other detectors spread across the United States, including some at universities and some deployed by the Department of Homeland Security in large cities when a terrorist threat is received. But none of those transmits data in real time to a dedicated early-warning system, officials said.

The Comprehensive Nuclear-Test-Ban Treaty Organization, based in Vienna, has four real-time radiation monitors in the continental U.S. The one in Sacramento, operated by the U.S. Department of Energy, was the first to detect traces of radiation from Japan in California.

But that system is designed to detect evidence of nuclear bomb tests,

not to notify the U.S. public to evacuate or take other precautions if elevated levels of radiation are detected.

At the outset of the Japanese crisis, environmentalists noticed that a map on the Environmental Protection Agency's website showing the locations of the monitors nationwide indicated that only about half were "running." Most of the others were producing data that was "undergoing quality review."

The website has since been updated to say that data from the problematic monitors "is being reviewed at EPA's National Air and Radiation Environmental Laboratory" and that the sensors are still collecting data.

Bandrowski said the data from those sensors, transmitted via satellite to the Alabama lab every hour, arrive with problems that mean it can't be added to the database automatically. Instead, a staff member has to manually review the information, a process that can take up to several hours.

"That's the nature of satellite transmissions," Bandrowski said. "There's always going to be glitches."

Brendan Gilfillan  
Press Secretary  
U.S. Environmental Protection Agency  
Office of Public Affairs  
202-564-2081  
gilfillan.brendan@epa.gov

**From:** [Harrington, Holly](#)  
**To:** [Dricks, Victor](#)  
**Subject:** RE: STP info and Tsunami's  
**Date:** Friday, March 25, 2011 2:19:00 PM

---

Do you concur with this change in verbiage?  
Can David be clear which Q&As he's talking about?

---

**From:** Dricks, Victor  
**Sent:** Friday, March 25, 2011 2:14 PM  
**To:** Harrington, Holly  
**Subject:** FW: STP info and Tsunami's

---

**From:** Proulx, David  
**Sent:** Friday, March 25, 2011 12:51 PM  
**To:** Dricks, Victor; Uselding, Lara  
**Cc:** Walker, Wayne  
**Subject:** STP info and Tsunami's

Looking at the Q&A's on the Japanese events there is some misinformation on STP.

The Q&A's state that STP is located "on the Gulf of Mexico" and is designed to withstand a Tsunami. Actually STP is 12 miles inland and 50 foot above sea level, and is not (as is commonly believed) cooled by seawater but by a licensee-owned reservoir, that is refilled occasionally (a couple of times a year) by the Colorado River which is near the owner controlled area of the plant. The ultimate heat sink (that cools safety related loads) consists of separate cooling ponds (that contain a 30 day supply of water).

The plant is designed for designed basis flooding of the Colorado river, and hurricane force winds. However, the plant is too far inland to be considered a concern for hurricane storm surges. Though the plant is designed for probable maximum flooding of the Colorado River, Tsunami is not considered a credible event - and is not specifically designed against.

Actually the worst case event for STP is considered to be a failure of the levee's built onside for their reservoir, and most of the flooding analysis discusses levee failure of the Main Cooling Reservoir.

Questions?

David Proulx  
Senior Project Engineer  
RPBA

ABI 134

**From:** Doane, Margaret  
**To:** Harrington, Holly  
**Cc:** Brenner, Eliot  
**Subject:** Response  
**Date:** Friday, March 25, 2011 3:42:09 PM

---

Holly, I think this should be run by the Chairman's office if we have not said it previously. This is my shot at the discussion:

The US Government was approached by the Japanese Government to provide assistance. The NRC is part of a larger US Government team providing support. The US AID, Disaster and Recovery Team (DART), includes team members from the NRC and other federal agencies. As part of this effort, the NRC dispatched a group of experts to the US Embassy in Tokyo to assist the US Ambassador's efforts to support Japan. NRC's support, as part of this larger team effort is being coordinated through the US Embassy in Tokyo.

Questions regarding the Japanese request for assistance or the activities of the DART team should be addressed to the US Embassy in Tokyo or US AID in Washington.

ABI/135

**From:** Akstulewicz, Brenda  
**To:** Ghneim, Munira  
**Subject:** FW: Seismic Issues.docx  
**Date:** Monday, March 28, 2011 9:11:00 AM  
**Attachments:** Seismic Issues.docx

---

Munira,

If you would not mind, Beth and I would greatly appreciate you putting this in final format.

The document is at G(or J for you)://Factsheets\_Backgrounders/Fact Sheets/FS\_SeismicIssues.doc.

- \* You will need to put in final format
- \* Copy/paste it in the new template (G://Facatsheets\_Backgrounders/Fact Sheets/Factsheet Header)
  - o The border is only on the first page so you can't cut and past the entire document and paste it on the first page

Let me know if you have any questions.

Thanks,  
B

---

**From:** Hayden, Elizabeth  
**Sent:** Friday, March 25, 2011 4:40 PM  
**To:** Akstulewicz, Brenda  
**Subject:** Seismic Issues.docx

On Monday, can you fix up this Fact Sheet with the same font, format and no line-outs?

ABI 136

**From:** Sheehan, Neil  
**To:** Dean, Bill; Lew, David; Roberts, Darrell; Wilson, Peter; Dentel, Glenn; Henderson, Pamela  
**Cc:** McNamara, Nancy; Tift, Doug; Screnci, Diane; Harrington, Holly; Brenner, Eliot  
**Subject:** Trace amounts of iodine-131 detected in Oregon  
**Date:** Friday, March 25, 2011 2:47:53 PM

---

Here's a news story about iodine-131 being detected in Oregon:  
[http://www.oregonlive.com/argus/index.ssf/2011/03/officials\\_japan\\_reactor\\_radiat.html](http://www.oregonlive.com/argus/index.ssf/2011/03/officials_japan_reactor_radiat.html) .

ABI 137

**From:** Akstulewicz, Brenda  
**To:** Couret, Ivonne  
**Subject:** Info - comradio Penn State (11:15 deadline)  
**Date:** Monday, March 28, 2011 9:47:00 AM  
**Importance:** High

---

Samantha Curti  
Com Radio Penn State University  
814-865-2325  
*Info on low-level radiation in water in Japan*

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI 138

**From:** [Akstulewicz, Brenda](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** Info - LA Times - Tight Deadline  
**Date:** Monday, March 28, 2011 5:00:00 PM

---

Eryn Brown

LA Times

213-237-7218

[eryn.brown@latimes.com](mailto:eryn.brown@latimes.com)

How will Japan handle the radioactive materials found in the ground and drinking water.

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/ 139

**From:** [Akstulewicz, Brenda](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** FW: Staff in Japan with Dr. Jaczko  
**Date:** Tuesday, March 29, 2011 8:50:00 AM  
**Importance:** High

---

**From:** Herr, Linda  
**Sent:** Tuesday, March 29, 2011 8:50 AM  
**To:** OPA Resource; Brenner, Eliot; Akstulewicz, Brenda  
**Cc:** Nieh, Ho; Bozin, Sunny  
**Subject:** FW: Staff in Japan with Dr. Jaczko  
**Importance:** High

OPA:

Please handle this action as appropriate.

Thank you!

Linda  
301-415-1759

---

**From:** CMROSTENDORFF Resource  
**Sent:** Tuesday, March 29, 2011 7:56 AM  
**To:** Herr, Linda  
**Subject:** FW: Staff in Japan with Dr. Jaczko

---

**From:** Nakashima, Ryan [<mailto:RNakashima@ap.org>]  
**Sent:** Monday, March 28, 2011 10:59 PM  
**To:** CMROSTENDORFF Resource  
**Subject:** Staff in Japan with Dr. Jaczko

Hi Mr. Ostendorf,

I am a reporter with The Associated Press in Tokyo and wanted to find out which staff members are in Japan with Dr. Jaczko consulting with Japanese officials on its nuclear crisis.

This is simply for the purpose of identifying them so our reporter might be able to address them. If you have bios and images that would also help tremendously.

Sincerely,

Ryan Nakashima  
The Associated Press  
Shiodome Media Tower 7F  
Minato-ku, Tokyo 105-7207

ABI/140

Tel: (03) 6215-8931

Fax: (03) 6215-8949

@rnakashi

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[IP\_US\_DISC]msk dccc60c6d2c3a6438f0cf467d9a4938

**From:** Veronika Penciakova  
**To:** Burnell, Scott  
**Subject:** RE: BROOKING INSTITUTE - A Few Questions Regarding NRC  
**Date:** Tuesday, March 29, 2011 3:17:21 PM

---

Hi Scott,

Thank you for all your assistance, your responses have been quite helpful. I know you guys must be very busy so I especially appreciate the time you took to respond.

All the best,

-Veronika

---

**From:** Burnell, Scott [mailto:Scott.Burnell@nrc.gov]  
**Sent:** Tuesday, March 29, 2011 11:53 AM  
**To:** Veronika Penciakova  
**Subject:** RE: BROOKING INSTITUTE - A Few Questions Regarding NRC

Hello Veronika;

First off, My apologies for a slow reply, we're responding as quickly as we can to questions these days. Since our authority is limited to the U.S. we cannot comment on Japan's approach to regulation. That being said:

Types of regulations:

The NRC authority does have limits. We cannot unilaterally impose new requirements unless there is a solid technical base for doing so. In cases where the technical base is supportive but not conclusive, the NRC can still impose requirements if they meet a reasonable cost-benefit analysis. In other cases the NRC will lay out the case for taking voluntary action that will improve plants' ability to go beyond our regulations, but that cannot be shown to be needed to meet our requirements.

Consultation

The NRC's rulemaking process allows all stakeholders (including plant owners) to participate. The key is in the technical support any one party has for their suggestions to proposed rules. Rulemakings on particularly complex topics can involve public meetings prior to the drafting of rule language; the only exception would be for security-related matters that cannot be discussed in public. The nuclear power plant industry engages with the NRC in an ongoing manner through the Nuclear Energy Institute; similar, more focused groups deal with the NRC regarding particular reactor designs or other subsets of the NRC's jurisdiction.

Enforcement

A detailed explanation of the NRC's enforcement process is found on our website:  
<http://www.nrc.gov/about-nrc/regulatory/enforcement.html>

Risk Assessment

AB/141

Speaking broadly, the NRC's design certification process will examine a reactor design's ability to deal with extreme events considered possible in the United States. Specific Combined License applications must show that a proposed reactor can appropriately deal with the extreme events for the proposed site. More information regarding the NRC's approach to risk analysis is available here: <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/reactor-risk.html>

Please let me know if you need additional detail. Thanks.

Scott Burnell  
Public Affairs Officer  
Nuclear Regulatory Commission

---

**From:** Veronika Penciakova [mailto:vpenciakova@brookings.edu]  
**Sent:** Monday, March 28, 2011 10:47 AM  
**To:** OPA Resource  
**Subject:** A Few Questions Regarding NRC

To whom it may concern:

I hope this email finds you well. I'm contacting you from the Brookings Institution and would be interested in getting some background information on the NRC for a piece I'm working on regarding the U.S. regulatory environment. Specifically, I have been looking at the U.S. regulatory experience compared to that of Japan. As such, any insight you might have on the Japanese experience as related to the questions below would be very welcome. The list of questions follow:

*Types of Regulations*

- Does the NRC ever issue non-binding safety recommendations to nuclear plant operators, or are all safety-related recommendations binding?
- Under what circumstances would non-binding safety recommendations be issued?

*Consultation*

- When regulations are being rewritten, does the NRC consult with companies?
- Are there NRC-company meetings, and if so, is nuclear power plant operators' presence mandatory?
- To what extent do power companies engage with the regulatory process?

*Enforcement*

- How does the NRC enforce its rules?
- How are regulatory infringements uncovered; how long do plant operators have to fix infringements and what penalties can/are levied against companies if irregularities are uncovered?

*Risk Assessments*

- During a NRC committee hearing I heard one of your experts explain that an assessment is made at each nuclear plant location to assess natural disaster risks, and subsequent to such assessments certain safety requirements are drawn up.

First, how do baseline requirements compare to additional ones applied based on geographical location?

- What types of models are used to assess risks?
- Specifically, are predictive models used or are recommendations based more on the historical record?
- Since when has the U.S. employed this type of assessment?

Thank you in advance for your time and assistance.

Best regards,

**Veronika Penciakova**

Research Assistant

Global Economy and Development

The Brookings Institution

ph: 202.797.6465

**From:** [Oesterle, Eric](#)  
**To:** [Burnell, Scott](#)  
**Subject:** RE: Japan Earthquake Green Ticket - March 22.docx  
**Date:** Tuesday, March 29, 2011 4:06:10 PM

---

OK, thanks. I think they are but we weren't in the loop on the green ticket.  
Eric

---

**From:** Burnell, Scott  
**Sent:** Tuesday, March 29, 2011 4:05 PM  
**To:** Oesterle, Eric; Rihm, Roger  
**Cc:** Anderson, Brian  
**Subject:** RE: Japan Earthquake Green Ticket - March 22.docx

If these are responses to a Congressional query OPA is not the controlling office.  
Nevertheless the answers are OK from our standpoint.

---

**From:** Oesterle, Eric  
**Sent:** Tuesday, March 29, 2011 3:52 PM  
**To:** Rihm, Roger  
**Cc:** Burnell, Scott; Anderson, Brian  
**Subject:** FW: Japan Earthquake Green Ticket - March 22.docx

Roger...attached are responses to questions as noted below for green ticket G2011-0177.  
We will have OPA review also.

Scott...please review attached responses for OPA approval. Thanks!

I apologize in advance if you've received these through other channels.

*Eric*

Eric R. Oesterle  
NRR Communications Team  
Senior Policy Analyst (NRO/DNRL)  
U.S. Nuclear Regulatory Commission  
301-415-1365

---

**From:** Khanna, Meena  
**Sent:** Monday, March 28, 2011 10:11 AM  
**To:** Oesterle, Eric; Markley, Michael  
**Subject:** Fw: Japan Earthquake Green Ticket - March 22.docx

Fyi

---

**From:** Manoly, Kamal  
**To:** Scales, Kerby  
**Cc:** Khanna, Meena; Hiland, Patrick; Skeen, David; Wilson, George  
**Sent:** Fri Mar 25 19:29:21 2011

AB/142

**Subject:** Japan Earthquake Green Ticket - March 22.docx

Kerby,

Attached in the response to Questions 2, 3 & 7 in the Green Ticket.

Kamal

**From:** [McIntyre, David](mailto:McIntyre, David)  
**To:** [Lobsenz, George](mailto:Lobsenz, George); [Burnell, Scott](mailto:Burnell, Scott)  
**Subject:** RE: Moving Spent fuel to Dry Storage  
**Date:** Tuesday, March 29, 2011 4:59:10 PM

---

Ha! Good point.

---

**From:** Lobsenz, George [<mailto:George.Lobsenz@ihs.com>]  
**Sent:** Tuesday, March 29, 2011 4:08 PM  
**To:** McIntyre, David; Burnell, Scott  
**Subject:** RE: Moving Spent fuel to Dry Storage

Thanks Dave--just fyi, Diaz said the NAS recommendation lacked "sound technical basis"--fighting words for a nuclear engineer, in my opinion.

---

**From:** McIntyre, David [<mailto:David.McIntyre@nrc.gov>]  
**Sent:** Tuesday, March 29, 2011 3:51 PM  
**To:** Burnell, Scott; Lobsenz, George  
**Subject:** RE: Moving Spent fuel to Dry Storage

Hi George –

I'd say go with Borchardt's response, as this question and many others certainly will be looked at by the task force.

For background, I don't know if we "fiercely resisted" the NAS recommendation, but in then-Chairman Diaz' letter to Sen. Domenici spelling out our responses, Diaz explained that NRC views both wet and dry storage as safe. Therefore the agency's position is there is no safety reason to require utilities to move it at a certain time. As Borchardt said, that position is likely to be looked at again.

Dave

---

**From:** Burnell, Scott  
**Sent:** Tuesday, March 29, 2011 3:13 PM  
**To:** Lobsenz, George; McIntyre, David  
**Subject:** RE: Moving Spent fuel to Dry Storage

Hi George;

David's in a better position to respond.

Scott

---

**From:** Lobsenz, George [<mailto:George.Lobsenz@ihs.com>]  
**Sent:** Tuesday, March 29, 2011 2:39 PM  
**To:** Burnell, Scott  
**Subject:** Moving Spent fuel to Dry Storage

Hi Scott--

AB/143

I am writing a story today on Dave Lochbaum's call for speedier movement of spent fuel from wet pools to dry storage. This resurrects a recommendation that the National Academy of Sciences made six years ago, and which NRC fiercely resisted as not based on sound science.

At the senate hearing today, Borchardt was not directly asked about Lochbaum's recommendation, but said generally that spent fuel issues would of course be looked at by the new task force on the Fukushima accident.

My question: Does anybody at NRC want to respond specifically to Lochbaum's recommendation for speedier movement of spent fuel to dry storage?

If not, I will go with Borchardt's general comments today that NRC will be looking at all spent fuel issues raised by Fukushima.

Thanks, George

**From:** Burnell, Scott  
**To:** Brenner, Eliot; Hayden, Elizabeth; McIntyre, David; Couret, Ivonne; Anderson, Brian; Janbergs, Holly  
**Subject:** For Wed.  
**Date:** Tuesday, March 29, 2011 5:42:00 PM

---

For any Japan questions that require NRR's help, please CC Robert Nelson in DORL, as he's coordinating their work.

George Wilson is good for station blackout and related issues.  
Robert Dennig is good for Mark I containment issues.  
Pat Hiland/Kamal Manoly/Meena Khanna are GI-199 (Brian can help)

That's about all I can think of at this point. I will NOT BE REACHABLE in the morning.  
Afternoon? Perhaps.

Thanks.

AB/144

**From:** Akstulewicz, Brenda  
**To:** Deavers, Ron; Bonaccorso, Amy  
**Subject:** Info request  
**Date:** Wednesday, March 30, 2011 9:20:00 AM

---

Stephanie Daigle

Law Firm Washington, DC

202-508-8915 (rel)

Confirmation on radioactive particles in rainwater in the area

**Brenda Akstulewicz**

Administrative Assistant

Office of Public Affairs

301-415-8209

[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI 145

**From:** [Hayden, Elizabeth](#)  
**To:** [Sheehan, Neil](#)  
**Cc:** [Burnell, Scott](#)  
**Subject:** FW: SOARCA study put on hold for Japan reviews?  
**Date:** Wednesday, March 30, 2011 3:41:43 PM

---

Fyi

I saw Steve's response that he is set for now, but I'd like RES to give us their "official statement" on this.

*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:** Uhle, Jennifer  
**Sent:** Wednesday, March 30, 2011 3:27 PM  
**To:** Hayden, Elizabeth  
**Cc:** Sheron, Brian  
**Subject:** RE: SOARCA study put on hold for Japan reviews?

Beth, I propose additional language and am double checking it. Can I get it to you tomorrow am?

---

**From:** Hayden, Elizabeth  
**Sent:** Wednesday, March 30, 2011 3:04 PM  
**To:** Uhle, Jennifer  
**Cc:** Sheron, Brian  
**Subject:** FW: SOARCA study put on hold for Japan reviews?

Can someone help us out in Scott Burnell's absence?

Thanks,

*Beth*

---

**From:** Dolley, Steven [[mailto:Steven\\_Dolley@platts.com](mailto:Steven_Dolley@platts.com)]  
**Sent:** Wednesday, March 30, 2011 2:56 PM  
**To:** OPA Resource  
**Cc:** Hayden, Elizabeth  
**Subject:** RE: SOARCA study put on hold for Japan reviews?

Could someone please confirm or disconfirm Neil's statement that the NRC Soarca study is on hold pending the Japan reviews? I'm not sure why he can't, but he referred me to HQ.

Thanks,  
Steve

AB/146

Steven Dolley  
Managing Editor, Inside NRC  
Platts Nuclear  
202-383-2166 Office  
202-383-2187 Fax

---

**From:** Sheehan, Neil [mailto:Neil.Sheehan@nrc.gov]  
**Sent:** Wednesday, March 30, 2011 2:51 PM  
**To:** Dolley, Steven  
**Cc:** Burnell, Scott  
**Subject:** FW: SOARCA study put on hold for Japan reviews?

Steve,

I would refer you to Scott Burnell on this. He may be out today.

Neil  
NRC Public Affairs  
(610) 337-5331

---

**From:** Dolley, Steven [mailto:Steven\_Dolley@platts.com]  
**Sent:** Wednesday, March 30, 2011 2:49 PM  
**To:** Sheehan, Neil  
**Subject:** SOARCA study put on hold for Japan reviews?

Neil, Can you confirm this? If so, how long will the Soarca review be on hold?

Thanks, Steve

That study has been put on hold, though, because the NRC is busy reviewing facilities to make sure vulnerabilities identified from what happened in Japan after the March 11 earthquake and tsunami are not found in U.S. plants, Sheehan said.  
[http://www.timesonline.com/news/figures-showing-high-risk-of-meltdown-at-beaver-valley-outdated/article\\_2b061d5c-5a5a-11e0-b6b3-0017a4a78c22.html](http://www.timesonline.com/news/figures-showing-high-risk-of-meltdown-at-beaver-valley-outdated/article_2b061d5c-5a5a-11e0-b6b3-0017a4a78c22.html)

Steven Dolley  
Managing Editor, Inside NRC  
Platts Nuclear  
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---

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**From:** [Burnell, Scott](#)  
**To:** [Hayden, Elizabeth](#); [Sheehan, Neil](#)  
**Cc:** [Couret, Ivonne](#)  
**Subject:** RE:  
**Date:** Wednesday, March 30, 2011 7:49:00 PM

---

That's essentially what I'd said to the couple of reporters I'd discussed SOARCA with – competing resource demands, but overall impact uncertain.

---

**From:** Hayden, Elizabeth  
**Sent:** Wednesday, March 30, 2011 5:31 PM  
**To:** Sheehan, Neil  
**Cc:** Burnell, Scott; Couret, Ivonne  
**Subject:**

If Steve D. or other reporters ask about SOARCA, our statement per Jennifer Uhle is:

NRC is continuing its efforts on the State of the Art Reactor Consequence Analysis (SOARCA) project at a reduced pace since many of the staff and contractors working on SOARCA are assisting NRC's efforts regarding the Fukushima event. This will undoubtedly stretch the schedule out somewhat but we have not yet determined for exactly how long.

*Beth*

AB/147

**From:** Akstulewicz, Brenda  
**To:** Brenner, Eliot; Hayden, Elizabeth  
**Subject:** Comm. Magwood's Opening Remarks  
**Date:** Thursday, March 31, 2011 8:15:00 AM  
**Importance:** High

---

Eliot,

I have received Comm. Magwood's opening remarks at the small modular reactor briefing yesterday. Please confirm that I should process these as I did his last opening remarks, or since he was acting as the chairman, should they be issued as we do the chairman's?

Thanks,

B

**Brenda Akstulewicz**  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/148

**From:** Lobel, Richard  
**To:** Burnell, Scott; Dennig, Robert; Alexion, Thomas  
**Cc:** Russell, Andrea; Nelson, Robert  
**Subject:** RE: followup question from omaha world-herald  
**Date:** Thursday, March 31, 2011 2:37:15 PM

---

8 PWRs use containment accident pressure in calculating available NPSH.

---

**From:** Burnell, Scott  
**Sent:** Thursday, March 31, 2011 1:58 PM  
**To:** Dennig, Robert; Alexion, Thomas  
**Cc:** Russell, Andrea; Nelson, Robert; Lobel, Richard  
**Subject:** RE: followup question from omaha world-herald

Bob;

Have any PWRs claimed CAP credit? Thanks.

Scott

---

**From:** Dennig, Robert  
**Sent:** Thursday, March 24, 2011 3:18 PM  
**To:** Burnell, Scott; Alexion, Thomas  
**Cc:** Russell, Andrea; Nelson, Robert; Lobel, Richard  
**Subject:** RE: followup question from omaha world-herald

9 units credited CAP in their Extended Power Uprates (EPUs). Duane Arnold is one of them.

4 additional units still in EPU review request CAP credit.

---

**From:** Burnell, Scott  
**Sent:** Thursday, March 24, 2011 2:43 PM  
**To:** Alexion, Thomas; Dennig, Robert  
**Cc:** Russell, Andrea; Nelson, Robert  
**Subject:** RE: followup question from omaha world-herald

Bob D.;

Can we determine quickly?

Bob N. – this is probably Japan-related, sorry for the oversight.

---

**From:** Alexion, Thomas  
**Sent:** Thursday, March 24, 2011 2:41 PM  
**To:** Burnell, Scott  
**Cc:** Russell, Andrea  
**Subject:** RE: followup question from omaha world-herald

Scott,

I do not have this information, and it is not something I could generate quickly. (I would

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have to read each of the 135 approved power uprates (specifically the Safety Evaluations of each) to determine this information.)

SCVB may have the information.

The SCVB Branch Chief is Robert Denning.

Tom

---

**From:** Burnell, Scott  
**Sent:** Thursday, March 24, 2011 2:14 PM  
**To:** Alexion, Thomas  
**Cc:** Dricks, Victor  
**Subject:** RE: followup question from omaha world-herald  
**Importance:** High

Tom;

Is there any way to determine this quickly??? Thanks!

Scott

---

**From:** Dricks, Victor  
**Sent:** Thursday, March 24, 2011 2:09 PM  
**To:** Burnell, Scott  
**Subject:** FW: followup question from omaha world-herald

Could you please respond?

---

**From:** Gaarder, Nancy [mailto:Nancy.Gaarder@owh.com]  
**Sent:** Thursday, March 24, 2011 12:42 PM  
**To:** Dricks, Victor  
**Subject:** followup question from omaha world-herald

Hi Victor,

I'm following up on the Duane Arnold question: Would you be able to tell me how many BWR/Mark 1 reactors have been given credit for containment overpressure as part of a power uprate?

Thank you,

Nancy

---

## Omaha World-Herald

[www.omaha.com](http://www.omaha.com)

**Nancy Gaarder**

Reporter

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1314 Douglas St. - Suite 700

Omaha, NE 68102

**From:** Burnell, Scott  
**To:** Uhle, Jennifer; Brenner, Eliot; Hayden, Elizabeth  
**Subject:** RE: Fukushima Video  
**Date:** Thursday, March 31, 2011 2:41:00 PM

---

Ah yes, stellar reporting from Fox. How unusual. (wish I had a sarcasm emoticon)

---

**From:** Uhle, Jennifer  
**Sent:** Thursday, March 31, 2011 2:39 PM  
**To:** Burnell, Scott; Brenner, Eliot; Hayden, Elizabeth  
**Subject:** RE: Fukushima Video

Yes the video and the article.

---

**From:** Burnell, Scott  
**Sent:** Thursday, March 31, 2011 2:38 PM  
**To:** Uhle, Jennifer; Brenner, Eliot; Hayden, Elizabeth  
**Subject:** RE: Fukushima Video

"We Are Ready To Die," you mean? I wonder how good Fox's translator is...

---

**From:** Uhle, Jennifer  
**Sent:** Thursday, March 31, 2011 2:34 PM  
**To:** Brenner, Eliot; Hayden, Elizabeth; Burnell, Scott  
**Subject:** FW: Fukushima Video

Did you see this one?

In first section click on video.

<http://www.foxnews.com/>

ABI/150

**From:** [Burnell, Scott](#)  
**To:** [fflam@phillynews.com](mailto:fflam@phillynews.com)  
**Cc:** [Couret, Ivonne](#)  
**Subject:** RE: MEDIA -FW: NRC REPLY - Media - Philadelphia Inquirer  
**Date:** Thursday, March 31, 2011 4:28:00 PM

---

Hello Faye;

The NRC simply isn't in a position to comment on the latest "snapshot" of the situation, particularly those based on media reports. Officials in Japan are best able to provide updates on the current conditions at Fukushima. Thanks.

Scott Burnell  
Public Affairs Officer  
Nuclear Regulatory Commission

---

**From:** Flam, Faye [<mailto:fflam@phillynews.com>]  
**Sent:** Thursday, March 31, 2011 3:30 PM  
**To:** Couret, Ivonne  
**Subject:** RE: NRC REPLY - Media - Philadelphia Inquirer

Ivonne,

My question is pretty straight forward. A physicist at Temple U called me to say that the Japanese are reporting a radioactive isotope of chlorine that is indicative of a "reignition" of reactor 1. This is something he said "made his hair stand up on end." And yet there hasn't been much reported on this possibility. So I'm looking for someone to address it.

Thanks,  
Faye

---

**From:** Couret, Ivonne [<mailto:Ivonne.Couret@nrc.gov>]  
**Sent:** Thursday, March 31, 2011 2:37 PM  
**To:** Flam, Faye  
**Subject:** NRC REPLY - Media - Philadelphia Inquirer

Faye,

Specifically do you have any questions to ask or verify. I just want to be able to get the correct public affairs officer to respond.

Please note that this week the agency has been on the hill. Here are the hearings for this week:  
**Tuesday, March 29, 10:00 am,**– Senate Energy and Natural Resources Committee  
366 Dirksen Senate Office Building  
Mr. Bill Borchardt: **Update on Fukushima**

**Wednesday, March 30, 10:00 am,** House Transportation and Infrastructure Subcommittee on Economic Development, Public Buildings, and Emergency Management  
2253 Rayburn House Office Building  
Mr. Mike Weber: **Emergency Management Programs**

**Wednesday, March 30, 10:00 am,** Senate Appropriations Energy and Water Subcommittee  
138 Dirksen Senate Office Building

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Chairman Jaczko: **Review of Nuclear Safety**

**Thursday, March 31**, 10:00 am, House Appropriations Energy and Water Subcommittee  
2362B Rayburn House Office Building  
Chairman Jaczko

**Ivonne L. Couret**  
Public Affairs Officer  
Office of Public Affairs  
Media Desk  
[opa.resource@nrc.gov](mailto:opa.resource@nrc.gov)  
301-415-8200

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<http://www.nrc.gov/reading-rm/photo-gallery/>

2010-2011 Information Digest - Where you can find NRC Facts at a Glance  
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>

---

**From:** Royer, Deanna  
**Sent:** Thursday, March 31, 2011 2:31 PM  
**To:** Couret, Ivonne  
**Subject:** Media - Philadelphia Inquirer

Faye Flam  
Philadelphia Inquirer  
215-854-4977  
[fflam@phillynews.com](mailto:fflam@phillynews.com)  
Re: Japan crises

Deanna Royer  
Contract Secretary  
Division of New Reactor Licensing  
(301) 415-7158  
[Deanna.Royer@nrc.gov](mailto:Deanna.Royer@nrc.gov)

**From:** [Hayden, Elizabeth](#)  
**To:** [Wilson, George](#)  
**Cc:** [Brenner, Eliot](#); [Burnell, Scott](#); [Weber, Michael](#)  
**Subject:** FW: HEADS UP - MISLEADING HOMELAND SECURITY NEWSWIRE ARTICLE  
**Date:** Thursday, March 31, 2011 6:12:17 PM

---

George,

Per Mike Weber's e-mail below, can you send me the information you pulled together to rebut this misconception about batteries so we can get the information out?

*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:** Brenner, Eliot  
**Sent:** Thursday, March 31, 2011 5:48 PM  
**To:** Hayden, Elizabeth  
**Subject:** FW: HEADS UP - MISLEADING HOMELAND SECURITY NEWSWIRE ARTICLE

There is some material around that sets this straight. I would agree that maybe a for the record or even a blog post might clear this up.

eliot

---

**From:** Weber, Michael  
**Sent:** Thursday, March 31, 2011 7:19 AM  
**To:** Brenner, Eliot; Hayden, Elizabeth  
**Cc:** Leeds, Eric; Wilson, George; Sheron, Brian; Gibson, Kathy; Wittick, Brian; Boger, Bruce; LIA06 Hoc; LIA08 Hoc; Andersen, James; Muessle, Mary; Borhardt, Bill  
**Subject:** HEADS UP - MISLEADING HOMELAND SECURITY NEWSWIRE ARTICLE

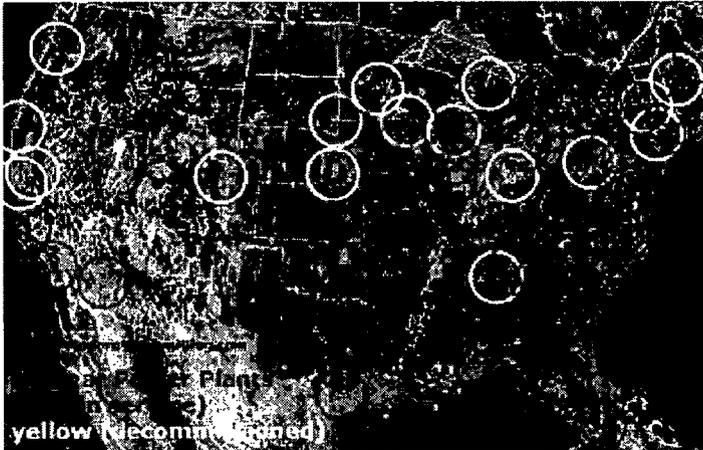
Good morning, Eliot and Beth. I suggest that we issue a "For the Record" or Blog posting or stronger response to this misleading article that was posted this morning in the Homeland Security Newswire. AP ran a story similar to this earlier this week picking up on Dave Lochbaum's testimony. NRC staff (NRR & RES, led by George Wilson) scrambled on Tuesday to pull together information to rebut this misinformation. However, it appears that the story has legs.

Thanks

**U.S. reactors have weaker back-up batteries than Fukushima Daiichi had**

AB/152

Almost all American nuclear power plants have backup batteries that would last only half as long as those at Japan's troubled Fukushima Daiichi plant did after a tsunami knocked out power there; just eleven of the U.S. 104 plants had eight-hour batteries, and 93 had four-hour batteries; the batteries are not powerful enough to run pumps that direct cooling water, but they can operate valves and can power instruments that give readings of water levels, flow and temperatures



U.S. reactors, all with underpowered batteries // Source: modernsurvivalblog.com

Almost all American nuclear power plants have backup batteries that would last only half as long as those at Japan's troubled Fukushima Daiichi plant did after a tsunami knocked out power there, an expert testified Tuesday at a Senate committee briefing on nuclear safety.

An industry official, addressing the Senate Energy and Natural Resources Committee, conceded that battery life was "one of the obvious places" that nuclear operators would examine for potential improvements. The *New York Times* reports that David Lochbaum, a nuclear expert at the Union of Concerned Scientists, which generally takes a critical tone toward nuclear reactors, said that just eleven of the nation's 104 plants had eight-hour batteries, and 93 had four-hour batteries. The batteries are not powerful enough to run pumps that direct cooling water, but they can operate valves and can power instruments that give readings of water levels, flow and temperatures.

After the 11 March tsunami disabled the local electricity grid at the Fukushima Daiichi plant and the plant's emergency diesel generators, the failure of the batteries deprived the plant's operators of those crucial measurements.

Addressing the committee with Lochbaum was Anthony R. Pietrangelo, senior vice president and chief nuclear officer of the Nuclear Energy Institute (NEI), the industry trade association. "To get to 48 hours, or 72 hours, pick a number," he said of the backup batteries. "We're going to have to take a hard look and see what resources would be required."

The *Times* notes that after the committee briefing, Pietrangelo said that one alternative to adding long-lasting batteries could be having portable diesel generators available for quick dispatch to a reactor. Some equipment intended to cope with a severe accident or terrorist

attack is already centrally stockpiled, he said.

Separately, Representative Edward J. Markey (D-Massachusetts), said Tuesday that he would introduce legislation to require that American plants acquire 72-hour batteries along with fourteen days of fuel for the backup diesel generators.

Fukushima reportedly had seven days of diesel fuel, but the tanks were washed away by the tsunami; most American plants bury their tanks for safety, according to industry officials.

The bill would also impose a moratorium on license renewals and on new plant licenses.

Another expert who spoke before the Senate committee, William Borchardt, the chief staff official of the Nuclear Regulatory Commission (NRC), said that the Fukushima crisis would have no impact on the commission's granting of new licenses or license extensions.

If Japan's experience shows that changes in reactors are needed here, he said, those will be ordered immediately, regardless of the status of the plant's license, license extension or license application.

Another American practice that appears likely to be re-evaluated in view of Japan's crisis is filling pools with spent fuel to the maximum extent possible. Markey and others called for reducing the risk by moving some fuel to dry casks, something that is done now only when the pool is at capacity.

*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:** [Harrington, Holly](#)  
**To:** [Burnell, Scott](#); [McIntyre, David](#)  
**Cc:** [Brenner, Eliot](#)  
**Subject:** FW: Article from Japanese newspaper  
**Date:** Friday, April 01, 2011 8:54:55 AM

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fyi

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**From:** Janbergs, Holly **On Behalf Of** OPA Resource  
**Sent:** Friday, April 01, 2011 7:46 AM  
**To:** Harrington, Holly  
**Subject:** FW: Article from Japanese newspaper

---

**From:** LIA06 Hoc  
**Sent:** Thursday, March 31, 2011 6:24 PM  
**To:** OPA Resource; OPA1 RESOURCE; OPA2 Resource; OPA4 Resource; RST01 Hoc  
**Cc:** LIA01 Hoc; LIA02 Hoc; LIA03 Hoc; LIA04 Hoc; LIA05 Hoc; LIA06 Hoc; LIA07 Hoc; LIA08 Hoc; LIA09 Hoc; LIA10 Hoc; LIA11 Hoc; LIA12 Hoc; OST05 Hoc  
**Subject:** FW: Article from Japanese newspaper

FYI and potential action. The article below may get circulation in the US and elsewhere and cause questions to be posed to us regarding studies conducted in the early 80s by ORNL under NRC direction for a BWR scenario that some may link to the Fukushima event. It has been forwarded to RES for their review and action by the ET.

Mark Lombard  
Liaison Team Director  
U.S. Nuclear Regulatory Commission  
Operations Center

---

**From:** ET02 Hoc  
**Sent:** Thursday, March 31, 2011 5:54 PM  
**To:** LIA06 Hoc  
**Subject:** FW: Article from Japanese newspaper

This is the article that Brian wanted sent to OPA for their awareness in case it hits US media. This Japanese paper posts their articles via Facebook. They are named Asahi Japan Watch.

---

**From:** ET02 Hoc  
**Sent:** Thursday, March 31, 2011 3:56 PM  
**To:** Sheron, Brian  
**Subject:** Article from Japanese newspaper

AJW by the Asahi Shimbun  
AJW 3/11 quake update:

U.S. simulation predicted similar problems at Fukushima nuclear plant

ABI/153

A U.S. simulation exercise conducted about 30 years ago of what would happen at a boiling-water reactor if all power sources were lost eerily matches what has unfolded at the Fukushima No. 1 nuclear power plant.

...While the simulation demonstrated the dangers of losing all power sources, Japan's nuclear authorities took the optimistic position that power transmission lines and other power sources would be restored quickly.

The simulation was conducted by the Oak Ridge National Laboratory in 1981 and 1982. A report was later submitted to the U.S. Nuclear Regulatory Commission, which used the report's findings to establish safety regulations.

The simulation was based on the No. 1 reactor at the Browns Ferry Nuclear Plant in Alabama. The reactor had an output of 1.1 gigawatts and was the same Mark I boiling-water reactor manufactured by General Electric Co. that is used at the No. 1 to No. 5 reactors at the Fukushima No. 1 nuclear plant.

One part of the simulation assumes that an external AC power source as well as emergency diesel generators have been lost, which is what actually happened at the Fukushima No. 1 plant after the Great East Japan Earthquake and subsequent tsunami hit on March 11.

The simulation goes on to predict what would likely occur depending on how long the emergency batteries were operable as well as on how the emergency cooling mechanism was working.

If the batteries could be used for four hours, the simulation predicts that after five hours without external power, the fuel rods in the core would become exposed. Thirty minutes later, the fuel rods would reach 485 degrees and start producing hydrogen. Another 30 minutes later, the fuel rods would begin to melt, according to the simulation.

It goes on to predict that seven hours after the loss of an external power source, the lower part of the pressure container would be damaged. Ninety minutes later, the containment vessel would be damaged.

Another simulation exercise assuming the use of batteries for six hours has fuel rods being exposed after eight hours and starting to melt after 10 hours. Damage to the containment vessel would occur after 13-and-a-half hours.

At the Fukushima No. 1 plant, the external power source was lost when the earthquake struck. It switched to an emergency diesel generator, but that was flooded and irreparably damaged by the tsunami about an hour later.

The only remaining power source was a DC battery.

At that point, the conditions at the Fukushima plant were nearly identical to those used in the simulation exercise.

Despite the fact that the batteries at the Fukushima plant could be used for eight hours, rather than six, the ensuing events at the Fukushima plant closely mimicked those in the simulation. Moreover, if the predictions are extrapolated, it would mean that the containment vessels may no longer be sound, despite contrary comments by officials of Tokyo Electric Power Co., the operator of the Fukushima plant.

Satoshi Sato is a nuclear consultant who worked for many years at a GE-affiliated company, managing boiling-water reactors.

"The simulation is still sufficiently valid today," he said. "But I do not know if such knowledge has been passed down within electric power companies."

In Japan, the possibility that all external power sources could be lost at nuclear plants has not been seriously considered.

In 1990, when the Nuclear Safety Commission of Japan decided on guidelines for approving safety design at nuclear plants, it stated, "There is no need to consider the loss of all AC power sources for a long period of time because we can expect a restoration of power transmission lines or the recovery of emergency AC power source facilities."

Shojiro Matsuura, president of the Nuclear Safety Research Association, once served as NSC chairman.

"There was the unspoken understanding that we did not have to think about a situation in which everything failed," Matsuura said. "It was not possible to foresee every possibility, such as a direct hit by a meteor."

(This article was written by Ichiro Matsuo and Ryoma Komiyama.)

(Copyright 2011 the Asahi Shimbun. All Rights Reserved.)

**From:** [Blount, Tom](#)  
**To:** [Quichocho, Jessie](#)  
**Cc:** [McGinty, Tim](#); [Boger, Bruce](#); [Leeds, Eric](#); [Burnell, Scott](#); [Adams, Alexander](#); [Tran, Linh](#)  
**Subject:** RE: Columbia Tribune Article  
**Date:** Friday, April 01, 2011 9:07:58 AM

---

Thanks for the update. I think you are right though, given current events there could be additional interest so being prepared will be a very good thing....

Tom

---

**From:** Quichocho, Jessie  
**Sent:** Friday, April 01, 2011 8:20 AM  
**To:** Blount, Tom  
**Cc:** McGinty, Tim; Boger, Bruce; Leeds, Eric; Burnell, Scott; Adams, Alexander; Tran, Linh  
**Subject:** FW: Columbia Tribune Article

It seems that RTRs are coming up on the radar screens...I worked with Scott yesterday on Aerotest. The RTR staff gave the Commission TAs a briefing on the status of RTR renewals in the summer last year to include how RTRs differ from power reactors and their safety significance. As part of this briefing, the management chain was also briefed. I do not see a need to brief up at the moment, however I will brush the dust off what we presented last year and update it (just in case).

As an fyi, we do have a Commission meeting tentatively scheduled in July on the topic of "status of RTR license renewals." Depending on how the current NRC environment with relation to Japan develops, the Commission may use this meeting to discuss other topics besides license renewal. But, it's too early to tell as well as if this meeting will happen.

The RTR group will continue to work with and support OPA and be at the ready should briefings be needed.

-Jessie

---

**From:** Burnell, Scott  
**Sent:** Thursday, March 31, 2011 4:51 PM  
**To:** Adams, Alexander; Quichocho, Jessie  
**Subject:** RE: Columbia Tribune Article

Gentlemen;

Here's what will appear in tonight's "coming attractions" note from OPA to senior managers:

AEROTEST – OPA has been working with a San Francisco reporter examining Northern California research and test reactors in the aftermath of events in Japan. In the course of the conversation, the reporter noted he'd "heard" that the Aerotest facility's license had expired. OPA used an existing NRR communication plan and publicly available documents to explain the unique status of Aerotest and the NRC's expectations for the facility going forward. Publication expected this weekend.

Scott

ABI/154

**From:** [Akstulewicz, Brenda](#)  
**To:** [Medina, Veronika](#)  
**Subject:** FW: Info request - NHK TV  
**Date:** Friday, April 01, 2011 12:04:00 PM

---

**From:** Couret, Ivonne  
**Sent:** Friday, April 01, 2011 10:23 AM  
**To:** Akstulewicz, Brenda  
**Subject:** RE: Info request - NHK TV

Send items to VERONIKA

---

**From:** Akstulewicz, Brenda  
**Sent:** Friday, April 01, 2011 10:23 AM  
**To:** Couret, Ivonne  
**Subject:** Info request - NHK TV

**Alex Kirst**  
**NHK Japanese TV**  
**718-839-3859**  
**are all new plants licensed for 40 years**

Brenda Akstulewicz  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



ABI 155

**From:** [Anderson, Brian](#)  
**To:** [Sanfilippo, Nathan](#)  
**Cc:** [Burnell, Scott](#)  
**Subject:** I'm leaving now -- RE: Task force press release  
**Date:** Friday, April 01, 2011 12:21:08 PM

---

Nathan – I'm leaving the office now. Scott will handle the press release from here.

Thanks for your help during all of the back-and-forth on this.

Brian

---

**From:** Anderson, Brian  
**Sent:** Friday, April 01, 2011 12:15 PM  
**To:** Sanfilippo, Nathan  
**Cc:** Burnell, Scott  
**Subject:** RE: Task force press release

Got it. Thank you!

---

**From:** Sanfilippo, Nathan  
**Sent:** Friday, April 01, 2011 12:15 PM  
**To:** Anderson, Brian  
**Cc:** Burnell, Scott  
**Subject:** RE: Task force press release

That's the charter, and the other document is the memo that transmits it.

---

**From:** Anderson, Brian  
**Sent:** Friday, April 01, 2011 12:08 PM  
**To:** Sanfilippo, Nathan  
**Cc:** Burnell, Scott  
**Subject:** RE: Task force press release

Nathan – As a back-up plan to ensure the press release can get issued today, we can add the charter to the end of the press release. Can you confirm that ML11089A045 is the final/approved charter?

Thanks,  
Brian

---

**From:** Sanfilippo, Nathan  
**Sent:** Friday, April 01, 2011 12:05 PM  
**To:** Taylor, Renee; Anderson, Brian  
**Cc:** Burnell, Scott  
**Subject:** RE: Task force press release

Thanks so much!

---

**From:** Taylor, Renee  
**Sent:** Friday, April 01, 2011 12:04 PM  
**To:** Sanfilippo, Nathan; Anderson, Brian  
**Cc:** Burnell, Scott

AB/156

**Subject:** RE: Task force press release

Resubmitted for immediate release.

---

**From:** Sanfilippo, Nathan  
**Sent:** Friday, April 01, 2011 11:55 AM  
**To:** Anderson, Brian; Taylor, Renee  
**Cc:** Burnell, Scott  
**Subject:** RE: Task force press release

Yes, immediately. Who do we need to work with to make that happen?

Renee, can you help?

Thanks!  
Nathan

---

**From:** Anderson, Brian  
**Sent:** Friday, April 01, 2011 11:50 AM  
**To:** Sanfilippo, Nathan  
**Cc:** Burnell, Scott  
**Subject:** RE: Task force press release

Nathan - Are you pushing for the charter to be released immediately...or is it in the normal processing queue?

If it takes until the end of the day for the charter to be declared, it probably makes more sense to hold the press release until Monday.

Brian

---

**From:** Taylor, Renee  
**Sent:** Friday, April 01, 2011 10:30 AM  
**To:** Anderson, Brian  
**Subject:** RE: Task force press release

They were placed in ADAMS Document Processing, I would think they will be declared sometime today.

---

**From:** Anderson, Brian  
**Sent:** Friday, April 01, 2011 9:16 AM  
**To:** Taylor, Renee  
**Cc:** Sanfilippo, Nathan; Burnell, Scott  
**Subject:** RE: Task force press release  
**Importance:** High

Renee –

Can you tell me whether the task force charter and memo (Memo: ML11089A030 -- Charter: ML11089A045) are ready to be declared in ADAMS?

They are profiled for public release, but because the documents have not yet been

declared, they do not appear in an external (public) ADAMS search.

Thank you,  
Brian

---

**From:** Sanfilippo, Nathan  
**Sent:** Friday, April 01, 2011 8:58 AM  
**To:** Burnell, Scott; Anderson, Brian  
**Cc:** Miller, Charles  
**Subject:** RE: Task force press release

Memo: ML11089A030 Charter: ML11089A045

I'm over in the other building. Renee Taylor could probably tell you the status of its public availability.

Thanks!

---

**From:** Burnell, Scott  
**Sent:** Friday, April 01, 2011 8:53 AM  
**To:** Sanfilippo, Nathan; Anderson, Brian  
**Cc:** Miller, Charles  
**Subject:** Task force press release

Nathan, Brian;

I have the release back from the Chairman's office – just need the URL for the task force charter or the ML # if it's only going into ADAMS. I'll work in all the edits from the 17<sup>th</sup> floor. Thanks.

Scott

**From:** Anderson, Brian  
**To:** Burnell, Scott  
**Subject:** Status of Task Force Press Release  
**Date:** Friday, April 01, 2011 12:23:01 PM

---

Scott –

1. Chairman's office revisions have been made. I put the concurrence package on your desk.
2. The press release file is -- G:\ Crisis Communication\Japan Quake Tsunami\TF\_charter\_press\_release.docx
3. The task force charter accession # is ML11089A045
4. As of right now, the charter and memo have not been made publically available.

Brian

AB/157 -

**From:** [Burnell, Scott](#)  
**To:** "[Steven Dolley@platts.com](mailto:Steven_Dolley@platts.com)"  
**Subject:** Re: Fox News has this wrong  
**Date:** Friday, April 01, 2011 12:41:23 PM

---

You are correct, thanks.

Sent from an NRC Blackberry  
Scott Burnell  
202-441-0471

---

**From:** Dolley, Steven <[Steven\\_Dolley@platts.com](mailto:Steven_Dolley@platts.com)>  
**To:** Burnell, Scott  
**Sent:** Fri Apr 01 12:40:11 2011  
**Subject:** Fox News has this wrong

<http://latino.foxnews.com/latino/money/2011/04/01/regulators-say-3-nuke-plants-need-closer-look/#>

The NRC felt the three required significant additional oversight but continue to operate safely," spokesman Scott Burnell said, discussing the results of a review of all 104 U.S. nuclear reactors ordered by President Barack Obama after the crisis at the Fukushima Daiichi complex in earthquake-stricken Japan.

Burnell said the review uncovered potential problems at the H.B. Robinson plant in South Carolina, Fort Calhoun in Nebraska and Wolf Creek in Kansas.

You were, in fact, referring to the ROP annual assessments and the three plants still in Column 3, correct? NOT the results of the Japan review?

Just want to make sure I didn't miss something

Thanks,  
Steve

Steven Dolley  
Managing Editor, Inside NRC  
Platts Nuclear  
202-383-2166 Office  
202-383-2187 Fax

---

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ABI/158

**From:** Medina, Veronika  
**To:** Burnell, Scott  
**Subject:** RE: Info request - NHK TV  
**Date:** Friday, April 01, 2011 1:51:12 PM

---

Thanks!

---

**From:** Burnell, Scott  
**Sent:** Friday, April 01, 2011 1:49 PM  
**To:** Medina, Veronika  
**Subject:** RE: Info request - NHK TV

Done.

---

**From:** Medina, Veronika  
**Sent:** Friday, April 01, 2011 1:47 PM  
**To:** Burnell, Scott  
**Subject:** FW: Info request - NHK TV

Scott,

Can you please call this reporter?

Thanks,  
Veronika

---

**From:** Akstulewicz, Brenda  
**Sent:** Friday, April 01, 2011 12:05 PM  
**To:** Medina, Veronika  
**Subject:** FW: Info request - NHK TV

---

**From:** Couret, Ivonne  
**Sent:** Friday, April 01, 2011 10:23 AM  
**To:** Akstulewicz, Brenda  
**Subject:** RE: Info request - NHK TV

Send items to VERONIKA

---

**From:** Akstulewicz, Brenda  
**Sent:** Friday, April 01, 2011 10:23 AM  
**To:** Couret, Ivonne  
**Subject:** Info request - NHK TV

**Alex Kirst**  
**NHK Japanese TV**  
**718-839-3859**  
**are all new plants licensed for 40 years**

Brenda Akstulewicz  
Administrative Assistant  
Office of Public Affairs

ABI/15a

From: Burnell, Scott  
 To: Nelson, Robert  
 Subject: RE: Query: Today's Headlines: Retreat for Rebels; Libyan Foreign Minister Quits  
 Date: Friday, April 01, 2011 3:09:00 PM  
 Attachments: image001.png

The only NRC info there is on the 50-mile recommendation and that's described accurately. I'd stick to that info only in any public meetings.

From: Nelson, Robert  
 Sent: Friday, April 01, 2011 3:08 PM  
 To: Burnell, Scott  
 Subject: Query: Today's Headlines: Retreat for Rebels; Libyan Foreign Minister Quits

Should have forwarded this earlier. Any insights?

NELSON

From: Barkley, Richard  
 Sent: Thursday, March 31, 2011 5:36 PM  
 To: Nelson, Robert  
 Cc: Roberts, Darrell; McDermott, Brian  
 Subject: FW: Today's Headlines: Retreat for Rebels; Libyan Foreign Minister Quits

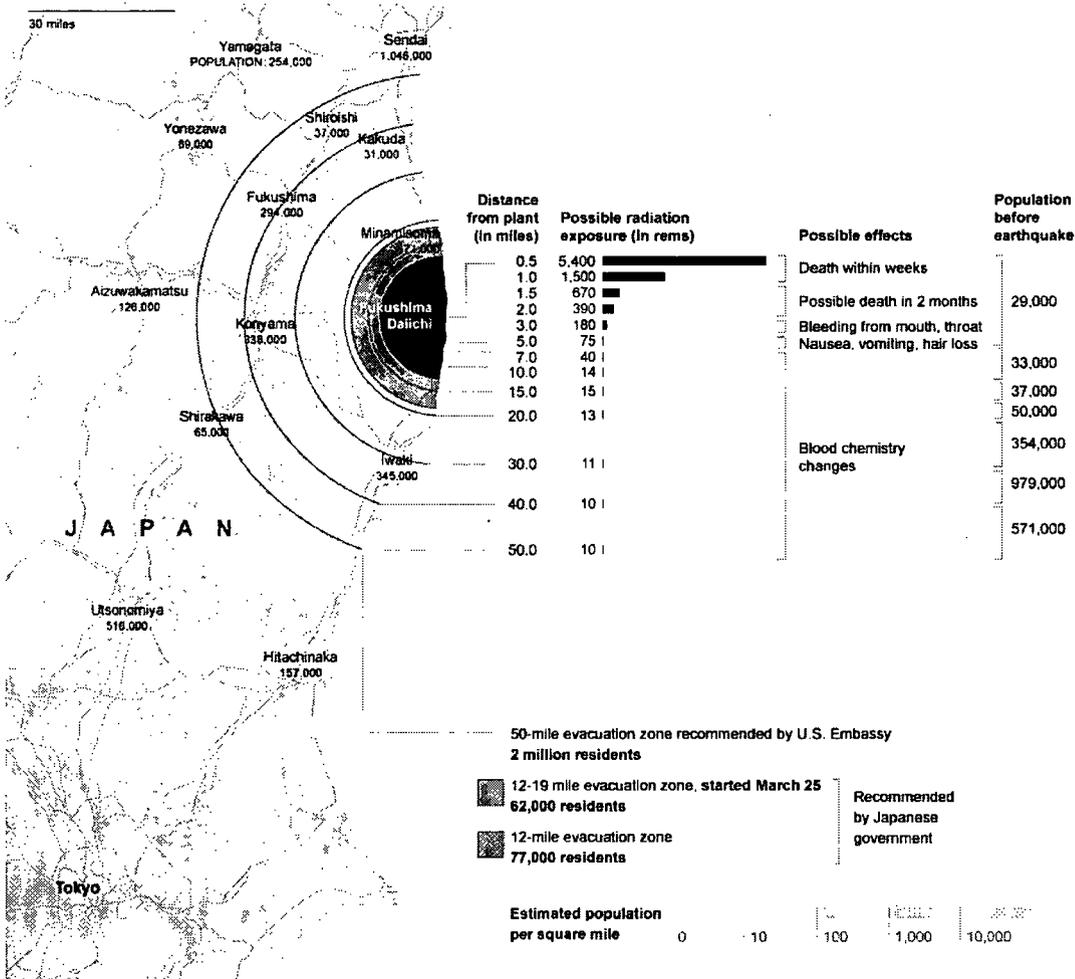
Nelson,

The New York Times conveyed a considerable amount of information today regarding radiation exposures to citizens near Fukushima (assuming they had remained in their homes). The article claimed some very high exposure numbers. The quoted sources for this information included the Nuclear Regulatory Commission.

Have we prepared any type of equivalent information along these lines? I am anticipating seeing these graphics show up at public meetings in the months ahead. Anything that would suggest the kind of exposures being received by the public would be helpful – My guess is that very few members of the public got anywhere near these amounts because they left the area promptly due to the evacuation order, or because the earthquake/tsunami made their home uninhabitable.

Thanks – Maybe Brian's staff have prepared such a document.

### The Evacuation Zones Around the Fukushima Daiichi Nuclear Plant



Estimates of Possible Exposure Define U.S. Evacuation Zone

ABI/160

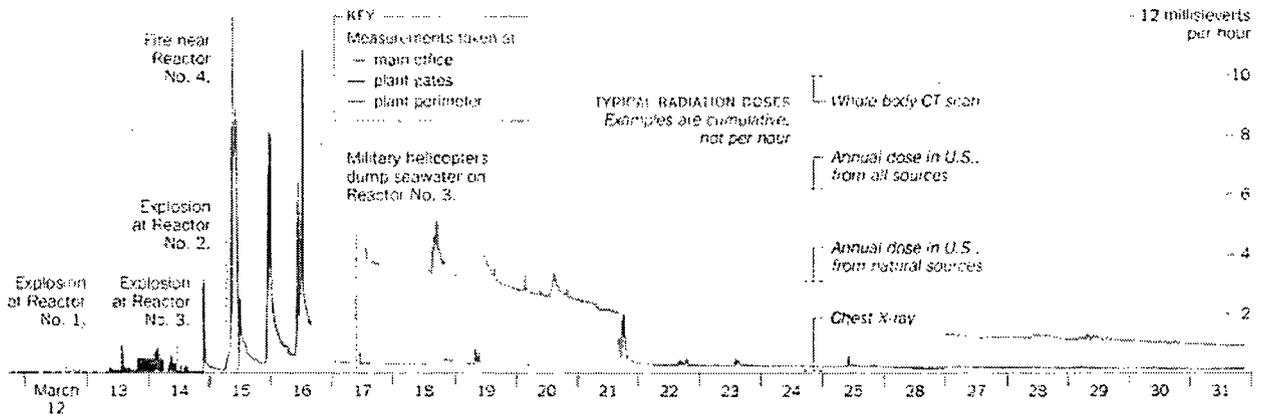
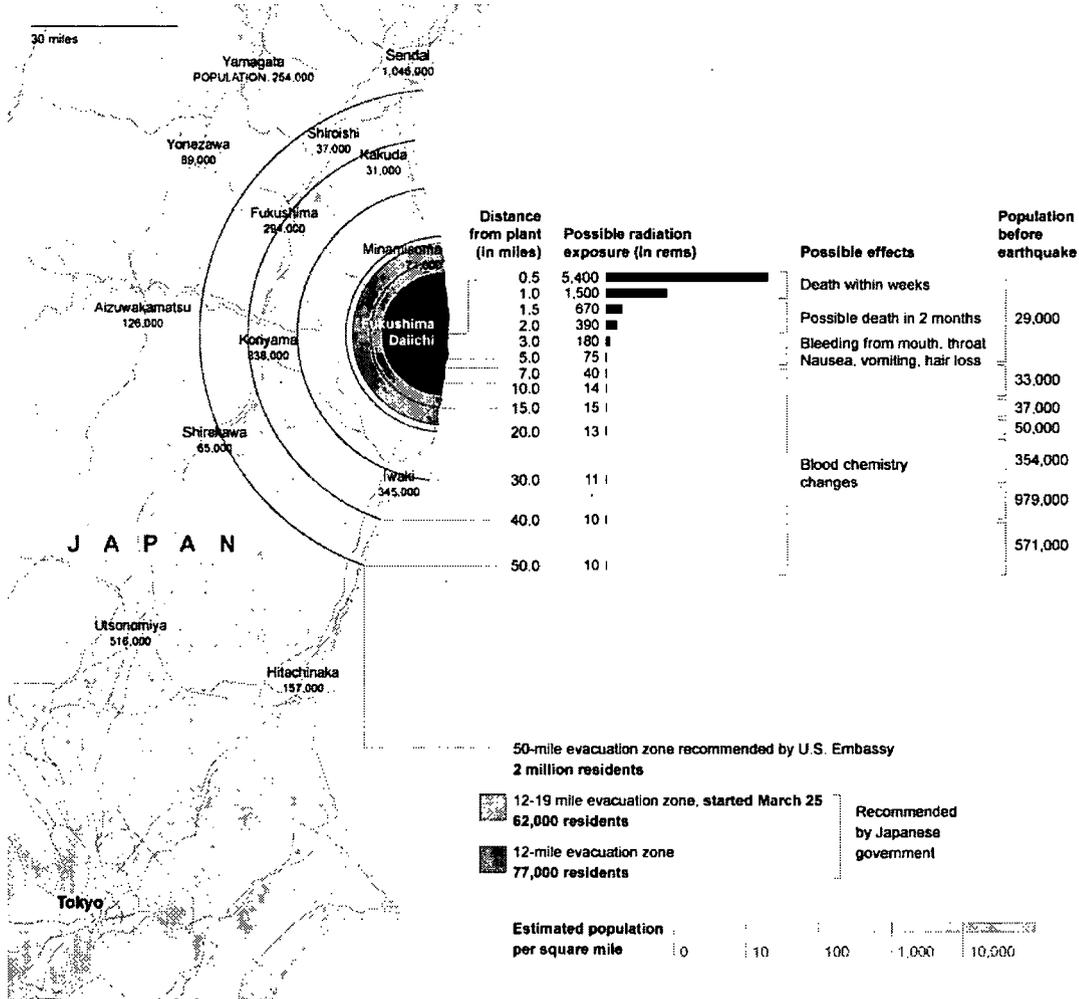
The American Embassy recommended on March 17 that Americans within 50 miles of the Fukushima reactors evacuate. The recommendation was based on an analysis by the Nuclear Regulatory Commission that predicts possible radiation levels assuming conditions at the plant degrade. It is not based on current radiological conditions. It includes factors like whether containment vessels remain intact and weather patterns, among others. Here are the results of the analysis on March 16.

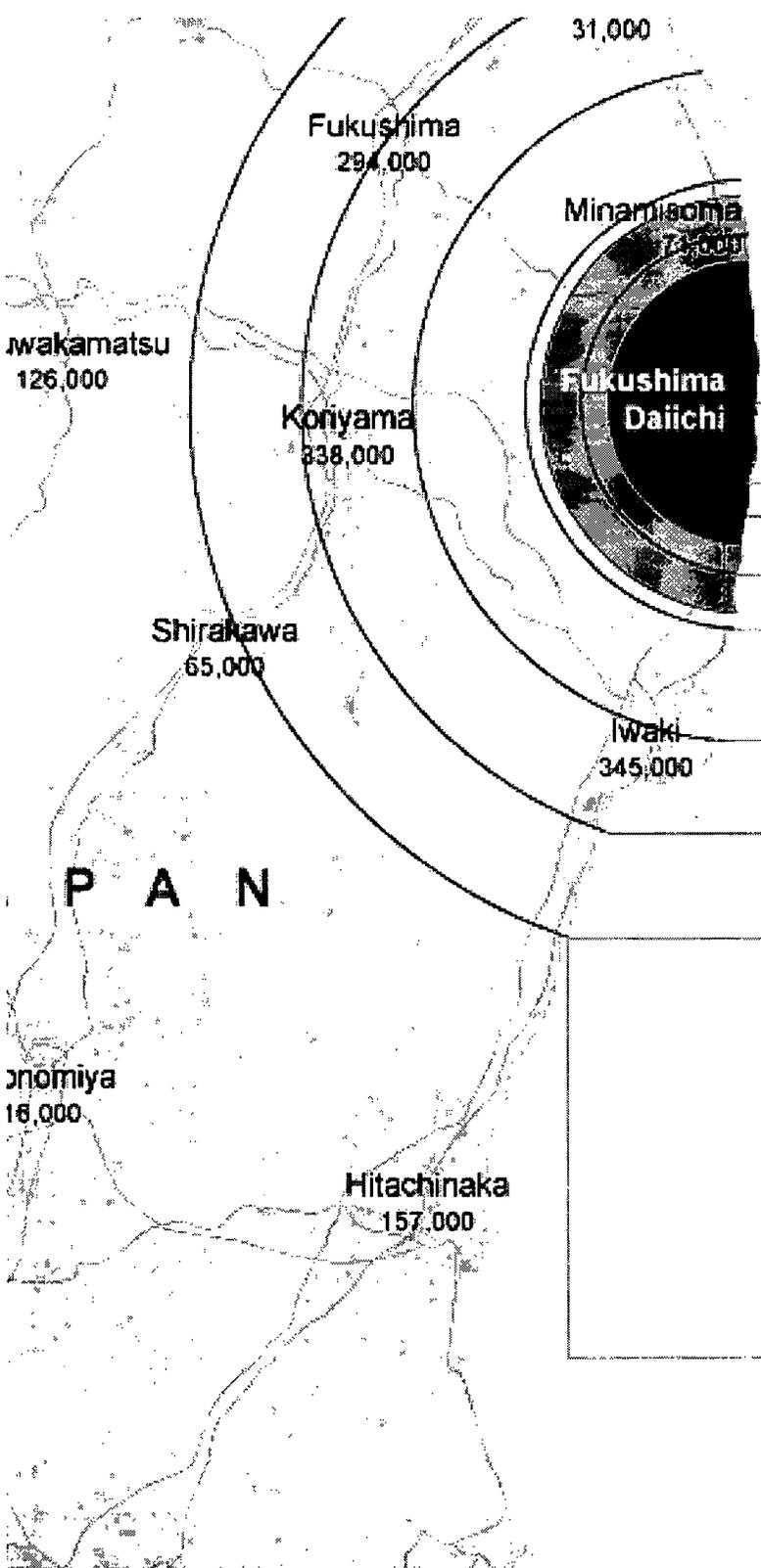
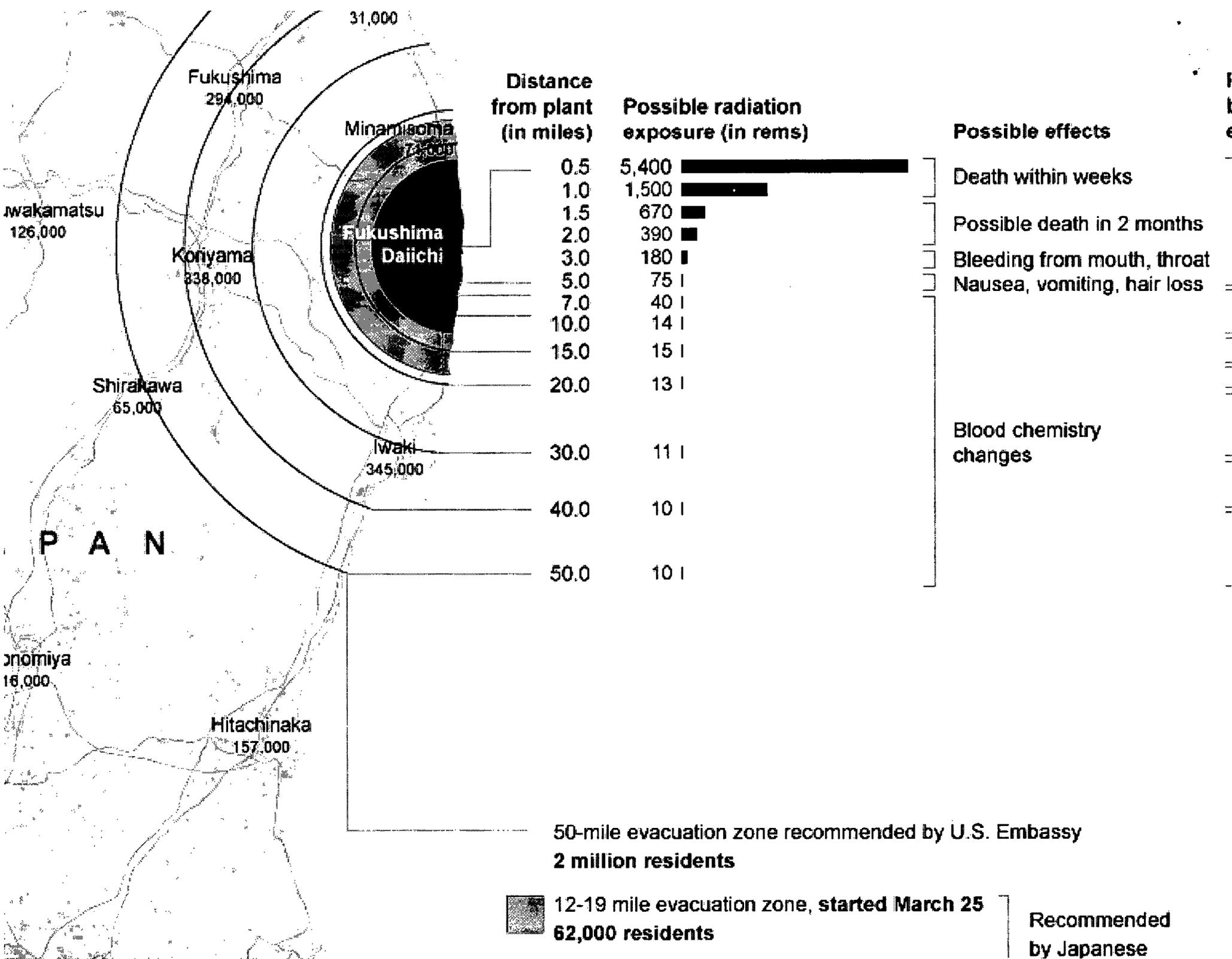
### Japanese and American Evacuation Zones

About 2 million people live within 50 miles of the plant. This is a much larger than the area established by the Japanese, who have advised everyone within 19 miles to evacuate.

By AMANDA COX, MATTHEW ERICSON and ARCHIE TSE.

Send Feedback





**From:** Nelson, Robert  
**To:** Burnell, Scott  
**Subject:** RE: NGA Center in DC Requests NRC Expert Speaker for 3/22 or 3/23 and 4/4  
**Date:** Friday, April 01, 2011 3:28:43 PM

---

That's my understanding.

NELSON

---

**From:** Burnell, Scott  
**Sent:** Friday, April 01, 2011 3:27 PM  
**To:** Nelson, Robert  
**Cc:** Hayden, Elizabeth  
**Subject:** RE: NGA Center in DC Requests NRC Expert Speaker for 3/22 or 3/23 and 4/4

Doesn't look like something open to the public – am I correct?

---

**From:** Nelson, Robert  
**Sent:** Friday, April 01, 2011 3:23 PM  
**To:** Burnell, Scott  
**Subject:** FYI: NGA Center in DC Requests NRC Expert Speaker for 3/22 or 3/23 and 4/4  
**Importance:** High

See below for originating request.

NELSON

---

**From:** Dierkers, Gregory <gdierkers@NGA.ORG>  
**To:** Virgilio, Rosetta  
**Cc:** Gander, Sue <sgander@NGA.ORG>; MacLellan, Thomas <TMaclellan@NGA.ORG>; Ferro, Carmen <CFerro@NGA.ORG>  
**Sent:** Thu Mar 17 16:36:04 2011  
**Subject:** NGA Center NRC expert speaker requests

Hi Rosetta,

Thanks for your time today. We appreciate you identifying someone from the NRC to support the NGA Center's outreach to states during this busy time.

As we discussed we would like to invite the NRC to join us for **two upcoming events -- a webinar next week and a conference in early April -- to brief governors' advisors on the Japanese situation and the implications for US plants.** The events are:

1) **A webinar with governors' security and energy advisors.** NGA Center staff is planning to host a conference call next week (Tuesday 3/21 or Wednesday 3/22) to provide senior state officials with an update on the Japan situation and to answer questions as to the operations of US plants, including regulations, plant security/safety, and the emergency preparedness efforts at the US nuclear fleet. We would ask that an NRC expert join the webinar remotely; the webinar would last

AB/161

for 1 hour.

**2) An in-person speaker at a governors' energy advisors meeting.** NGA Center's *Governors' Energy Advisors Policy Institute* on April 4th in Arlington, Virginia. The focus of the April 4th Institute is to provide a 'Technology 101' briefing for governors senior energy advisors. We would invite the NRC to attend in-person on April 4th from 1:45pm to 4:15pm. We would ask for a 10-15 minute presentation on the situation in Japan, the state of nuclear technology and regulations in the US, and the implications for states from the Japanese crisis. Attached is a draft agenda.

Thanks for considering both of these requests.

Sincerely,

Greg Dierkers

Program Director – Energy and Transportation

NGA Center for Best Practices

Environment, Energy and Transportation Division

202-624-7789

[gdierkers@nga.org](mailto:gdierkers@nga.org)

**From:** [Burnell, Scott](#)  
**To:** [Burnell, Scott](#)  
**Subject:** FW: Rebecca Smith calling about Bechtel Equipment  
**Date:** Friday, April 01, 2011 4:19:00 PM

---

Ruland, skeen

---

**From:** Hayden, Elizabeth  
**Sent:** Friday, April 01, 2011 3:51 PM  
**To:** Burnell, Scott  
**Cc:** Akstulewicz, Brenda; Brenner, Eliot  
**Subject:** Rebecca Smith calling about Bechtel Equipment

I got a heads up from Michelle Allen, Bechtel, that she got a call from our WSJ friend Rebecca Smith inquiring about what industry was doing with regard to Fukushima. Michelle told her about the piece of equipment that NRC first conceived and Bechtel polished and built for pumping water to the plants. Rebecca will likely call us—I hope it is not until Monday, but it may be over the weekend. Since you are on duty, I thought I would let you know.

*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*

AB/162

**From:** [Hayden, Elizabeth](#)  
**To:** [Burnell, Scott](#)  
**Subject:** FW: Eric Leeds NGA Presentation  
**Date:** Friday, April 01, 2011 5:29:04 PM  
**Attachments:** [Presentation%20to%20NGA%20\(Energy%20Panel\)%20April%202011.ppt.ppt](#)

---

Fyi—note this is a first draft.

*Beth*

---

**From:** Leeds, Eric  
**Sent:** Friday, April 01, 2011 4:55 PM  
**To:** Dean, Bill; Lew, David; Roberts, Darrell; McCree, Victor; Wert, Leonard; Satorius, Mark; Pederson, Cynthia; West, Steven; Howell, Art; Kennedy, Kriss  
**Cc:** Johnson, Michael; Flanders, Scott; Wiggins, Jim; Evans, Michele; Virgilio, Martin; Weber, Michael; Miller, Charles; Holahan, Gary; Brenner, Eliot; Hayden, Elizabeth; Schmidt, Rebecca; Powell, Amy; Meighan, Sean; Ruland, William; Boger, Bruce; Cheok, Michael; Moore, Scott  
**Subject:** Eric Leeds NGA Presentation

Attached is our first draft of a generic slide presentation for the Fukushima event. Its geared for a non-nuclear, public audience and is meant to be modified based on the time allowed (generally 30 minutes or less) and level of detail the presenter chooses to provide.

Your comments and suggestions are welcome and requested. Sean Meighan is our POC.

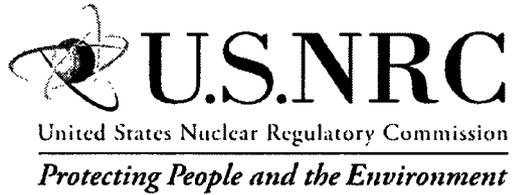
Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
301-415-1270

AB/163



# **Presentation on Fukushima to NGA Center for Best Practices**

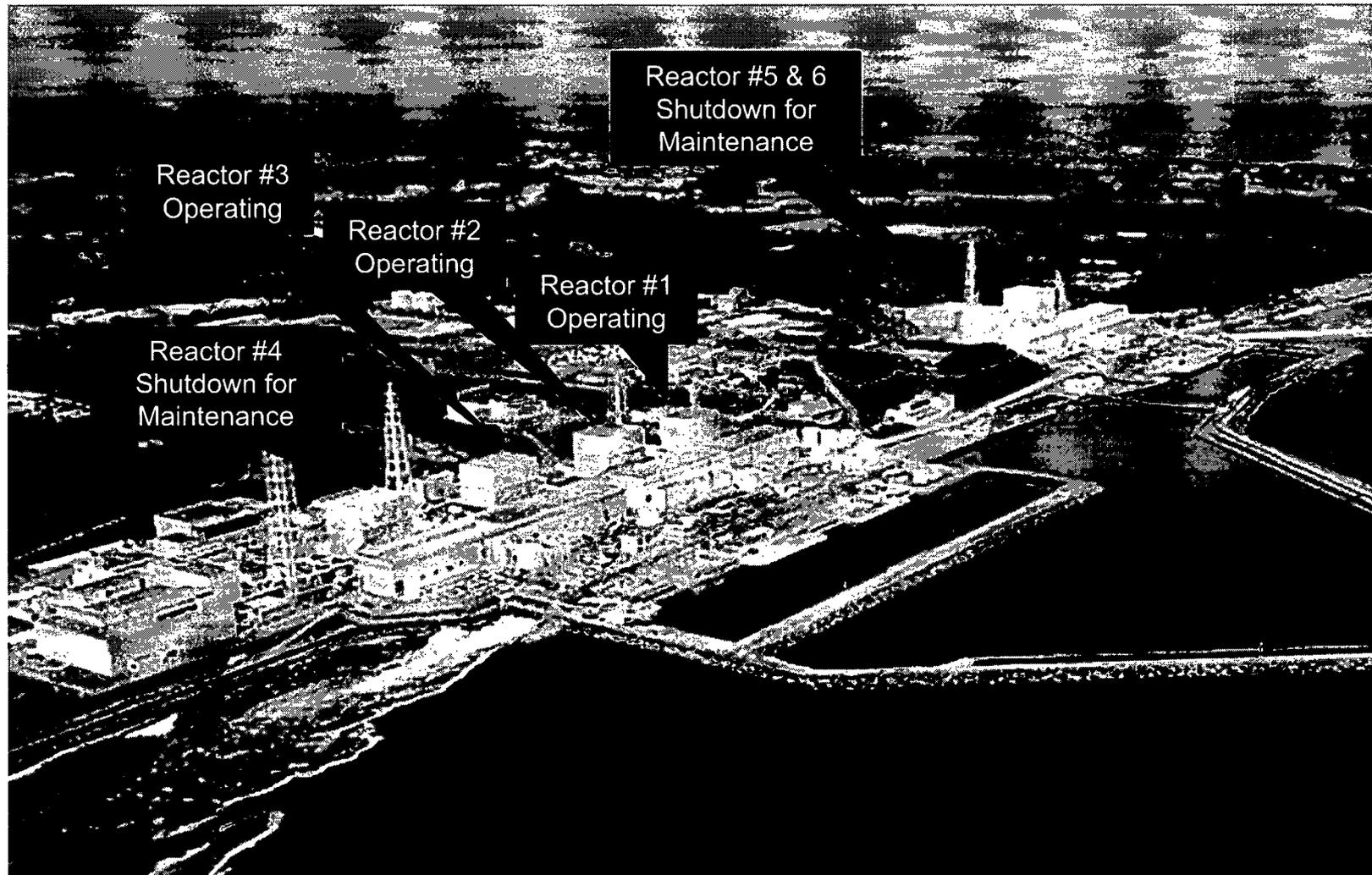
**Eric Leeds, Director  
Office of Nuclear Reactor Regulation  
(NRR)**

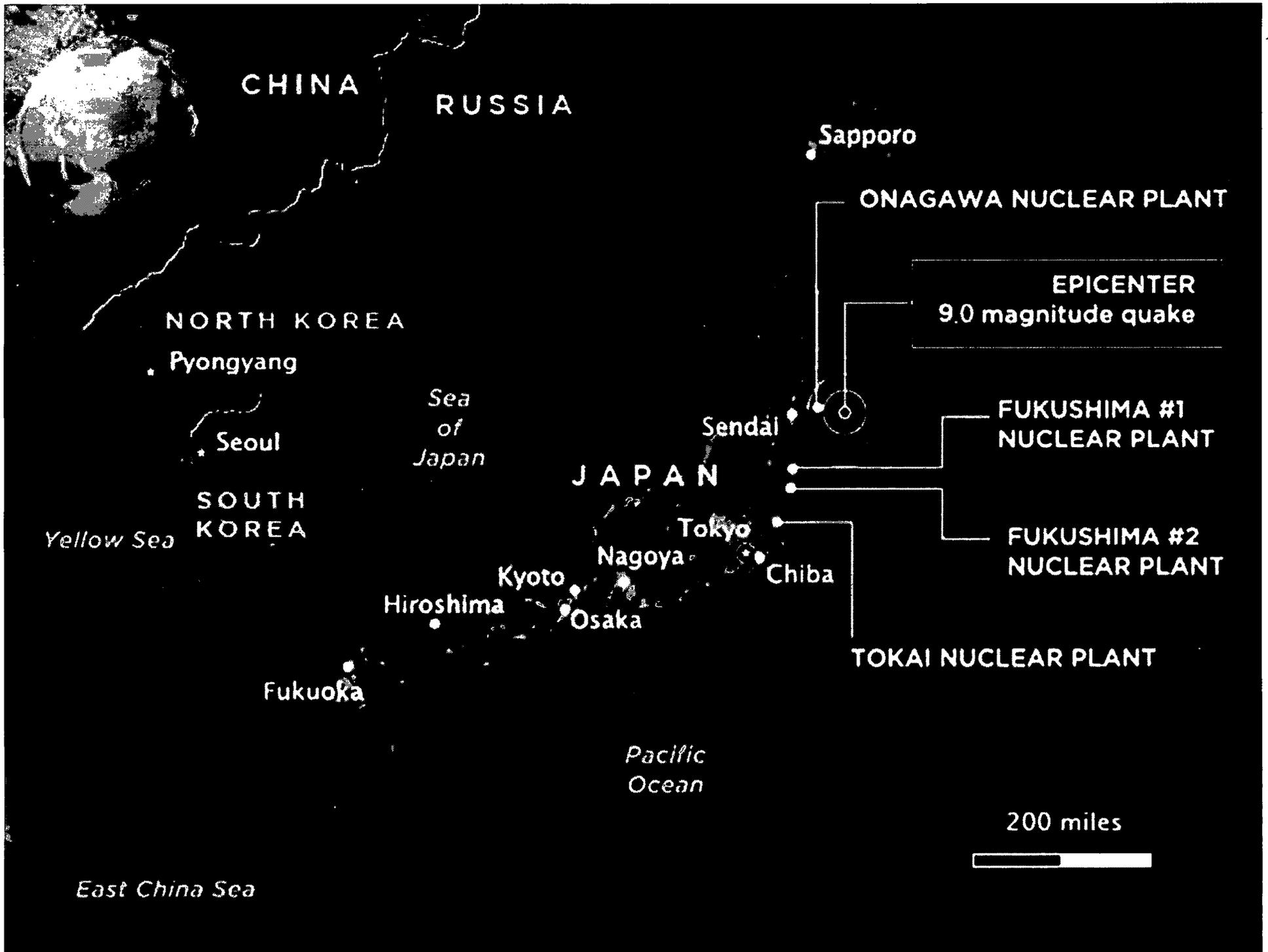


## **NRC Mission – What Do We Do?**

- The mission of the NRC is to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials in order to **protect public health and safety, promote the common defense and security, and protect the environment.**

# Overview of Fukushima Daiichi Nuclear Power Station

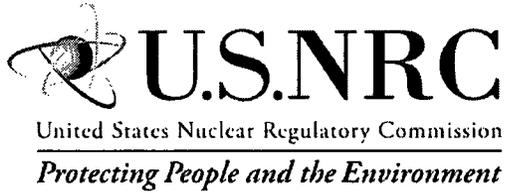




# Earthquake & tsunami sequence of events

Friday March 11<sup>th</sup> @ 2:36 pm local

- Magnitude 9.0 earthquake 231 miles northeast of Tokyo.
- Quake is fifth largest in the world (since 1900).
- Earthquake generated a 14m Tsunami



# Plant Response

## Earthquake

- Earthquake Caused Automatic Shutdown of 3 Operating Units
- Offsite Power Lost
- Initial indications were that Emergency Diesels operated

## 14m Tsunami (less than 1 hour later)

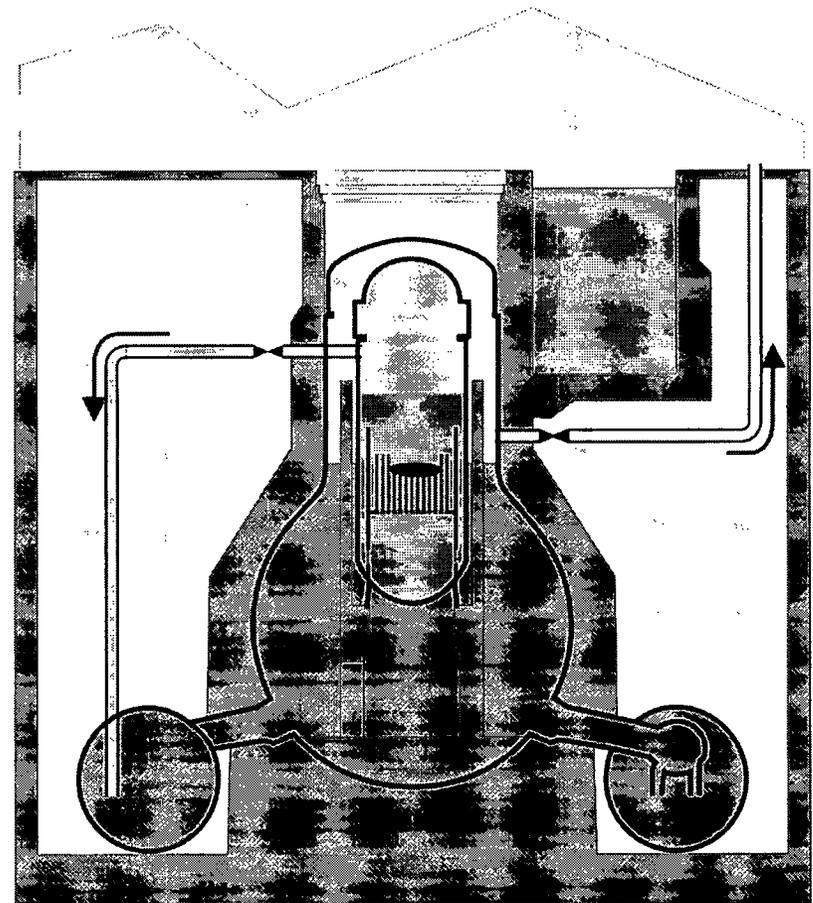
- All Emergency Back-up Power Lost
- 8-10 hours later Station Batteries Depleted

- **Current status of the Reactors**

- Core Damage in Unit 1,2, 3
- Electrical Power Restored
- Fresh Cooling Water supplied to  
All Units

- **Spent Fuel Pool Status**

- Suspect Fuel Damage in  
Pools 3 & 4
- Providing periodic make up water





## **NRC Response**

- Ops Center 24/7
- Team of experts to Tokyo
- Support to U.S. Ambassador and Japanese
- Coordinating Environmental Monitoring with DOE & EPA



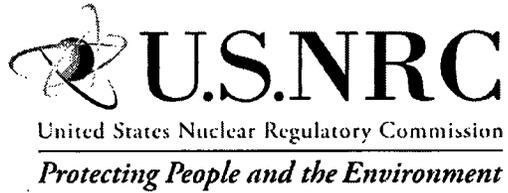
## **Domestic Considerations**

- No anticipated U.S. Health Effects from Fukushima
- U.S. Plants Designed for External Events
- NRC has initiated additional inspections at all U.S. Plants
- NRC conducting Near-Term and Long-Term Reviews.



## **NRC Near Term Actions**

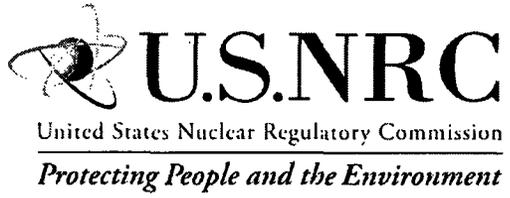
- Evaluate Fukushima Daiichi Events
- Domestic Operating Reactors and Spent Fuel Pools
  - External Events
  - Station Blackout
  - Severe Accident Mitigation
  - Emergency Preparedness
  - Combustible Gas Control
- Near Term Review due in 90 days (mid June)



## **NRC Longer Term Actions**

- Based on Near Term Review and Additional Insights from Fukushima Event
- Identify Potential Technical and Policy Issues
  - Research Activities
  - Generic Issues
  - Reactor Oversight Process
  - Regulatory Framework
  - Interagency Emergency Preparedness





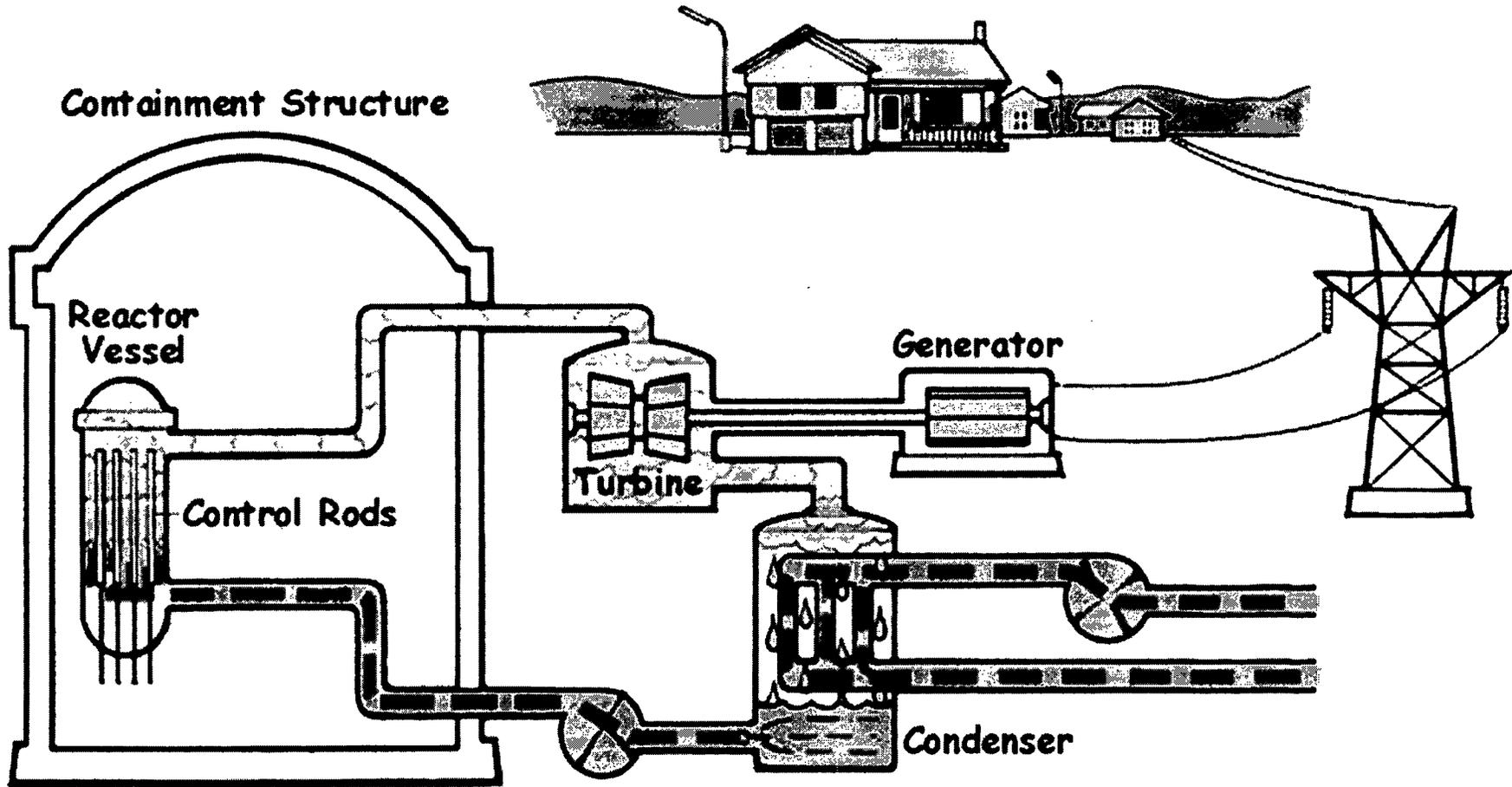
**Questions?**

# PARS

- NRC Regulations have 2 Emergency Planning Zones (EPZs) 10/50 miles
- EPZs are not limits, but frameworks that allow for expansion as needed
- 50 miles in Japan due to extraordinary situation
  - 4 units severely challenged
  - Unclear information as to state of reactors, mitigative strategies, radiological releases
  - Decision to evacuate conservative, better to err on conservative
- Precautionary evacuation occurred days before fuel melt.

# Generic BWR

Containment Structure



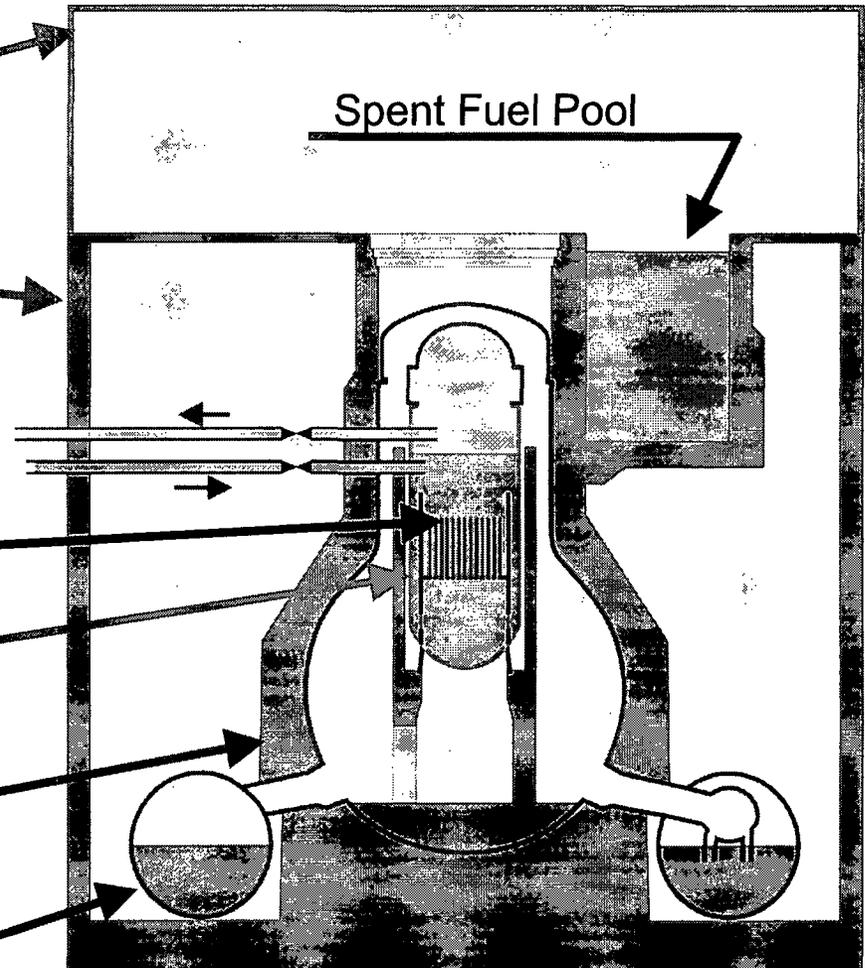


# U.S.NRC

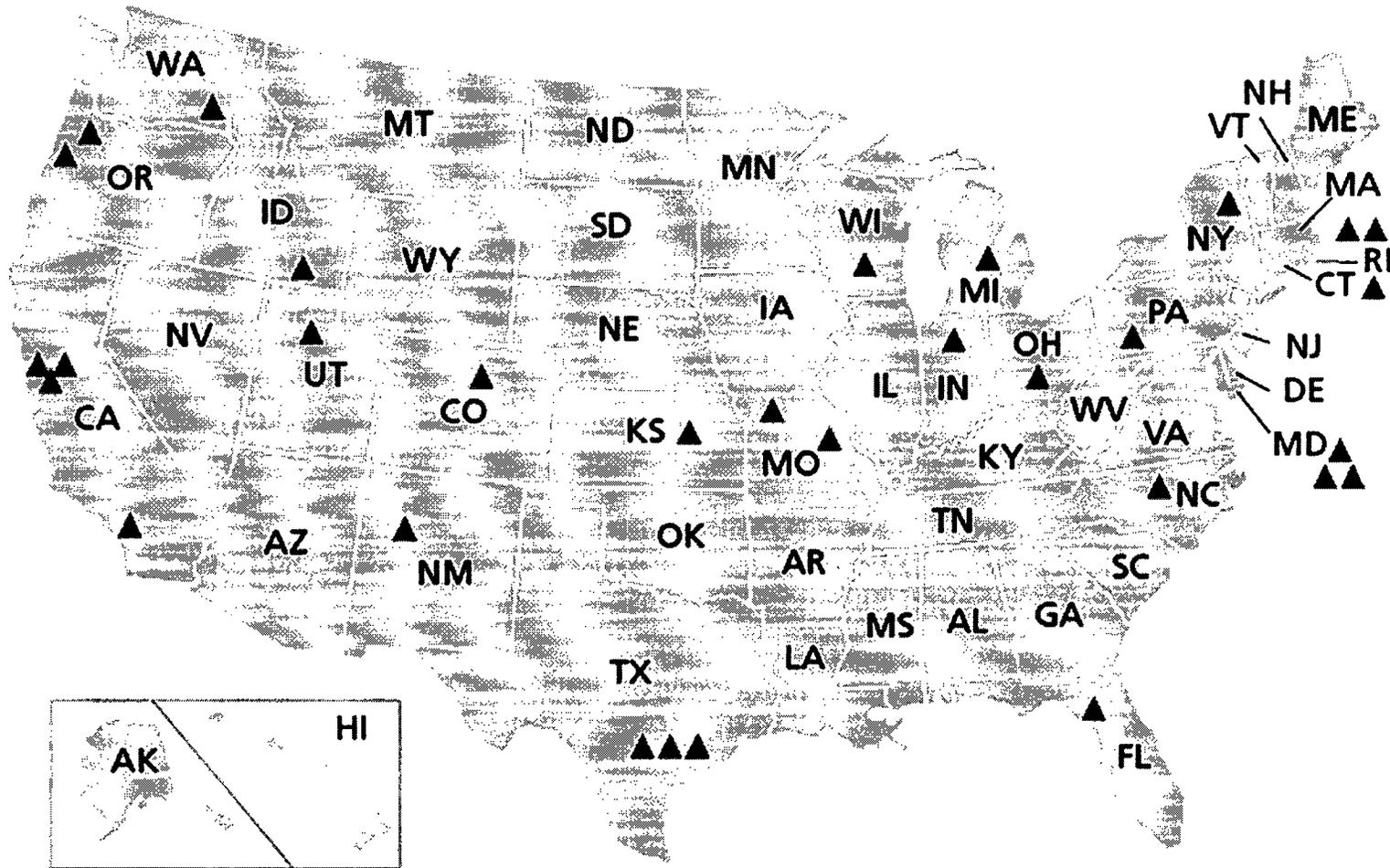
United States Nuclear Regulatory Commission

*Protecting People and the Environment*

- ▶ Reactor Service Floor  
(Steel Construction)
- ▶ Concrete Reactor Building  
(secondary Containment)
- ▶ Reactor Core
- ▶ Reactor Pressure Vessel
- ▶ Containment (Dry well)
- ▶ Containment (Wet Well)



# Research and Test Reactors



**From:** Burnell, Scott  
**To:** Hayden, Elizabeth; Brenner, Eliot; Harrington, Holly  
**Subject:** WH call wrapup  
**Date:** Friday, April 01, 2011 6:34:00 PM

---

Nothing of major social significance for us, although DOE did say they were supporting US

NNSA said Japan's asking for survey flights near Narita (major airport) to help prepare for planting season.

EPA & USDA have additional staff and assets in Pacific locations for monitoring

FDA added six prefectures to the import ban list

Everyone reiterated the "no harmful levels" language we started.

Only question from L.A. about cargo monitoring at Long Beach, CPB said prior coordination making for smooth process, longshoremen totally unconcerned about CPB doing rad monitoring in normal clothing.

AB/164

**From:** [CNN Breaking News](#)  
**To:** [textbreakingnews@ema3lsv06.turner.com](mailto:textbreakingnews@ema3lsv06.turner.com)  
**Subject:** CNN Breaking News  
**Date:** Saturday, April 02, 2011 2:57:00 AM

---

-- Radioactive water from damaged Japan nuclear plant is leaking into the Pacific Ocean, officials tell CNN.

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ABI 165

**From:** [Will Dalrymple](#)  
**To:** [Burnell, Scott](#)  
**Subject:** Re: Query from Nuclear Engineering International magazine  
**Date:** Monday, April 04, 2011 7:52:16 AM

---

Scott:  
No, that's great, thanks.  
-Will

On 4/4/11 11:13, "Burnell, Scott" <Scott.Burnell@nrc.gov> wrote:

> Hello Will;  
>  
> These days it's always a good idea to keep bugging me about these things.  
>  
> CR-6890 is the latest document to focus on station blackout.  
>  
> The staff tells me there have been zero cases of anything other than  
> reactor-grade water being used as coolant at U.S. nuclear power plants.  
>  
> How else may I be of service?  
>  
> Scott  
>  
>  
> Sent from an NRC Blackberry  
> Scott Burnell  
> 202-441-0471  
>  
> ----- Original Message -----  
> From: Will Dalrymple <[wdalrymple@neimagazine.com](mailto:wdalrymple@neimagazine.com)>  
> To: Burnell, Scott  
> Sent: Mon Apr 04 05:48:34 2011  
Subject: Re: Query from Nuclear Engineering  
> International magazine  
>  
> Hi Scott:  
> Please may I chase you up on this matter?  
> -Will  
>  
>  
> On 22/3/11 15:08, "Burnell, Scott" <Scott.Burnell@nrc.gov> wrote:  
>  
>> Even that might not be enough time, but I'll try.  
>>  
>> Pardon the impertinence, but eons ago I played "Oliver" in a community  
>> theatre  
>> production, and I couldn't help reading your very polite reply in Oliver's  
>> "Please sir, may I have some more?" voice. It's these little diversions  
>> that  
>> are helping me deal with the situation, you understand. :-)  
>>  
>> -----Original Message-----  
>> From: Will Dalrymple [<mailto:wdalrymple@neimagazine.com>]  
>> Sent: Tuesday, March 22, 2011 11:05 AM  
>> To: Burnell, Scott  
>> Subject: Re: Query from Nuclear Engineering International magazine

AB/166

>>  
>> Hi Scott;  
>> Please may I have some answers by the end of the week?  
>> Thanks,  
>> Will  
>>  
>>  
>> On 22/3/11 14:52, "Burnell, Scott" <Scott.Burnell@nrc.gov> wrote:  
>>  
>>> Hello Will;  
>>>  
>>> I'll check on those items. What's your deadline? Thanks for the good  
>>> wishes.  
>>>  
>>> Scott  
>>>  
>>> -----Original Message-----  
>>> From: Will Dalrymple [<mailto:wdalrymple@neimagazine.com>]  
>>> Sent: Tuesday, March 22, 2011 10:43 AM  
>>> To: Burnell, Scott  
>>> Subject: Query from Nuclear Engineering International magazine  
>>>  
>>> Sir:  
>>>  
>>> Best wishes to you from London.  
>>>  
>>> In the light of current events, I am trying to source some relevant content  
>>> for our May issue.  
>>>  
>>> 1. Please may I ask, has there been any recent work done at the NRC about  
>>> station blackouts since the 2004 review,  
>>> <http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6890/>  
>>>  
>>> 2. Second, please may I ask if have been any cases of emergency seawater  
>>> (or river/lake water) injection into US reactors? I would be interested to  
>>> hear of any other precedents for the emergency actions in Japan.  
>>>  
>>> Best regards,  
>>>

--  
Will DALRYMPLE  
editor  
Nuclear Engineering International magazine

Tel: +44 (0)20 8269 7773  
Fax: +44 (0)20 8269 7804

Progressive House  
2 Maidstone Road  
Foots Cray, Sidcup  
Kent DA14 5HZ, UK  
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**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Saturday, April 02, 2011 4:49:13 AM

---

## News

4 new results for **Nuclear Regulatory Commission**

### [PSEG reactors pass NRC reviews](#)

NJ.com

The **Nuclear Regulatory Commission** has completed its environmental and safety reviews of license renewal applications submitted by PSEG Nuclear for its three reactors here and finds no issues that would preclude allowing the plants to operate for an ...

[See all stories on this topic »](#)

### [Fort Calhoun violations listed](#)

Omaha World-Herald

By Nancy Gaarder On Friday — April Fools' Day, no less — the **Nuclear Regulatory Commission** posted its daily log of problems reported by nuclear facilities around the country. Two of the five items logged involved Fort Calhoun Nuclear Station, ...

[See all stories on this topic »](#)

### [Japan crisis spurs Calif. senators to action](#)

San Diego News Room

The senators also sent a letter to US **Nuclear Regulatory Commission (NRC)** Chair Gregory Jaczko, requesting inspections of California's nuclear plants, the San Onofre nuclear power plant in San Clemente and Diablo Canyon in San Luis Obispo, ...

[See all stories on this topic »](#)

### [150 protesters rally against nuke plant](#)

Pueblo Chieftain

Paul Wright of Avondale said the commissioners only need to focus on the fact that the federal **Nuclear Regulatory Commission** requires all power plants to keep the highly radioactive spent fuel rods on site. "So the question is, do you want a nuclear ...

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AB/167

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**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Saturday, April 02, 2011 3:55:13 PM

---

**News**

**1** new result for **Nuclear Regulatory Commission**

[US studies Fukushima disaster for safety lessons](#)

AFP

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, ...

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[AFP](#)

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**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Saturday, April 02, 2011 7:31:00 PM

---

**News**

**1** new result for **Nuclear Regulatory Commission**

[Will there be a \*\*nuclear\*\* meltdown in your backyard?](#)

Daily Caller

Because the **Nuclear Regulatory Commission (NRC)** says the GE-designed reactors in Fukushima have 23 sisters in the United States. What happened in Japan could happen here. The **NRC** database of nuclear power plants shows that 23 of the 104 nuclear power ...

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[Daily Caller](#)

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**Subject:** Google Alert - Nuclear Regulatory Commission  
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**News**

**1 new result for Nuclear Regulatory Commission**

[Disaster fuels debate over \*\*nuclear\*\* accident evacuation plans](#)

[MiamiHerald.com](#)

The disaster in Japan, followed by the US **Nuclear Regulatory Commission** urging Americans to evacuate within 50 miles of the Fukushima Daiichi reactors, has sparked calls to reassess emergency plans for the nation's 65 nuclear plants. ...



[MiamiHerald.com](#)

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**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Sunday, April 03, 2011 7:45:00 AM

---

**News**

**2** new results for **Nuclear Regulatory Commission**

[ELIAS: Japan lesson: Go slow on relicensing California \*\*nuclear\*\* plants](#)

North County Times

Sam Blakeslee of San Luis Obispo, fired off a letter in late February to the US Energy Department's Blue-Ribbon Commission on America's Nuclear Future begging the federal team to hold hearings in California before the **Nuclear Regulatory Commission ...**

[See all stories on this topic »](#)

[Japan's \*\*nuclear\*\* crisis reshapes landscape for Indian Point's relicensing](#)

The Journal News | LoHud.com

Until Fukushima, the US **Nuclear Regulatory Commission's** record when it came to relicensing had been a perfect 63 and 0 — none of the atom plants that applied had been turned down. Now that it's Indian Point's turn — regardless of events in Japan ...

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**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - "David McIntyre"  
**Date:** Sunday, April 03, 2011 10:13:18 AM

---

## News

5 new results for "**David McIntyre**"

### [Former River Rats Beat Devils, 5-3](#)

WXXA

Steve Zalewski and **David McIntyre** joined Wiseman in the goal column with power-play tallies of their own. McKenna posted his 10th 30-plus-save game and made ...

### [Roundup: Japan's unfolding crisis adds to long list of world ...](#)

istockAnalyst.com

... United States," said **David McIntyre**, NRC spokesman. "Some of our personnel in Japan have already returned (from Fukushima) and others have been sent. ...

### [Late turnover proves costly as Devils lose 5-3 to Charlotte](#)

Albany Times Union

The Devils received power play goals from Steve Zalewski, Chad Wiseman, and **David McIntyre** but could not hold on as Charlotte scored the final three goals ...

### [Checkers clinch playoff spot](#)

Charlotte Observer

The Devils' goals were scored by Steven Zalewski, Chad Wiseman and **David McIntyre**. The Checkers scored early on their division rival, as Nicolas Blanchard ...

### [Turnover is costly for Albany](#)

Albany Times Union

Chad Wiseman and **David McIntyre** scored less than two minutes apart midway through the second period to give the Devils the lead before Jon Matsumoto scored ...

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**News**

**1** new result for **Nuclear Regulatory Commission**

[Controlling Japan \*\*nuclear\*\* plant could take months](#)

Seattle Post Intelligencer

Photo: Harry Hamburg / AP Dr. Peter Lyons, acting assistant Energy Secretary for Nuclear Energy, left, accompanied by Bill Borchardt, executive director for Operations, **Nuclear Regulatory Commission (NRC)** testifies on Capitol Hill in Washington, ...

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## News

2 new results for **Nuclear Regulatory Commission**

### [NE's nuclear money pit](#)

*Berkshire Eagle*

Vermont Yankee, in Vernon, Vt., is on the west bank of the Connecticut River, just north of the Massachusetts border; the plant, in operation since 1972, last week won a 20-year license renewal from the US **Nuclear Regulatory Commission**, allowing it to ...

[See all stories on this topic »](#)

### [Japan's unfolding crisis adds to long list of world nuclear mishaps](#)

*Xinhua*

Meanwhile, international nuclear experts are closely monitoring the crippled nuclear power plant and updating their findings. The US **Nuclear Regulatory Commission (NRC)** has sent a team of experts to Japan providing technical assistance to help deal ...

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**News**

**3** new results for **Nuclear Regulatory Commission**

**[NRC Names Safety Task Force Members](#)**

Nuclear Street - Nuclear Power Portal (blog)

The **Nuclear Regulatory Commission** has assigned several of its senior managers to a task force that will examine US reactor safety in light of the Fukushima Daiichi accident in Japan. The president called for a review of plant safety in the wake of ...

[See all stories on this topic »](#)

**[Nuclear Crisis Puts 50 US Aides in Japan Testing Own Readiness](#)**

Bloomberg

There are 104 nuclear-power reactors in the US Chicago- based Exelon Corp. (EXC) owns the most US nuclear plants, with 17 reactors at 10 sites. The Energy Department and **Nuclear Regulatory Commission** are providing technical expertise and monitoring ...

[See all stories on this topic »](#)

**[PSEG Wins Positive EIS for License Extension at New Jersey Reactors](#)**

Nuclear Street - Nuclear Power Portal (blog)

The Salem and Hope Creek nuclear plants moved a critical step closer to a 20-year license extension Friday. The **Nuclear Regulatory Commission** announced in a final supplemental environmental impact statement that the extensions would cause no adverse ...

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**From:** [Google Alerts](#)  
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**Subject:** Google Alert - Nuclear Regulatory Commission  
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## News

5 new results for **Nuclear Regulatory Commission**

### [Reports Show Surry Nuclear Plant Safe; Public Meeting Wednesday](#)

Williamsburg Yorktown Daily

It will begin with a brief presentation, then US **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 ...

[See all stories on this topic »](#)

### [US Nuclear Output Falls Near Lowest in Year as Reactors Refuel](#)

Bloomberg

By Colin McClelland - Mon Apr 04 13:16:49 GMT 2011 US 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. ...

[See all stories on this topic »](#)

### [TVA officials to discuss valve failure at nuclear plant](#)

Birmingham Business Journal (blog)

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 ...

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### [Chairman Jaczko Should Listen to Himself](#)

All Things Nuclear

"We don't have technical information that says it is safer to be in one or the other," **Nuclear Regulatory Commission** Chairman Gregory Jaczko told a House Appropriations subcommittee. "The likelihood of anything happening is so small, it's hard to say ...

[See all stories on this topic »](#)

### [Poll: Majority say US nuke plants are safe, divisions on new reactors remain](#)

The Hill (blog)

US 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 US attitudes about ...

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**Subject:** Google Alert - Nuclear Regulatory Commission  
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## News

4 new results for **Nuclear Regulatory Commission**

### [Nuclear watchdog group wants new review of Vermont Yankee electrical cables](#)

The Republic

The New England Coalition says it plans this week to file an enforcement petition with the **Nuclear Regulatory Commission** citing documents from the **NRC** and Vermont Yankee owner Entergy Corp. as pointing to the problem. The group asked the **NRC** to look at ...

[See all stories on this topic »](#)

### [Nuclear Studies](#)

Chemical & Engineering News

are asking the **Nuclear Regulatory Commission (NRC)**—the federal body responsible for overseeing the nation's nuclear power plants—to quickly examine the safety and emergency preparedness of California's San Onofre and Diablo Canyon nuclear generating ...

[See all stories on this topic »](#)



[Chemical & Engineering News](#)

### [Nuclear Rupture In Japan Raises Questions About Plants At Home](#)

89.7 WUWM - Milwaukee Public Radio

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

[See all stories on this topic »](#)

### [Critics Challenge Security at Savannah MOX Fuel Plant](#)

Global Security Newswire

A US **Nuclear Regulatory Commission** board on Friday permitted critics of the Mixed-Oxide Fuel Fabrication Facility under construction in South Carolina to present an indictment of protective measures at the site, the Associated Press reported (see GSN, ...

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**From:** Google Alerts  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Tuesday, April 05, 2011 11:25:22 PM

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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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**Subject:** CRS Reports on the Japan Situation - please follow the links  
**Date:** Monday, April 04, 2011 11:17:29 AM

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[US Nuclear Power Plant Sites: Maps of Seismic Hazards and Population Centers \[506 Kb\]](#)  
[The Japanese Nuclear Incident: Technical Aspects \[215 Kb\]](#)  
[Japan's 2011 Earthquake and Tsunami: Economic Effects and Implications for the United States \[524 Kb\]](#)  
[Fukushima Nuclear Crisis \[251 Kb\]](#)  
[Japan-U.S. Relations: Issues for Congress \[536 Kb\]](#)  
[Japan 2011 Earthquake: U.S. Department of Defense \(DOD\) Response \[346 Kb\]](#)

ABI/168

**From:** McIntyre, David  
**To:** Ruland, William; Ordaz, Vonna  
**Cc:** Weaver, Doug; Haney, Catherine; Easton, Earl; White, Bernard; Call, Michel; Nelson, Robert; Wertz, Trent; Miller, Charles; Dorman, Dan; Wertz, Trent  
**Subject:** RE: HEADS UP - Early removal of spent fuel from the pool.doc  
**Date:** Monday, April 04, 2011 11:56:00 AM

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All – note that over the weekend, media and blog reports on this issue began to focus on Chairman Jaczko’s prior support for the Alvarez paper (when the chairman worked on the Hill) and for early transfer of fuel to cask (when a commissioner, about a year before being designated Chairman). This is probably the line of questioning we will get in the week ahead.

Dave Mc

---

**From:** Ruland, William  
**Sent:** Monday, April 04, 2011 11:35 AM  
**To:** Ordaz, Vonna  
**Cc:** Weaver, Doug; Haney, Catherine; Easton, Earl; White, Bernard; Call, Michel; Nelson, Robert; Wertz, Trent; Miller, Charles; Dorman, Dan; McIntyre, David; Wertz, Trent  
**Subject:** RE: HEADS UP - Early removal of spent fuel from the pool.doc

Vonna,

Please contact Trent Wertz, our front office TA.

Trent, we will need to make sure that we mention SFP safety when discussing the Task Force efforts. NMSS will be present to answer questions on their part. Also, let’s meet today at 2:45 to discuss where we are.

Thanks again everyone!

Bill

---

**From:** Ordaz, Vonna  
**Sent:** Monday, April 04, 2011 11:29 AM  
**To:** Ruland, William  
**Cc:** Weaver, Doug; Haney, Catherine; Easton, Earl; White, Bernard; Call, Michel; Nelson, Robert; Wertz, Trent; Miller, Charles; Dorman, Dan; McIntyre, David  
**Subject:** RE: HEADS UP - Early removal of spent fuel from the pool.doc

Will do. Please let us know your staff POC for the briefing, and we’ll coordinate accordingly.

Thanks,  
Vonna

---

**From:** Ruland, William  
**Sent:** Monday, April 04, 2011 11:26 AM  
**To:** Ordaz, Vonna; Miller, Charles; Dorman, Dan; McIntyre, David  
**Cc:** Weaver, Doug; Haney, Catherine; Easton, Earl; White, Bernard; Call, Michel; Nelson, Robert; Wertz, Trent

AB1169

**Subject:** RE: HEADS UP - Early removal of spent fuel from the pool.doc

Thanks!

We are getting ready for a ACRS briefing on Thursday on the events at Fukushima. We would appreciate it if someone from NMSS could be present to answer questions on this matter or supply support prior to the meeting. It will be a public meeting so we will need speak with some care.

Bill

---

**From:** Ordaz, Vonna  
**Sent:** Monday, April 04, 2011 11:12 AM  
**To:** Miller, Charles; Dorman, Dan; McIntyre, David; Ruland, William  
**Cc:** Weaver, Doug; Haney, Catherine; Easton, Earl; White, Bernard; Call, Michel  
**Subject:** HEADS UP - Early removal of spent fuel from the pool.doc

There is recent press from Dave Lochbaum on why don't we just move fuel from the pools to dry storage sooner. As a result, we discussed it briefly, and prepared the attached response for internal use only. Earl Easton is our POC on this item. Also, there is an EPRI 2010 Technical Report entitled, "Impacts Associated with Transfer of Spent Nuclear Fuel from Spent Fuel Storage Pools to Dry Storage After Five Years of Cooling."

If you have any questions or which to discuss it further, please let us know.

Thanks,  
Vonna

---

**From:** Weaver, Doug  
**Sent:** Wednesday, March 30, 2011 3:06 PM  
**To:** Haney, Catherine  
**Cc:** Ordaz, Vonna  
**Subject:** Early removal of spent fuel from the pool.doc

Cathy,

Please see the attached impacts on NRC of moving "hotter" fuel into dry cask storage. There are many other implications we didn't try to address because of time considerations.

Also, see page 2 for heat load versus time curves. It becomes pretty obvious why 5 years is the standard for moving to dry storage – that's the knee of the heat load curve.

It might be helpful if we could talk you through some of the other major consideration/implications of this approach – during our brief brainstorming session we came up with quite a list.

Doug

**From:** Burnell, Scott  
**To:** Brock, Terry  
**Subject:** RE: cancer press release #2  
**Date:** Monday, April 04, 2011 1:24:00 PM

---

I'll check, thanks.

---

**From:** Brock, Terry  
**Sent:** Monday, April 04, 2011 1:24 PM  
**To:** Burnell, Scott  
**Subject:** RE: cancer press release #2

Sure, give her a copy to review, but I think they are making an announcement today. Anything we do will be a couple days away and referencing their stuff—they will still have the lead. This is exactly the same as last time.

---

**From:** Burnell, Scott  
**Sent:** Monday, April 04, 2011 1:20 PM  
**To:** Brock, Terry  
**Subject:** RE: cancer press release #2

Terry;

We can certainly do this, but I'd like to coordinate with Erin first – it's VERY easy to cross wires with all the Japan coverage right now.

Scott

---

**From:** Brock, Terry  
**Sent:** Monday, April 04, 2011 1:17 PM  
**To:** Burnell, Scott  
**Subject:** cancer press release #2

Tweak and I'll start routing through concurrence over here.

Terry

Terry Brock, Ph.D.  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
Washington D.C. 20555  
Mail Stop CSB-3A07  
phone: 301-251-7487

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**From:** [McIntyre, David](#)  
**To:** [Burnell, Scott](#); [Uselding, Lara](#)  
**Cc:** [Dricks, Victor](#)  
**Subject:** RE: Any input on this? FW: more on UCI, other research reactors  
**Date:** Monday, April 04, 2011 3:05:00 PM

---

There's also extensive NRC comment included in the GAO report, which may mirror the For the Record.

I love it when reporters dig up an old GAO report and want us to comment, when the agency's statement is right in front of them.

---

**From:** Burnell, Scott  
**Sent:** Monday, April 04, 2011 3:04 PM  
**To:** Uselding, Lara; McIntyre, David  
**Cc:** Dricks, Victor  
**Subject:** RE: Any input on this? FW: more on UCI, other research reactors

Hi Lara;

I handled that GAO report, not certain if Pat's talking about the "For the Record" that politely said GAO was full of it:

<http://www.nrc.gov/reading-rm/doc-collections/for-the-record/2008/rtr-letter-2-12.pdf>

Let me know if you need additional backup.

RTRs will be covered by the general agency review.

Scott

---

**From:** Uselding, Lara  
**Sent:** Monday, April 04, 2011 3:00 PM  
**To:** McIntyre, David; Burnell, Scott  
**Cc:** Dricks, Victor  
**Subject:** Any input on this? FW: more on UCI, other research reactors

Also, I'm still waiting for a response back on research reactors and any pending reviews due to Japan

---

**From:** Pat Brennan [<mailto:pbrennan@ocregister.com>]  
**Sent:** Monday, April 04, 2011 1:14 PM  
**To:** Uselding, Lara  
**Subject:** more on UCI, other research reactors

hi Lara...looks like GAO did a report on research reactors in 2008 saying they might be vulnerable to terrorism:

<http://www.gao.gov/new.items/d08403.pdf>

figuring you're still working on getting latest from NRC on their view of safety of UC Irvine

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reactor; I'd also like to know agency's opinion on any possible terrorism threat to it, and whether this GAO report is still relevant, has NRC responded etc.

(what I saw suggests NRC had some issues with how this report was done; not sure what's happened since)...

thanks again...

**From:** [Hayden, Elizabeth](#)  
**To:** [McIntyre, David](#)  
**Cc:** [Brenner, Eliot](#)  
**Subject:** FW: Thanks NRR and OPA  
**Date:** Monday, April 04, 2011 4:21:33 PM

---

Good job!!! That equates to 3 "atta boys," so we'll let you have the day off tomorrow....just keep your BB handy in case Elizabeth can't jump in for you just yet.

*Beth*

---

**From:** Moore, Scott  
**Sent:** Monday, April 04, 2011 4:17 PM  
**To:** Leeds, Eric; Nelson, Robert; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** Ruland, William; Bahadur, Sher; Casto, Greg  
**Subject:** Thanks NRR and OPA

Thanks NRR and OPA! Late Friday afternoon, I took a call from a member of the public, who had a bunch of technical questions about responsibility for spent fuel pools changing hands between owners. Today, **Gerard Purciarello (NRR)** and **Dave McIntyre (OPA)** called her back and answered her questions (or will get back with the remaining answers to a couple of issues).

I appreciate their quick action. It was responsive to the person's request, and was the right thing to do. Your staff did well, and I wanted to pass along the info, so that you can let them know.

Finally, I want to thank Bob Nelson, in NRR, for quickly identifying a contact point. The communications process that NRR has set up for the Japan-event is working well.

Scott  
x7875

AB1172

**From:** [Hayden, Elizabeth](#)  
**To:** "[wbarber@snl.com](mailto:wbarber@snl.com)"  
**Subject:** FW: Trade press question: NRC and government shutdown?  
**Date:** Monday, April 04, 2011 6:30:21 PM

---

The answer to each of your three questions is "yes."

*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](mailto:elizabeth.hayden@nrc.gov)*

---

**From:** Wayne Barber (SNL: 703-373-0160) [<mailto:WBarber@snl.com>]  
**Sent:** Monday, April 04, 2011 2:36 PM  
**To:** Burnell, Scott; OPA Resource  
**Subject:** Trade press question: NRC and government shutdown?

**Is NRC's operation center still being staff around-the-clock due to Japan's Fukushima crisis?**

**Will that operational center continue to stay open in the event of a federal government shutdown?**

**What about the just-announced NRC task force? Will it continue its work in the event of a government shutdown? What about the support staff for the task force?**

**Many thanks.**

**Wayne B.**

---

**Wayne Barber**

Generation Markets Week Editor  
SNL Energy  
703-373-0160 p  
703-373-0159 f  
[wbarber@snl.com](mailto:wbarber@snl.com)

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**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

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## **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.

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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:** [McIntyre, David](#)  
**To:** [Brach, Bill](#)  
**Subject:** RE: Location and amount of Spent Fuel in the U.S. - Request from National Public Radio  
**Date:** Tuesday, April 05, 2011 10:09:00 AM

---

Thanks, Bill!

---

**From:** Brach, Bill  
**Sent:** Tuesday, April 05, 2011 10:10 AM  
**To:** McIntyre, David  
**Subject:** RE: Location and amount of Spent Fuel in the U.S. - Request from National Public Radio

Dave,

Thanks, and just to let you know I enjoy your weekly wine column in the WPost.

Best regards, Bill

---

**From:** McIntyre, David  
**Sent:** Tuesday, April 05, 2011 9:58 AM  
**To:** Waters, Michael; Brach, Bill; Goshen, John; Benner, Eric; Ordaz, Vonna; White, Bernard  
**Subject:** RE: Location and amount of Spent Fuel in the U.S. - Request from National Public Radio

We've received this request from about a gazillion media outlets since March 11. I've actually referred reporters to those links below, as well as this one from the BRC's first meeting:  
[http://www.brc.gov/pdfFiles/CRS\\_BlueRibbonCommissionWastePolicyHistory.pdf](http://www.brc.gov/pdfFiles/CRS_BlueRibbonCommissionWastePolicyHistory.pdf) . It's Congressional Research Service, using NEI data. It has the figure of 63,000+ MTU as of EOY 2009, with 2,000-2,400 added each year. AP in the first weeks after the quake did their own research by calling various utilities and came up with a total of 71K+ tons as current inventory.

We do not have a satisfactory answer to this question, which astonishes people and makes us sound stupid, because the NMMSS database tracks SNM, not SNF, and does not distinguish between fresh and spent fuel. Plus, it's considered Safeguards, so even if we did know the answer, we wouldn't tell anyone.

I will relay these links to the producer. Thanks for your input. Bill – nice to see your name on an email again!

Dave

---

**From:** Waters, Michael  
**Sent:** Tuesday, April 05, 2011 9:18 AM  
**To:** Brach, Bill; Goshen, John; Benner, Eric; Ordaz, Vonna; White, Bernard; McIntyre, David  
**Subject:** RE: Location and amount of Spent Fuel in the U.S. - Request from National

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Public Radio

Suggest we refer NPR to these two sources below. Dave, do we have a more direct fact sheet regarding this type of question? Not clear if NRC tracks real-time our spent fuel populations at

Mike

**NRC Information Digest (page 78)**

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/v22/sr1350v22-sec-5.pdf>

**Recent EPRI BRC Presentation (including future projections):**

[http://www.brc.gov/Transportation\\_Storage\\_SC/docs/TS\\_SC\\_08-19\\_mtg/2\\_EPRI\\_Used\\_Fuel\\_Inventory-August\\_2010\\_final\\_John%20Kessler.pdf](http://www.brc.gov/Transportation_Storage_SC/docs/TS_SC_08-19_mtg/2_EPRI_Used_Fuel_Inventory-August_2010_final_John%20Kessler.pdf)

[http://www.brc.gov/Transportation\\_Storage\\_SC/docs/TS\\_SC\\_08-19\\_mtg/1\\_EPRI%20Fuel%20Inventories%20Summary.pdf](http://www.brc.gov/Transportation_Storage_SC/docs/TS_SC_08-19_mtg/1_EPRI%20Fuel%20Inventories%20Summary.pdf)

---

**From:** Brach, Bill  
**Sent:** Tuesday, April 05, 2011 8:49 AM  
**To:** Goshen, John  
**Cc:** Waters, Michael  
**Subject:** FW: Location and amount of Spent Fuel in the U.S. - Request from National Public Radio

John,

Forwarding the note below for your information. The email below from NPR was addressed to you and me, I thought the note was to John Cook and me, and just noticed it was to you and me.

Bill

---

**From:** Brach, Bill  
**Sent:** Tuesday, April 05, 2011 7:58 AM  
**To:** White, Bernard  
**Cc:** Ordaz, Vonna; Benner, Eric; Cook, John  
**Subject:** FW: Location and amount of Spent Fuel in the U.S. - Request from National Public Radio

Bernie,

The email below from NPR is requesting information on spent fuel inventories in the US. The email was sent last night and requests a response by noon today. I am forwarding the note to you for SFST consideration. Suggest that you engage OPA on the NPR request.

Bill

---

**From:** Andrew Prince [mailto:APrince@npr.org]  
**Sent:** Monday, April 04, 2011 6:06 PM  
**To:** Goshen, John; Brach, Bill  
**Subject:** Location and amount of Spent Fuel in the U.S. - Request from National Public Radio

Hi John and Bill,

I'm a producer with the science desk at NPR. I'm trying to track down the amount of spent nuclear fuel in reactors and storage facilities across the U.S. might you be able to provide me with that data? We're looking for both wet and dry storage, at commercial reactor facilities and independent sites.

Do you have any information you can pass along? We're working on a bit of a deadline of noon or so Tuesday, 4/5, so I'd love to hear back from you before then if possible.

If you're not the right person, can you connect me with him or her?

Thanks,  
Andrew

---

**Andrew Prince**  
NPR Science Desk  
Digital News | [npr.org](http://npr.org)  
202.513.3543 | [aprince@npr.org](mailto:aprince@npr.org)

**From:** Burnell, Scott  
**To:** Anderson, Brian  
**Subject:** RE: A new Q  
**Date:** Tuesday, April 05, 2011 11:14:00 AM

---

I'd start with the division TA, Jeremy Susco, and let him check with Holian, etc. Please CC Robert Nelson.

---

**From:** Anderson, Brian  
**Sent:** Tuesday, April 05, 2011 11:14 AM  
**To:** Burnell, Scott  
**Subject:** RE: A new Q

Who is the best contact in DLR to confirm this answer is okay?

Thanks,  
Brian

---

**From:** Burnell, Scott  
**Sent:** Tuesday, April 05, 2011 9:36 AM  
**To:** Harrington, Holly; Anderson, Brian  
**Subject:** RE: A new Q

That's fine.

---

**From:** Harrington, Holly  
**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** Burnell, Scott; Anderson, Brian  
**Subject:** RE: A new Q

A suggested edit:

The NRC's recently initiated ~~ongoing~~ 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 ~~covered by ongoing oversight and appear to be separate from the~~ 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.

---

**From:** Burnell, Scott  
**Sent:** Tuesday, April 05, 2011 9:30 AM  
**To:** Harrington, Holly; Anderson, Brian  
**Subject:** RE: A new Q

Holly, Brian;

The answer I've been giving has been along the lines of:

The NRC's ongoing review of U.S. plants will examine current practice at operating

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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 covered by ongoing oversight and appear to be separate from the 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.

Brian, could you run that past the DLR folks? Thanks.

Scott

---

**From:** Harrington, Holly  
**Sent:** Tuesday, April 05, 2011 9:16 AM  
**To:** Burnell, Scott; Anderson, Brian  
**Subject:** A new Q

This question was asked from Region III specific to Prairie Island, but it might be useful to have some generic statement for all the regions to use.

Can either of you take a stab at an A for the following Q:

How will the events in Japan affect license renewal for U.S. plants?

I assume we'll answer something vague about not change at this time but part of the short and long-term review?

**From:** CSIS Proliferation Prevention Program  
**To:** Burnell, Scott  
**Subject:** CSIS INVITATION: Nuclear Safety After Fukushima  
**Date:** Tuesday, April 05, 2011 11:28:57 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

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Please **RSVP** to Ms. Tamara Spitzer-Hobeika at [tspitzer-hobeika@csis.org](mailto:tspitzer-hobeika@csis.org) or  
202.775.3239.



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



**From:** [World Nuclear News](#)  
**To:** [Burnell, Scott](#)  
**Subject:** WNN Weekly 29 March - 4 April 2011  
**Date:** Tuesday, April 05, 2011 11:47:43 AM

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[View WNN Weekly in your browser.](#)



## **29 March - 4 April 2011**

### **REGULATION & SAFETY:**

Leakage traced to crack in Fukushima shaft  
4 April 2011

A crack in a system of concrete trenches and tunnels has been identified as a possible route through which water has been leaking to the sea from Fukushima Daiichi unit 2. Work is under way to seal the crack.

Tepco's plans for water issues  
1 April 2011

Engineers have plans to deal with contaminated water at the Fukushima Daiichi site, although enacting them will take time. New water storage and treatment facilities are planned for construction.

Concrete pumps to Fukushima  
1 April 2011

Four more concrete pumping trucks are on their way to the Fukushima Daiichi nuclear power plant to help the effort to maintain fuel ponds.

International nuclear safety pledges and promises  
1 April 2011

The governing body of the World Association of Nuclear Operators (WANO) has pledged to maintain a 'safety first' focus following the events at Fukushima. Meanwhile, French President Nicolas Sarkozy has called for international nuclear safety standards.

Further evacuations a possibility  
31 March 2011

Japanese authorities are considering the evacuation of some people beyond the current evacuation area around the Fukushima Daiichi nuclear power plant after a more serious spot of radionuclide disposition was identified. Some restrictions on tap water are being lifted but discharges to sea continue.

Cooling standard could hit power plants  
30 March 2011

More than 600 power plants, including over half of the US nuclear fleet, may be forced to retrofit once-through cooling systems with cooling towers under a proposed rule issued by the country's Environmental Protection Agency.

Tsunami likely filled trenches  
30 March 2011

Analysis of the trenches at Fukushima Daiichi indicates they were probably flooded by the tsunami. Low radioactivity in one trench may result from capture of radionuclides from the air but high levels in another are unexplained.

Trench water under investigation  
29 March 2011

Contaminated water at Fukushima Daiichi is present in large trenches that run alongside and are connected to the turbine buildings, where contaminated water has also been found. One trench is showing very high dose rates from its surface.

IAEA chief proposes nuclear safety meeting  
29 March 2011

The head of the International Atomic Energy Agency (IAEA) has called for a high-level conference to discuss what lessons can be learned from the accident at the quake- and tsunami-hit Fukushima Daiichi nuclear power plant in Japan.

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## WASTE & RECYCLING:

Call for holistic approach to plutonium

29 March 2011

Four possibilities for the UK's policy on the recycling of uranium and plutonium stockpiles have been presented in a report by Sir David King, who called for a "holistic approach" to nuclear policy covering legacy materials as well as new build.

## CORPORATE:

RWE appeals against German moratorium

1 April 2011

RWE Power has today lodged an appeal with the Administrative Court of Appeal in Kassel against the three-month shutdown of its Biblis nuclear power plant ordered by the German government.

Swiss nuclear organisation targeted

31 March 2011

A suspected letter bomb has exploded in the offices of the Swiss nuclear trade organisation, swissnuclear, injuring two people.

Big money moves for Areva

31 March 2011

Areva has made some financial changes to allow investment from Kuwait. It is soon to pay around €1.62 billion (\$2.29 billion) to buy out Siemens' 34% stake in their shared reactor business.

Future of reactors new and old

30 March 2011

Reactors 1 to 4 at Fukushima Daiichi are highly likely to be written off, Tokyo Electric Power Company has said. The fate of undamaged units 5 and 6 may lie in the hands of local residents, as may plans for new units.

## EXPLORATION & NUCLEAR FUEL:

Feasibility study for Olympic Dam expansion

30 March 2011

BHP Billiton has announced that its plans for a massive expansion of operations at the Olympic Dam mine in South Australia have moved to the feasibility study phase.

## INDUSTRY TALK:

Chinese company bidding for Equinox

4 April 2011

Minmetals Resources of China has announced plans for an offer to buy Equinox Minerals, owner of the Lumwana copper, gold and uranium project in Zambia.

Bruce steam generator shipment on hold

1 April 2011

Bruce Power has announced that it is delaying the shipment of 16 steam generators from Canada to Sweden for recycling to allow time for further discussion with First Nations, Métis and other interested parties.

Uranium property swap for Uravan and Cameco

31 March 2011

Uranium exploration company Uravan Minerals has completed a deal to swap various Canadian interests with major producer Cameco.

*An archive of all WNN's reporting on the Japanese earthquake and subsequent tsunami and their effects on the Fukushima Daiichi and Daini plants can be found on the WNA website.*

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**Our mailing address is:**

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London, Westminster SW1Y4JH

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**From:** [Jones, Steve](#)  
**To:** [McIntyre, David](#); [White, Bernard](#)  
**Subject:** RE: SNF Talking Points and Qs.docx - Please review  
**Date:** Tuesday, April 05, 2011 12:25:37 AM  
**Attachments:** [SNF Talking Points and Qs.docx](#)

---

Dave,

My comments are indicated by tracked changes in the attached file. Note, I recommend checking with NSIR on the wording used with question 4.

Steve

---

**From:** McIntyre, David  
**Sent:** Monday, April 04, 2011 4:29 PM  
**To:** Jones, Steve; White, Bernard  
**Subject:** SNF Talking Points and Qs.docx - Please review

Steve, Bernie –

OPA has developed the attached talking points on SNF storage in pools and casks to use in answering questions from the public and the media. Could you please look them over (or ask someone in your group to) and make sure they are accurate and that we aren't saying anything we shouldn't say?

Thanks,  
Dave Mc, OPA

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# OPA Talking Points and Qs&As

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## Spent Fuel Pools and Storage

[Revision 0, April 4, 2011]

### Talking Points:

1. All U.S. nuclear power plants store spent nuclear fuel in “spent fuel pools.” These pools are robust constructions made of reinforced concrete ~~four~~ several feet thick, with steel liners. The water is typically about 40 feet deep, and serves both to shield the radiation and cool the rods.
2. As the pools near capacity, utilities move some of the older spent fuel into “dry cask” storage. Fuel is typically cooled at least five years in the pool before transfer to cask. NRC has authorized transfer as early as three years; the industry norm is about 10 years.
3. The NRC believes spent fuel pools and dry casks both provide adequate protection of the public health and safety and the environment. Therefore there is no pressing safety or security reason to mandate earlier transfer of fuel from pool to cask. *(Note: We do not say they are “equally” safe. We say they are both safe.)*
4. After the 9/11/2001 terrorist attacks, the NRC issued orders to plant operators requiring several measures aimed at mitigating the effects of a large fire, explosion, or ~~other~~ accident that ~~drains~~ damages a spent fuel pool. ~~These were meant to deal with the aftermath of a terrorist attack or plane crash; however, they would also be effective in responding to natural phenomena such as tornadoes, earthquakes or tsunami. These mitigating measures include:~~
  - a. ~~Reracking the~~ Controlling the configuration of fuel assemblies in the pool to ~~reduce the danger of the assemblies catching fire if exposed to air~~ enhance the ability to keep the fuel cool and recover from damage to the pool.
  - b. ~~Installing~~ Establishing emergency spent fuel cooling capability ~~water spray systems~~
  - c. Staging emergency response equipment nearby so it can be deployed quickly
5. According to the Congressional Research Service (using NEI data), there were 62,683 metric tons of commercial spent fuel accumulated in the United States as of the end of 2009.

Comment [s1]: Check with NSIR on this wordin

- a. Of that total, 48,818 metric tons – or about 78 percent – were in pools.
- b. 13,856 metric tons – or about 22 percent – were stored in dry casks.
- c. The total increases by 2,000 to 2,400 tons annually.

### *Questions and Answers – General*

**Q1:** What is spent nuclear fuel?

**A1:** “Spent nuclear fuel” refers to fuel elements that have been used at commercial nuclear reactors, but that are no longer ~~producing enough energy~~ contain the necessary material to economically sustain a nuclear reaction. Periodically, about one-third of the nuclear fuel in an operating reactor needs to be unloaded and replaced with fresh fuel.

**Q2:** Why is spent fuel hot?

**A2:** Spent fuel generates what is called “residual heat” because of radioactive decay of the elements inside the fuel. After the fission reaction is stopped and the reactor is shut down, the products left over from the fuel’s time in the reactor are still radioactive and emit heat as they decay into more stable elements. Although the heat production drops rapidly at first, heat is still generated many years after shutdown. Therefore, the NRC sets requirements on the handling and storage of this fuel to ensure protection of the public and the environment.

### *Questions and Answers – ISFSIs*

**Q3:** What is dry cask storage?

**A3:** Dry cask storage allows spent fuel that has already been cooled in the spent fuel pool for several years to be surrounded by inert gas inside a container called a cask. The casks are typically steel cylinders that are either welded or bolted closed. The steel cylinder provides a leak-tight containment of the spent fuel. Each cylinder is surrounded by additional steel, concrete, or other material to provide radiation shielding to workers and members of the public.

**Q4:** What is an “ISFSI”?

**A4:** An independent spent fuel storage installation, or ISFSI, is a facility that is designed and constructed for the interim storage of spent nuclear fuel. These facilities are licensed separately from a nuclear power plant and are considered independent even when they are located on the site of another NRC-licensed facility.

**Q5:** What kind of license is required for an ISFSI?

**A5:** NRC authorizes storage of spent nuclear fuel at an ISFSI in two ways: site-specific or general. For site-specific applications, the NRC reviews the safety aspects of the proposed ISFSI and, if we conclude it can operate safely, we issue a license valid for 20 years. This license contains requirements on topics such as leak testing and monitoring and specifies what the

licensee is authorized to store at the site. A general license authorizes storage of spent fuel in casks that the NRC has previously approved at a site that already has a licensed nuclear power plant. Licensees must show the NRC that it is safe to store spent fuel in dry casks at their site, including analysis of earthquake intensity and tornado missiles. Licensees also review their programs (such as security or emergency planning) and make any changes needed to incorporate an ISFSI at their site. Of the currently licensed ISFSIs, 48 are operating under general licenses and 15 have specific licenses.

### *Questions and Answers – Spent Fuel Inventories*

**Q6:** Why doesn't the NRC have up-to-date figures on how much spent fuel is stored at U.S. nuclear plants? Doesn't the regulator have a clue about how much of this stuff is out there?

**A6:** The NRC and Department of Energy (NNSA) operate the Nuclear Material Management and Safeguards System (NMSS), a database that tracks Special Nuclear Material (enriched uranium and plutonium). This database does not distinguish between fresh and irradiated material, and the information is withheld from the public for security reasons. That's why figures on spent fuel inventory come from the industry.

**Q7:** How much fuel is currently in dry cask storage?

**A7:** As of November 2010, there were 63 "independent spent fuel storage installations" (or ISFSIs) licensed to operate at 57 sites in 33 states. These locations are shown on a map on the NRC website at: <http://www.nrc.gov/waste/spent-fuel-storage/locations.pdf>. Over 1400 casks are stored in these independent facilities.

**Q8:** How much fuel is stored at decommissioned reactors? Is it in pools or casks?

**A8:** There are currently ten decommissioned nuclear power reactors at nine sites with no other nuclear operations. According to a 2008 Department of Energy report to Congress, approximately 2800 metric tons of spent fuel is stored at these nine sites. As of the writing of that report, seven of the sites had independent spent fuel storage installations, or ISFSIs. Two additional sites had approximately 1000 metric tons of spent fuel remaining in pool storage.

### *Questions and Answers – Spent Fuel Pool Safety*

**Q9:** What do you look at when you license a fuel storage facility? How do I know it can withstand a natural disaster?

**A9:** The NRC's requirements for both wet and dry storage can be found in Title 10 of the Code of Federal Regulations (10 CFR), including the general design criteria in Appendix A to Part 50 and the high-level waste requirements in Part 72. The staff uses these rules to determine that the fuel will remain safe under anticipated operating and accident conditions. There are requirements on topics such as radiation shielding, heat removal, and criticality. In addition, the staff reviews fuel storage designs for protection against:

- natural phenomena, such as seismic events, tornados, and flooding
- dynamic effects, such as flying debris or drops from fuel handling equipment and drops of fuel storage and handling equipment
- hazards to the storage site from nearby activities

**Q10:** How do you know the fuel pools are safe? Does the NRC inspect these facilities, or just the reactor itself?

**A10:** NRC inspectors are responsible for verifying that spent fuel pools and related operations are consistent with a plant's license. For example, our staff inspects spent fuel pool operations during each refueling outage. We also performed specialized inspections to verify that new spent fuel cooling capabilities and operating practices were being implemented properly.

**Q11:** What would happen to a spent fuel pool during an earthquake? How can I be sure the pool wouldn't be damaged?

**A11:** All spent fuel pools are designed to seismic standards consistent with other important safety-related structures on the site. The pool and its supporting systems are located within structures that protect against natural phenomena and flying debris. The pools' thick walls and floors provide structural integrity and further protection of the fuel from natural phenomena and debris. In addition, the deep water above the stored fuel (typically more than 20 feet above the top of the spent fuel rods) would absorb the energy of debris that could fall into the pool. Finally, the racks that support the fuel are designed to keep the fuel in its designed configuration after a seismic event.

**Q12:** Can spent fuel pools leak?

**A12:** Spent fuel pools lined with stainless steel are designed to protect against a substantial loss of the water that cools the fuel. Pipes typically enter the pool above the level of the stored fuel, so that the fuel would stay covered even if there were a problem with one of the pipes. The only exceptions are small leakage-detection lines and, at two pressurized water reactor (PWR) sites, robust fuel transfer tubes that enter the spent fuel pool directly. The liner normally prevents water from being lost through the leak detection lines, and isolation valves or plugs are available if the liner experiences a large leak or tear.

**Q13:** How would you know about a leak in such a large pool of water?

**A13:** The spent fuel pools associated with all but one operating reactor have liner leakage collection to allow detection of very small leaks. In addition, the spent fuel pool and fuel storage area have diverse instruments to alert operators to possible large losses of water, which could be indicated by low water level, high water temperature, or high radiation levels.

**Q14:** How can operators get water back in the pool if there is a leak or a failure?

**A14:** All plants have systems available to replace water that could evaporate or leak from a spent fuel pool. Most plants have at least one system designed to be available following a design basis earthquake. In addition, the industry's experience indicates that ~~even that were~~ systems not specifically designed to meet seismic criteria are likely to survive a design basis earthquake and be available for make-up to the spent fuel pools. Furthermore, plant operators can use emergency and accident procedures that identify temporary systems that can provide water to the spent fuel pool if normal systems are unavailable. In some cases, operators would need to connect hoses or install short pipes between systems. The fuel is unlikely to become uncovered rapidly because of the large water volume in the pool, the robust design of the pool structure, and the limited paths for loss of water from the pool.

**Q15:** Do U.S. nuclear power plants store their fuel above grade? Why is this considered safe?

**A15:** For boiling water reactor (BWR) Mark I and II designs, the spent fuel pool structures are located in the reactor building at an elevation several stories above the ground (about 50 to 60 feet above ground for the Mark I reactors). The spent fuel pools at other operating reactors in the U.S. are typically located with the bottom of the pool at or below plant grade level. Regardless of the location of the pool, its robust construction provides the potential for the structure to withstand events well beyond those considered in the original design. In addition, there are multiple means of restoring water to the spent fuel pools in the unlikely event that any is lost.

**Q16:** How are spent fuel pools kept cool? What happens if the cooling system fails?

**A16:** The spent fuel pool is cooled by an attached cooling system. The system keeps fuel temperatures low enough that, even if cooling were lost, operators would have substantial time to recover cooling before boiling could occur in the spent fuel pool. Licensees also have backup ways to cool the spent fuel pool, using temporary equipment that would be available even after fires, explosions, or other unlikely events that could damage large portions of the facility and prevent operation of normal cooling systems. Operators have been trained to use this backup equipment, and it has been evaluated to provide adequate cooling even if the pool structure loses its water-tight integrity.

**Q17:** What keeps spent fuel from re-starting a nuclear chain reaction in the pool?

**A17:** Spent fuel pools are designed with appropriate space between fuel assemblies and neutron-absorbing plates attached to the storage rack between each fuel assembly. Under normal conditions, these design features mean that there is substantial margin to prevent criticality (i.e., a condition where nuclear fission would become self-sustaining). Calculations demonstrate that some margin to criticality is maintained for a variety of abnormal conditions, including fuel handling accidents involving a dropped fuel assembly.

*Questions and Answers – Dry Cask Safety*

**Q18:** How do you know the dry casks are safe? Does the NRC inspect these facilities, or just the reactor and spent fuel pool?

**A18:** The NRC is responsible for inspection of dry cask storage. Before casks are loaded, inspectors with specific knowledge of ISFSI operations assess the adequacy of a “dry run” by the licensee; they then observe all initial cask loadings. The on-site resident inspectors or region-based inspectors may observe later cask loadings, and the regional offices also perform periodic inspections of routine ISFSI operations.

**Q19:** What keeps fuel cool in dry casks?

**A19:** Fuel is often moved to dry cask storage after several years in spent fuel pools, so the residual heat given off by the fuel has significantly decreased. These casks are typically thick, leak-tight steel containers inside a robust steel or concrete overpack. The fuel is cooled by natural airflow around the cask.

#### *Questions and Answers – Waste Confidence & Future Plans*

**Q20:** How long is spent fuel allowed to be stored in a pool or cask?

**A20:** NRC regulations do not specify a maximum time for storing spent fuel in pool or cask. The agency’s “waste confidence decision” expresses the Commission’s confidence that the fuel can be stored safely in either pool or cask for at least 60 years beyond the licensed life of any reactor without significant environmental effects. At current licensing terms (40 years of initial reactor operation plus 20 of extended operation), that would amount to at least 120 years of safe storage.

However, it is important to note that this does not mean NRC “allows” or “permits” storage for that period. Dry casks are licensed or certified for 20 years, with possible renewals of up to 40 years. This shorter licensing term means the casks are reviewed and inspected, and the NRC ensures the licensee has an adequate aging management program to maintain the facility.

**Q21:** The most recent waste confidence findings say that fuel can be stored safely for 60 years beyond the reactor’s licensed life. Does this mean fuel will be unsafe starting in 2059 [60 years after Dresden 1’s original license ended]? What if the spent fuel pool runs out of room even before the end of a reactor license? What is the NRC going to do about this?

**A21:** The NRC staff is currently developing an extended storage and transportation (EST) regulatory program. One aspect of this program is a safety and environmental analysis to support 300 years of storage and handling of spent fuel, as well as associated updates to the “waste confidence” rulemaking. This analysis will include an Environmental Impact Statement (EIS) on the environmental impacts of extended storage of fuel. The 300-year timeframe is appropriate for characterizing and predicting aging effects and aging management issues for EST. The staff plans to consider a variety of cask technologies, storage scenarios, handling activities, site characteristics, and aging phenomena—a complex assessment that relies on multiple supporting

technical analyses. Any revisions to the waste confidence rulemaking, however, would not be an “approval” for waste to be stored longer than before—we do that through the licensing and certification of ISFSIs and casks. More information on the staff’s plan can be found in SECY-11-0029.

**Q22:** Does the waste confidence decision mean that a particular cask is safe?

**A22:** Not specifically. When the NRC issues of certificates and licenses for specific dry cask storage systems, the staff makes a determination that the designs provide reasonable assurance that the waste will be stored safely for the term of the license or certificate. The Commission’s Waste Confidence Decision is a generic action where the Commission found reasonable assurance that the waste from the nation’s nuclear facilities can be stored safely and with minimal environmental impacts until a repository becomes available.

**Q23:** The waste-confidence revision seems like a long-term effort. What is the NRC doing to improve safety of spent fuel storage now?

**A23:** The NRC staff is currently reviewing its processes to identify near-term ways to improve efficiency and effectiveness in licensing, inspection, and enforcement. We expect to identify enhancements to the certification and licensing of storage casks, to the integration of inspection and licensing, and to our internal procedures and guidance. More information on the staff’s plans can be found in COMSECY-10-0007.

**Q24:** The NRC is reviewing applications for new nuclear power plants. What is the environmental impact of all that extra fuel?

**A24:** Continued use and potential growth of nuclear power is expected to increase the amount of waste in storage. This increased amount of spent fuel affects the environmental impacts to be assessed by the NRC staff, such as the need for larger storage capacities. In the staff’s plan to develop an environmental impact statement for longer-term spent fuel storage, a preliminary scoping assumption is that nuclear power grows at a “medium” rate (as defined by the Department of Energy), in which nuclear power continues to supply about 20 percent of U.S. electricity production.

### *Questions and Answers – Security*

**Q25:** What about security? How do you know terrorists won’t use all of this waste against us?

**A25:** For spent fuel, as with reactors, the NRC sets security requirements and licensees are responsible for providing the protection. We constantly remain aware of the capabilities of potential adversaries and threats to facilities, material, and activities, and we focus on physically protecting and controlling spent fuel to prevent sabotage, theft, and diversion. Some key features of these protection programs include intrusion detection, assessment of alarms, response to intrusions, and offsite assistance when necessary. Over the last 20 years, there have been no radiation releases that have affected the public. There have also been no known or suspected

attempts to sabotage spent fuel casks or storage facilities. The NRC responded to the terrorist attacks on September 11, 2001, by promptly requiring security enhancements for spent fuel storage, both in spent fuel pools and dry casks.

**From:** [McIntyre, David](#)  
**To:** [Burnell, Scott](#); [jvanloon@bloomberg.net](mailto:jvanloon@bloomberg.net)  
**Subject:** RE: Bloomberg News Questions:  
**Date:** Tuesday, April 05, 2011 12:48:00 PM

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Hi Jeremy - your colleague Jim Efstathiou is working on the same subject and has already asked much of these questions today. The issue of spent fuel storage will indeed be addressed by our task force review, and it is much too soon to speculate on what the task force might recommend. The Chairman's remarks on the Hill reflect current NRC policy.

Scott can clarify the task force mission, but I believe it is one task force, charged with doing a quick look for any immediate measures that can or should be taken, followed by a more in-depth look for the long term.

David McIntyre  
Office of Public Affairs  
U.S. Nuclear Regulatory Commission  
(301) 415-8200

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

From: Burnell, Scott  
Sent: Tuesday, April 05, 2011 12:39 PM  
To: McIntyre, David  
Subject: FW: Bloomberg News Questions:

And here's the e-mail version of his voicemail...

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

From: JEREMY VAN LOON, BLOOMBERG/ NEWSROOM: [<mailto:jvanloon@bloomberg.net>]  
Sent: Tuesday, April 05, 2011 12:38 PM  
To: Burnell, Scott  
Subject: Bloomberg News Questions:

Hi Scott - I'm putting together a story on cooling pools and costs to empty them of the backlog of spent fuel. I read through Chairman Jaczko's comments in the senate committee hearing from a week ago and just wanted to find out if the NRC had anything new to say about spent fuel storage in the meantime. Are there any new plans in the works to speed up transfer of spent fuel from pools into dry casks? And I assume there are no changes to NRC policy from the Chairman's comments last week on how long spent fuel can remain in pools? Also, I just wanted to get some clarity on the taskforce looking into nuclear safety. There are two as I understand the March 23 news release - on longterm review that was supposed to begin within 90 days (of March 23?) and a more immediate one that will be completed by 90 days. Have I understood that correctly? What are the different issues being looked at in the two different reviews? Thanks,  
Jeremy van Loon, Bloomberg  
News 403.444.5598

AB1180

**From:** [US Nuclear Energy Foundation](#)  
**To:** [Burnell, Scott](#)  
**Subject:** JAPAN lifting the bar on nuclear knowledge  
**Date:** Tuesday, April 05, 2011 1:30:28 PM

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Visit [www.usnuclearenergy.org](http://www.usnuclearenergy.org)

Dear Scott,

Please Note: all typos, misspellings, grammatical errors, etc. are attributed to speed typing on a wireless keyboard.

## Japan, lifting the bar on nuclear knowledge April-5, 2011

There are "snippets of indication" that Midwest and Western states are "waking up" to nuclear technology and its industrial manufacturing business assets (MO - CO - ID - CA - TX). NEVADA is NOT one of these states. See below, "[even California](#)" has just announced the development of a "Clean Energy Park".

[Fukushima Makes Case for Yucca Mountain](#) Link to IBD website

Posted 03/29/2011 Investor business DAILY Editorials

Nuclear Power: The greatest danger at Fukushima was and is the spent fuel stored at the reactor sites. So why are we doing the same thing when we have a safe place to store it?

Before a 9.0 axis-shifting earthquake damaged the nuclear reactors at Fukushima, Japan, legislation was introduced in the House of Representatives endorsing the construction of 200 nuclear power reactors in the U.S. by 2040, tripling current megawatt generating capacity.

H.R. 909, co-sponsored by 64 Republicans, also endorsed the completion of the spent fuel storage facility at Yucca Mountain in Nevada. That facility, which was supposed to open 12 years ago, has been taken off the table by Senate Majority Leader Harry Reid, D-Nev., Energy Secretary Steven Chu and the White House as unsafe. After Fukushima, we say: compared to what?

AB/181

## Did You Know?

[AREVA in the U.S. employs about 5,000](#) [Link to AREVA website](#)

They are currently contracted with the DOE to build a \$4 billion uranium enrichment facility planned near Idaho Falls Idaho, construction is expected to create about 1,000 jobs in eastern Idaho and inject millions of dollars in the state and local economy.

Another (DOE-AREVA) project is the ongoing construction of a Mixed-Oxide (MOX) Fuel Fabrication Facility at the Savannah River site near Aiken, South Carolina, The facility supports the DOE-managed U.S. Plutonium Disposition Program, which is the most significant non-proliferation program currently underway.

AREVA and Northrop Grumman Shipbuilding, marked a major step forward in the revival of the U.S. nuclear energy sector as the company's AREVA Newport News, LLC, joint venture broke ground today on a heavy component manufacturing facility for new nuclear power plants. The 300,000 square-foot facility represents an investment of more than \$360 million in the U.S. commercial nuclear and manufacturing industries and will bring more than 500 skilled hourly and salaried jobs to the Commonwealth of Virginia, NEVADA -0-

AREVA Newport News will be the first full-scale manufacturing facility dedicated to supply heavy components, such as reactor vessels, steam generators and pressurizers, to the U.S. nuclear energy industry. These complex pieces of equipment require precision manufacturing to meet the rigorous standards of nuclear power plants and require about three years to fabricate. The components will supply the first new U.S. nuclear power plants to be built in 35 years. Industry experts have viewed limited production of heavy components positioned against rising demand as a constraint on nuclear energy's expansion.

AREVA, Fresno Nuclear Energy Group Sign Contract  
for Clean Energy Park in California

FRESNO, Calif., March 30, 2011 - AREVA and the Fresno Nuclear Energy Group, LLC (FNEG) announced today they have signed a contract to initiate the first phase in the development of an advanced Clean Energy Park near Fresno, Calif.

Phase one of the Fresno Clean Energy Park envisions a Concentrated Solar Power (CSP) plant, which will power a water processing plant integrated with a waste water treatment facility. The contract focuses on activities to support the feasibility assessments of the project.

"We are developing the Fresno Clean Energy Park to meet our region's most serious needs: creating a stable supply of clean water for the Central Valley and meeting the state's growing energy demands with clean energy sources," said John Hutson, president of FNEG. "Together with AREVA, we look forward to building the state's first Clean Energy Park."

[Nevada Governor Sandoval Letter](#): USNEF reassess Yucca Mountain. [Link to PDF file](#)

With all of the current discussion activity about nuclear energy, we continue to encourage the State of Nevada and "our elected" officials to take a "responsible" assessment of energy, its cost, industrial need

and service to our citizens. However, based on Nevada's current position, it is not very likely that they are going to "see the forest through the trees".

### Senator Lamar Alexander, TN [Link to PDF file](#)

Tennessee-Japan nuclear ties: We must learn all we can from Japan to make American reactors as safe as possible

There is a special relationship between the Japanese and Tennesseans because so many Japanese companies have located in our state over the last 30 years. As a result, Tennesseans have been reaching out to our friends and their families in Japan, and we extend to the people of Japan our sympathy for the devastation they have experienced.

While the events at nuclear reactors in Japan continue to evolve, Americans must first help the Japanese recover safely and then learn all we can from the Japanese experience to make the operation of reactors in this country and around the world as safe as possible. Those of us who support nuclear power ought to be among the first to ask questions about what we can learn from what happened in Japan, and about the safety of our own reactors and those that are on the drawing board.

### USNEF Interview with D.C. based "The Christian Post" [Link to "The Christian Post"](#)

... However, proponents with the U.S. Nuclear Energy Foundation are urging Americans to get educated about the issue before they write it off. USNEF Director Gary Duarte said too much stock is being put into the fear surrounding Fukushima power plant. "Yes there are issues," he said. But "as we have in previous nuclear mishaps, we've learned by them."

### Newstatesmen Blog Post: [Link to "New Statesmen" website "How Much Radiation is Dangerous"](#)

POST = PHIL

... Right now the media is being very irresponsible in its portrayal of the potential threats of nuclear contamination, likening this to a possible Chernobyl, even though Chernobyl was a different type of reactor entirely and that a meltdown in these reactions (light water reactors) does not cause a violently explosive Chernobyl-style catastrophe. (Credit to your original article for mentioning this, it needs to be reinforced, as networks such as CNN are being absolutely responsible in this respect).

We also forget that Chernobyl killed far less people than is commonly assumed. In fact, the psychological stress has proven to be far more deadly than the actual radiation dosages most people (aside from the plant technicians on-duty at the time) received.

The biggest danger right now is the threat of internal radiation exposure, especially with the reactors constantly exploding and being vented. This, more than anything, caused the majority of damage in Chernobyl when people drank contaminated milk and water, as it does damage to the thyroid. This is the point of handing out iodine tablets--a very good move on the part of the Japanese government.

400 msv is certainly serious--but if you look closely at the reports, they are reading 400 msv NEAR the reactors. Definitely dangerous for those in the vicinity, but saying simply that contamination has been recorded at 400 msv, misportrays this, leading readers to assume that such high levels of contamination are spreading beyond the reactor, which seems unsubstantiated.

Further extending this to the idea that all nuclear reactors and nuclear projects in the developed world should be shut down is just irresponsible. Not only is it wrong to compare nuclear technology today to that used in reactors more than half a century ago, it is explicit misinformation.

[Pass the Plutonium:](#) Link to "Pass the Plutonium" website story in American Spectator.

William Tucker: 04-01-11

People think that Fukushima will mean the end of nuclear power, but I'm convinced it's the opposite. We're going to lose our nuclear virginity over this accident and start seeing the world as adults. In fact it's already happening.

William Tucker is the author of [Terrestrial Energy: How Nuclear Power Will Lead the Green Revolution and End America's Energy Odyssey](#) and editor-at-large at [Nuclear Townhall](#).



**Or mail a check to USNEF PO Box 2867, Sparks, NV 89432-2867**



Gary J. Duarte, Director,  
US Nuclear Energy Foundation

**As always, kindly** forward our newsletter to your contacts with nuclear energy interests. Urge them to visit our "Join Mail List" TAB on our website.

NOTICE: We use Constant Contact because it is a "permission based" email communication program. Somewhere along the line via a business card, online "Join Mail List" signup, postcard, etc. we received your email contact information. If we are in error, we apologize and you have the right to opt-out anytime via the Constant Contact opt-out link on every email we send out. We believe that our grassroots, "Evangelizing Nuclear Advocacy by Bringing Science to Citizens" is a very important mission. But if you would like to opt-out, please use the SafeUnsubscribe below. If you stay, we look forward to your continued interest and urge your participation. Thank you

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US Nuclear Energy Foundation | PO Box 2867 . Sparks | NV | 89432

**From:** [Harrington, Holly](#)  
**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](#); [Courret, Ivonne](#); [Hayden, Elizabeth](#); [McIntyre, David](#)  
**Subject:** Just fyi  
**Date:** Tuesday, April 05, 2011 3:28:10 PM

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Nuclear Government and Sector Coordinating Council partners,

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](#)

AB1182

**From:** JIM EFSTATHIOU JR., BLOOMBERG/ NEWSROOM:  
**To:** McIntyre, David  
**Subject:** <<no subject>>  
**Date:** Wednesday, April 06, 2011 7:57:04 AM

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David,

We are very eager to get a look at the assesment mentioned in todays times. We will say the document was obtained by bloomberg without saying where we got it. Any chance you can help?

Jim

---  
Sent From Bloomberg Mobile MSG

AB/183

**From:** [Hayden, Elizabeth](#)  
**To:** [Virgilio, Martin](#)  
**Cc:** [Cool, Donald](#); [Shane, Raeann](#); [Burnell, Scott](#)  
**Subject:** NYT Story re RST assmt of new Japan threat  
**Date:** Wednesday, April 06, 2011 8:17:15 AM

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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 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.

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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."

*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:** [Cathy Hawes](#)  
**To:** [McIntyre, David](#)  
**Subject:** IN 2011-08 (ML110830824)  
**Date:** Wednesday, April 06, 2011 9:55:54 AM  
**Attachments:** [ML110830824.pdf](#)

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Attached is an PDF version Information Notice 2011-08, Tohoku-Taiheiyu-Oki Earthquake Effects On Japanese Nuclear Power Plants – For Fuel Cycle Facilities, dated March 31, 2011, (ML110830824), that has been posted to the NRR GCC Web, along with the URL for Web access to generic communications files on the NRC Homepage: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/2011/>.

To subscribe or unsubscribe send an email to [lyris@nrc.gov](mailto:lyris@nrc.gov) , no subject, and use one of the following commands in the message portion:

subscribe gc-nrr (first and last name)  
unsubscribe gc-nrr (first and last name)

thanks  
Cathy

AB/185

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, DC 20555-0001

March 31, 2011

NRC INFORMATION NOTICE 2011-08: TOHOKU-TAIHEIYOU-OKI EARTHQUAKE  
EFFECTS ON JAPANESE NUCLEAR POWER  
PLANTS - FOR FUEL CYCLE FACILITIES

## ADDRESSEES

All licensees, applicants, and holders of a construction authorization and/or certificate issued by the U.S. Nuclear Regulatory Commission (NRC), for fuel cycle facilities including fuel manufacturing facilities, mixed oxide facilities, and uranium enrichment facilities licensed under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70, "Domestic Licensing of Special Nuclear Material"; gaseous diffusion plants certified under 10 CFR Part 76, "Certification of Gaseous Diffusion Plants"; and uranium conversion/de-conversion facilities licensed under 10 CFR Part 40, "Domestic Licensing of Source Material" (i.e., Honeywell Metropolis Works).

## PURPOSE

The NRC is issuing this information notice (IN) to inform addressees of effects of the Tohoku-Taiheiyou-Oki earthquake on nuclear power plants in Japan. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to ensure that features and preparations necessary to withstand or respond to severe external events from natural phenomena (e.g., earthquakes, tsunamis, floods, tornadoes, and hurricanes) are reasonable. The suggestions contained in this IN are not NRC requirements; therefore, no specific action or written response is required.

## DESCRIPTION OF CIRCUMSTANCES

The following summary of events is based on the best information available at this time. The situation in Japan regarding recovery efforts for the Fukushima Daiichi Nuclear Power Station continues to evolve.

On March 11, 2011, the Tohoku-Taiheiyou-Oki earthquake occurred near the east coast of Honshu, Japan. This magnitude 9.0 earthquake and the subsequent tsunami caused significant damage to at least four of the six units of the Fukushima Daiichi nuclear power station as the result of a sustained loss of both the offsite and onsite power systems. Efforts to restore power to emergency equipment were hampered and impeded by damage to the surrounding areas due to the tsunami and earthquake.

Units 1, 2 and 3 were operating at the time of the earthquake. Following the loss of electric power to normal and emergency core cooling systems and the subsequent failure of backup

**ML110830824**

decay heat removal systems, water injection into the cores of all three reactors was compromised, and reactor decay heat removal could not be maintained. The operator of the plant, Tokyo Electric Power Company, injected sea water and boric acid into the reactor vessels of these three units, in an effort to cool the fuel and ensure that the reactors remained shut down. However, the fuel in the reactor cores became partially uncovered. Hydrogen gas built up in Units 1 and 3 as a result of exposed, overheated fuel reacting with water. Following gas venting from the primary containment to relieve pressure, hydrogen explosions occurred in both units and damaged the secondary containments.

Units 3 and 4 were reported to have low spent fuel pool (SFP) water levels.

Fukushima Daiichi Units 4, 5 and 6 were shut down for refueling outages at the time of the earthquake. The fuel assemblies for Unit 4 had recently been offloaded from the reactor core to the SFP. The SFPs for Units 5 and 6 appear to be intact. Emergency power is available to provide cooling water flow through the SFPs for Units 5 and 6.

The damage to Fukushima Daiichi nuclear power station appears to have been caused by initiating events beyond the design basis of the facilities.

## **BACKGROUND**

Subpart H, "Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material," of 10 CFR Part 70 requires certain major fuel cycle facilities to perform, maintain, and annually update an integrated safety analysis that identifies controls to address potential accident sequences, both internal events and credible external events, including natural phenomena such as earthquakes, tornadoes, hurricanes, floods, and tsunami. Certificate holders under 10 CFR Part 76 also have requirements to address the implications of such events.

## **DISCUSSION**

The events at Fukushima Daiichi remind us that highly unlikely events caused by severe natural phenomena hazards can initiate accidents of concern under 10 CFR Part 70 Subpart H, Part 76, and Part 40 and can present multiple challenges, such as recovery from loss of power and other services caused by the event. In addition, these severe events may lead to additional events, such as fires, explosions, or chemical releases that could lead to accidents of concern under 10 CFR Part 70 Subpart H or other parts of the regulations. Compliance with the regulatory requirements to prevent or mitigate regulated hazards may require that facilities be prepared, or possess equipment, to provide these safety functions despite multiple challenges and degraded or disabled resources. The degradations could include long term loss of such functions as offsite power, onsite emergency power, transportation by road or rail to access offsite resources, loss of offsite water supply, and loss of other offsite services. For events with advanced warning, plant personnel key to coping with regulated hazards may have evacuated the site, and then be unable to return. The tragic events in Japan are a reminder of the complexities and challenges of performing an ISA for scenarios resulting from such severe and widespread natural phenomena.

## PAPERWORK REDUCTION ACT STATEMENT

This Information Notice does not contain any information collections and, therefore, is not subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

### Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

## CONTACTS

This information notice requires no specific action or written response. Please direct any questions about this matter to the technical contact listed below or the appropriate Office of Nuclear Material Safety and Safeguards project manager.

**/RA/**

John Kinneman, Director  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Technical Contact: Dennis Damon, FCSS  
301-492-3126  
e-mail: [Dennis.Damon@nrc.gov](mailto:Dennis.Damon@nrc.gov)

Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

## PAPERWORK REDUCTION ACT STATEMENT

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and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Technical Contact: Dennis Damon, FCSS  
301-492-3126  
e-mail: [Dennis.Damon@nrc.gov](mailto:Dennis.Damon@nrc.gov)

Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

DISTRIBUTION:  
FCSS r/f

**ML110830824**

OFFICE	NMSS/FCSS	NMSS/FCSS	QTE	NSIR/DSP	NMSS/FCSS	NMSS/FCSS
NAME	DDamon	PJenifer	JDougherty Via-email	MLayton Via e-mail	MBailey	JKinneman
DATE	03/29/2011	03/ 25/2011	3/28/2011	04/04/2011	03/30/2011	03/31/2011

**OFFICIAL RECORD COPY**

**From:** Stuckle, Elizabeth  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; McIntyre, David  
**Subject:** Suggestions for Additional Proactive Activities  
**Date:** Wednesday, April 06, 2011 10:26:47 AM  
**Attachments:** What Proactive Measures Should We Take.docx

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ABI/186

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# 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:** [McIntyre, David](#)  
**To:** [White, Bernard](#)  
**Subject:** RE: HEADS UP - Early removal of spent fuel from the pool.doc  
**Date:** Wednesday, April 06, 2011 10:36:00 AM

---

OK, thanks!

---

**From:** White, Bernard  
**Sent:** Wednesday, April 06, 2011 10:36 AM  
**To:** McIntyre, David  
**Subject:** RE: HEADS UP - Early removal of spent fuel from the pool.doc

This is it. If you have any questions on this topic, please call Earl.

---

**From:** McIntyre, David  
**Sent:** Wednesday, April 06, 2011 10:34 AM  
**To:** White, Bernard  
**Subject:** FW: HEADS UP - Early removal of spent fuel from the pool.doc

It was this ...

---

**From:** Ordaz, Vonna  
**Sent:** Monday, April 04, 2011 11:12 AM  
**To:** Miller, Charles; Dorman, Dan; McIntyre, David; Ruland, William  
**Cc:** Weaver, Doug; Haney, Catherine; Easton, Earl; White, Bernard; Call, Michel  
**Subject:** HEADS UP - Early removal of spent fuel from the pool.doc

There is recent press from Dave Lochbaum on why don't we just move fuel from the pools to dry storage sooner. As a result, we discussed it briefly, and prepared the attached response for internal use only. Earl Easton is our POC on this item. Also, there is an EPRI 2010 Technical Report entitled, "Impacts Associated with Transfer of Spent Nuclear Fuel from Spent Fuel Storage Pools to Dry Storage After Five Years of Cooling."

If you have any questions or which to discuss it further, please let us know.

Thanks,  
Vonna

---

**From:** Weaver, Doug  
**Sent:** Wednesday, March 30, 2011 3:06 PM  
**To:** Haney, Catherine  
**Cc:** Ordaz, Vonna  
**Subject:** Early removal of spent fuel from the pool.doc

Cathy,

Please see the attached impacts on NRC of moving "hotter" fuel into dry cask storage. There are many other implications we didn't try to address because of time considerations.

APR 187

Also, see page 2 for heat load versus time curves. It becomes pretty obvious why 5 years is the standard for moving to dry storage – that's the knee of the heat load curve.

It might be helpful if we could talk you through some of the other major consideration/implications of this approach – during our brief brainstorming session we came up with quite a list.

Doug

**From:** [Powell, Amy](#)  
**To:** [McIntyre, David](#)  
**Cc:** [Burnell, Scott](#); [Riley \(OCA\), Timothy](#)  
**Subject:** RE: Markey statement at today's nuclear hearing  
**Date:** Wednesday, April 06, 2011 10:59:49 AM

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E-mail from Scott came in at the same time on this same item. Tracking down...

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**From:** McIntyre, David  
**Sent:** Wednesday, April 06, 2011 10:57 AM  
**To:** Powell, Amy  
**Cc:** Burnell, Scott  
**Subject:** FW: Markey statement at today's nuclear hearing

Amy – can you tell us what we've told Markey?

---

**From:** Lobsenz, George [<mailto:George.Lobsenz@ihs.com>]  
**Sent:** Wednesday, April 06, 2011 10:56 AM  
**To:** McIntyre, David; Burnell, Scott  
**Subject:** FW: Markey statement at today's nuclear hearing

Hi guys--please see Markey statement below that he says he has been told by NRC that fuel has "probably" melted through reactor pressure vessel at Fukushima Unit 2. Can you confirm or deny this statement by Markey? Any comment on this would be welcome.

George

---

**From:** Barry, Giselle [<mailto:Giselle.Barry@mail.house.gov>]  
**Sent:** Wednesday, April 06, 2011 10:49 AM  
**To:** Barry, Giselle  
**Subject:** Markey statement at today's nuclear hearing

FOR IMMEDIATE RELEASE  
April 6, 2011

Contact: Giselle Barry 202-225-2836, Eben Burnham-Snyder 202-225-6065

**Statement of Congressman Edward J. Markey (D-Mass.)  
“The U.S. Government Response to the Nuclear Power Plant  
Incident in Japan”  
Subcommittee on Oversight and Investigations  
April 6, 2011**

“On March 28, 1979, almost exactly 32 years ago, a partial core meltdown at the Three Mile Island nuclear power plant terrified the nation and caused a full-scale re-evaluation of the nuclear industry in our country.”

AB1188

“On April 26, 1986, almost exactly 25 years ago, the meltdown caused by the Chernobyl nuclear power plant spewed highly radioactive smoke all over Europe. Again, the world was appalled, and promised increased safety.

“Today, we see that we are just as helpless when faced with nuclear disaster as we were 25 and 32 years ago.

“The cores of at least two of the Japanese reactors are severely damaged. I have been informed by the Nuclear Regulatory Commission that the core of Unit Two has gotten so hot that part of it has probably melted through the reactor pressure vessel.

“To bring the reactors and their spent fuel pools under control, the Japanese have had to resort to sending young workers in to risk their lives as they operate what amount to giant water guns.

“To assess and then sop up the radioactive water that has begun spewing into the ocean, they are relying on the use of bath salts and diapers.

“Just like the use of pantyhose and golf balls to stop last year’s oil spill, the Japanese have been compelled to try a “nuclear junk shot” in desperate attempts to stop an environmental calamity.

“Yet the Nuclear Regulatory Commission insists that our systems are safe, even before beginning, let alone completing, its review of our reactors and spent fuel pools.

“It does so in the face of its own analysis showing that there is a higher risk of core damage from earthquakes that has not yet been incorporated into regulatory requirements.

“It does so in the face of backup electricity requirements that are generally less stringent than what the Fukushima reactors were equipped with.

“And it does so after removing the post-Three Mile Island requirement to include systems to prevent the explosions of hydrogen that occurred at Fukushima from its regulations.

“I have introduced legislation, the Nuclear Power Plant Safety Act of 2011, to impose a moratorium on all pending NRC licenses and re-licenses in light of the need to fully understand the safety risks and include remedies into our own regulations. Many other countries have announced similar measures. I look forward to today’s testimony.”

*Information on the latest status of the Fukushima reactors was gathered from communications between Congressman Markey’s office and the Nuclear Regulatory Commission (NRC).*

###

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 06, 2011 11:02:21 AM

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## 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 ...

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AB/189

**From:** [Burnell, Scott](#)  
**To:** [Powell, Amy](#)  
**Subject:** RE: NYT follow-up  
**Date:** Wednesday, April 06, 2011 11:14:00 AM  
**Attachments:** [03-31-11 1200 RST Assessment Document REV 1 .docx](#)  
[03-26-2100 Final RST assessment of Daiichi Units document.docx](#)

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Sure.

---

**From:** Powell, Amy  
**Sent:** Wednesday, April 06, 2011 11:11 AM  
**To:** Burnell, Scott  
**Subject:** NYT follow-up

Scott –

Jim Wiggins was going to have the Ops Center “dig up” the 3/26 and 3/30 (“Rev 1”) docs for me. However, if you have them and we can save the Ops Center crew from “digging,” would you share?

Thanks,  
Amy

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

AB/190

Attachment 03-31-11 1200 RST Assessment Document REV 1 \_1.docx (42756 Bytes) cannot be converted to PDF format.

Attachment 03-26-2100 Final RST assessment of Daiichi Un\_1.docx (34806 Bytes) cannot be converted to PDF format.

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 06, 2011 11:18:02 AM

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**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. ...  
[See all stories on this topic »](#)



[DigitalJournal.com](#)

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

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AS/191

**From:** [Harrington, Holly](#)  
**To:** [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](#)  
**Cc:** [Anderson, Brian](#); [Clark, Theresa](#); [Bonaccorso, Amy](#); [Stuckle, Elizabeth](#)  
**Subject:** One talking point about Japan and license renewal  
**Date:** Wednesday, April 06, 2011 11:18:25 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

AB/192

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

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

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**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.<sup>1</sup>

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

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<sup>1</sup> 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.<sup>2</sup> 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).

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<sup>2</sup> 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.<sup>3</sup> (Tr. 5)

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<sup>3</sup> 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.<sup>4</sup> (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

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<sup>4</sup> 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.”<sup>5</sup> (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,”<sup>6</sup> including most significantly, the Three Mile Island accident in 1979, “to implement a program of continuous improvement for the U.S.

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<sup>5</sup> 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)

<sup>6</sup> 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.”<sup>7</sup> 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.”<sup>8</sup>

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.<sup>9</sup>

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<sup>7</sup> *Id.*

<sup>8</sup> *Id.* at 6-7.

<sup>9</sup> 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.<sup>10</sup>

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<sup>10</sup> 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.”<sup>11</sup> After issuance of TMI-2 Action Plan requirements in guidance, NRC determined that the new reactor requirements should be codified by regulation.<sup>12</sup> 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.’”<sup>13</sup>

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<sup>11</sup> *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.*

<sup>12</sup> *Id.* at 26492.

<sup>13</sup> *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.<sup>14</sup> 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.<sup>15</sup> These included measures, such as additional makeup water and equipment to mitigate fires, that would have beneficial effects regardless of the triggering event.<sup>16</sup>

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

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

<sup>15</sup> 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).

<sup>16</sup> See *New York v. NRC*, 589 F.3d 551, 555 (2<sup>nd</sup> 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.<sup>17</sup> 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.”<sup>18</sup> On judicial review, the courts have declined to second-guess the various measures NRC took in response to the September 11 attacks.<sup>19</sup>

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.<sup>20</sup> As the Chairman and EDO explained at the agency’s March 21<sup>st</sup> public meeting on still-unfolding events in Japan,

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

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

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

<sup>20</sup> 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.”<sup>21</sup>

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,

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<sup>21</sup> 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.”<sup>22</sup>

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.<sup>23</sup> 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

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<sup>22</sup> *Id.*

<sup>23</sup> 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."<sup>24</sup> As the basis for this confidence, the Chairman pointed to the "diverse and redundant safety systems that are required to be maintained

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<sup>24</sup> 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.”<sup>25</sup>

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.<sup>26</sup> 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.”<sup>27</sup> NRC has emphasized that its ongoing oversight “continuously analyzes conditions, acts, and practices that could affect safe operation of plants”<sup>28</sup> through the ongoing regulatory process, which “includes research, inspections, audits, investigations, evaluations of operating experience, and regulatory actions to resolve identified issues.”<sup>29</sup>

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<sup>25</sup> *Id.* at 6.

<sup>26</sup> 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.

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

<sup>28</sup> *Id.* at 22485.

<sup>29</sup> 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 be 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

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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.<sup>30</sup>

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

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<sup>30</sup> See, e.g., *Florida Power & Light Co. v. Lorion*, 470 U.S. 729 (1985); *Riverkeeper, Inc. v. Collins*, 359 F.3d 156, 158 (2<sup>nd</sup> 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 (1<sup>st</sup> 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.<sup>31</sup> 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

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<sup>31</sup> 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.”<sup>32</sup>

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.”<sup>33</sup> In contrast to aging-management issues, NRC’s ongoing “regulatory process provides reasonable assurance that there is compliance with the [current licensing basis].”<sup>34</sup>

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

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<sup>32</sup> *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.

<sup>33</sup> 60 Fed. Reg. at 22464.

<sup>34</sup> *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.<sup>35</sup>

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

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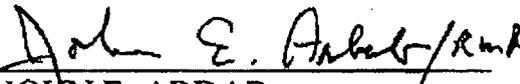
<sup>35</sup> *Florida Power & Light Co. v. Lorion*, 470 U.S. 729, 744 (1985). This Court has Hobbs Act jurisdiction only to review the “final agency action” from which petitioners have sought review. If petitioners were to seek relief before NRC regarding the events at Fukushima Daiichi, which they 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 (3<sup>rd</sup> 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.

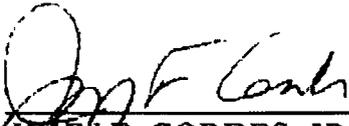
**Conclusion**

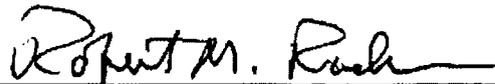
For the reasons given in our brief and at oral argument, the petition for review should be denied, based on the record before this Court. The disaster at the Fukushima Daiichi reactors in Japan is, of course, tragic and serious, and has triggered a full lessons-learned inquiry at NRC that may well lead 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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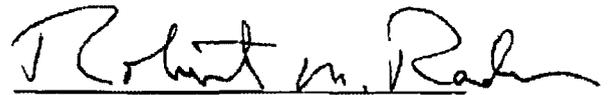
## CERTIFICATE OF SERVICE

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:

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**To:** [McIntyre, David](#)  
**Subject:** RE: ISFSI map  
**Date:** Wednesday, April 06, 2011 11:19:07 AM  
**Attachments:** [11map.legend.xls](#)  
[112010 ISFSI map.pptx](#)  
[image001.png](#)

---

David,

See attached. I do not have the actual information. They may schedule or have intention to load, but it is never on schedule, due to equipment failures and availability. When they loaded, they are required by regulation to report to us within 30 days. Then, I put into the information my database with the ML number.

Frank Gee  
Storage and Transportation Engineer  
Division of Spent Fuel Storage and Transportation  
Room 6003-3C22, Mail Stop 6003-3D02M  
Phone: 301-492-3329  
e-mail: [Frank.Gee@NRC.Gov](mailto:Frank.Gee@NRC.Gov)  
Fax: 301-492-3350



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**From:** McIntyre, David  
**Sent:** Wednesday, April 06, 2011 10:49 AM  
**To:** Gee, Frank  
**Subject:** ISFSI map

Hi Frank – Could you please send me the latest ISFSI map? I've managed to misplace mine.

Also, can you give me a list of plants that have not yet moved fuel to cask but have announced their intention to do so?

Thanks,  
Dave

---

**David McIntyre**  
**Public Affairs Officer**  
**U.S. Nuclear Regulatory Commission**  
(301) 415-8206 (direct)  
(202) 657-7096 (mobile)  
*Protecting People & the Environment*

Humboldt Bay  
Rancho Seco  
Diablo Canyon  
Private Fuel Storage  
North Anna\*  
Surry\*  
Robinson\*  
Oconee\*  
Prairie Island

Shearon Harris  
Summer  
Zion  
Beaver Valley  
Watts Bar

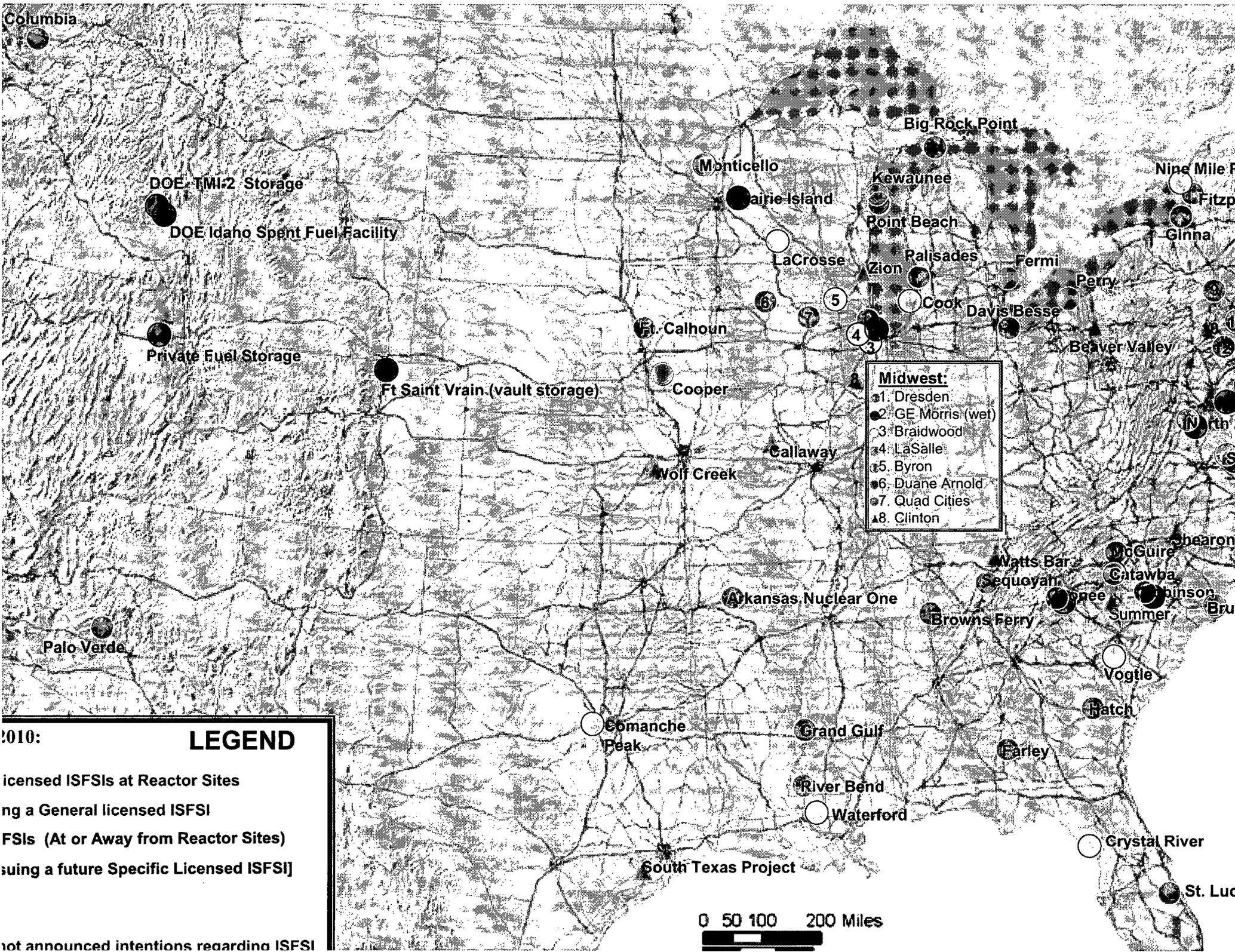
11

15

\*also General Licensees

Georgia  
Idaho  
Illinois  
Iowa  
Louisiana  
Maine  
Maryland  
Massachusetts  
Michigan  
Minnesota  
Mississippi  
Nebraska  
New Hampshire  
New Jersey  
New York  
North Carolina  
Ohio  
Oregon  
Pennsylvania  
South Carolina  
Tennessee  
Utah  
Vermont  
Virginia  
Washington  
Wisconsin

33



2010:

## LEGEND

- Licensed ISFSIs at Reactor Sites
- General licensed ISFSI
- FSIs (At or Away from Reactor Sites)
- (using a future Specific Licensed ISFSI)
- (not announced intentions regarding ISFSI)

**Midwest:**

- 1. Dresden
- 2. GE Morris (wet)
- 3. Braidwood
- 4. LaSalle
- 5. Byron
- 6. Duane Arnold
- 7. Quad Cities
- ▲ 8. Clinton





**From:** [McIntyre, David](#)  
**To:** [Burnell, Scott](#); [Hayden, Elizabeth](#)  
**Subject:** RE: House hearing, Markey  
**Date:** Wednesday, April 06, 2011 11:34:00 AM

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We may have to really dance on this one. Markey's statement said "probably". Tim Riley's e-mail said "speculates ... may have." Marty's statement suggests that something between has cased our speculation ...

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**From:** Burnell, Scott  
**Sent:** Wednesday, April 06, 2011 11:29 AM  
**To:** Hayden, Elizabeth; McIntyre, David  
**Subject:** RE: House hearing, Markey  
**Importance:** High

I'm thinking, "Marty's statement stands on its own," although that hangs either him or Riley out to dry

---

**From:** Dolley, Steven [[mailto:Steven\\_Dolley@platts.com](mailto:Steven_Dolley@platts.com)]  
**Sent:** Wednesday, April 06, 2011 11:27 AM  
**To:** Burnell, Scott  
**Cc:** Hayden, Elizabeth; OPA Resource  
**Subject:** RE: House hearing, Markey

Scott – as you've likely heard by now, Rep. Ed Markey said at the hearing he was told Tuesday by "NRC" that the core at Fukushima I Unit 2 has likely melted through the reactor vessel.

Martin Virgilio told reporters after his testimony that information does not square with today's event report, and he has seen no info that there has been melt-thru at Unit 2.

Who briefed Markey Tuesday, and what was he told? Why is he alleging meltthru? Is there something that he was told in briefing that might have been misinterpreted?

Filing right after the hearing. Thanks, Steve

Steven Dolley  
Managing Editor, Inside NRC  
Platts Nuclear  
202-383-2166 Office  
202-383-2187 Fax

---

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ABI 193

**From:** [JIM SNYDER, BLOOMBERG/ NEWSROOM:](#)  
**To:** [Burnell, Scott](#)  
**Subject:** RE: Media - Bloomberg-Question  
**Date:** Wednesday, April 06, 2011 11:38:28 AM  
**Attachments:** [alt\\_body.html](#)

---

Hey Scott, where have the SOARCA tests been conducted? I know one is Peach Bottom. Thanks.

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

**From:** JIM SNYDER (BLOOMBERG/ NEWSROOM:)  
**To:** [Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)  
**At:** 4/05 22:09:22

Hi Scott, Any chance you guys are giving out the document quoted in the Times story (U.S. Sees Array of New Threats at Japan's Nuclear Plant)? Apologies in advance if you get multiple requests from Bloomberg. Thanks, Jim.

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

**From:** Scott Burnell <[Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)>  
**To:** JIM SNYDER (BLOOMBERG/ NEWSROOM:)  
**Cc:** [Veronika.Medina@nrc.gov](mailto:Veronika.Medina@nrc.gov)  
**At:** 4/01 15:54:54

Hi Jim;

At this point, the only detail we have is that the NRC staff are assisting the U.S. Ambassador in providing the U.S. response to Japan's request for assistance. Thanks.

Scott

Jim Snyder  
Bloomberg  
202-624-1972  
[JSnyder24@bloomberg.net](mailto:JSnyder24@bloomberg.net) <<mailto:JSnyder24@bloomberg.net>>  
Re: What are the 11 people from NRC doing in Japan?

AB/194



Hi Jim;

At this point, the only detail we have is that the NRC staff are assisting the U.S. Ambassador in providing the U.S. response to Japan's request for assistance. Thanks.

Scott

Jim Snyder

Bloomberg

202-624-1972

[JSnyder24@bloomberg.net](mailto:JSnyder24@bloomberg.net)

Re: What are the 11 people from NRC doing in Japan?

**From:** Golla, Joe  
**To:** Burnell, Scott  
**Cc:** Jolicoeur, John; Blount, Tom; Markley, Michael; Oesterle, Eric; Stapleton, Bernard  
**Subject:** RE: Document Search - Japanese Reactor Incident Related  
**Date:** Wednesday, April 06, 2011 11:48:24 AM  
**Importance:** High

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Scott- I just got confirmation from the BWROG that BWROG EPGs and SAGs are products that are NOT available to the public. By direct inference then, the document in question (BWR Owner's Group, Emergency Procedure and Severe Accident Guidelines, Revision 2, March 2001) is not publicly available. According to your message below then, with this information and what was provided yesterday, you have enough to formulate the agency response to the reporter in Tokyo. I'll stand down on this then (and inform some others that were looking into it to see if there's anything they could do to help) unless there's something else I can help you with on it. Joe

---

**From:** Burnell, Scott  
**Sent:** Wednesday, April 06, 2011 9:47 AM  
**To:** Golla, Joe  
**Subject:** FW: Document Search - Japanese Reactor Incident Related

Joe;

If you can get a quick confirmation from Bern Stapleton or another classification guru that this is non-public, that'll be enough for me to go back to the reporter. Thanks.

Scott

---

**From:** Kilgore, Linda **On Behalf Of** ADAMS IM  
**Sent:** Wednesday, April 06, 2011 8:25 AM  
**To:** Golla, Joe  
**Cc:** Blount, Tom; Burnell, Scott  
**Subject:** RE: Document Search - Japanese Reactor Incident Related

Joe,

I don't think it's publicly available. I found only one small section of the report in ADAMS, and that piece is proprietary:

Accession Number ML090760588  
Document Date 03/31/2001  
Document Type Emergency Preparedness-Emergency Plan Implementing  
Procedures  
Operating Procedures  
Title BWR Owner's Group Emergency Procedure and Severe Accident Guidelines,  
Appendix B: Technical Basis, Volume 1, Revision 2.  
Author Affiliation BWR Owners Group  
Author Name  
Pages 18  
Official Record? Yes  
Availability Non-Publicly Available

AB1195

Sensitivity Sensitive- Proprietary

Linda Kilgore  
OIS/IRSD  
ADAMS Support Center

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**From:** Golla, Joe  
**Sent:** Wednesday, April 06, 2011 8:03 AM  
**To:** ADAMS IM  
**Cc:** Blount, Tom; Burnell, Scott  
**Subject:** Document Search - Japanese Reactor Incident Related  
**Importance:** High

Hi- I'm following up on a request for information we got from a reporter for the Wall Street Journal who is covering the incident at the Japanese reactors. She is communicating to us through our Office of Public Affairs from Tokyo. Would you please do a search on the attached document to see if it's in ADAMS? (I tried and didn't find it but then I'm nobody's ADAMS expert.) I'm trying to determine if this document is publicly available. The reporter is particularly interested in this document. I obtained it from one of our staff in NRC RES who had it on his computer. Need to know ASAP! Thank you much.

Joe Golla, Project Manager  
US Nuclear Regulatory Commission  
NRR/DPR/PLPB  
301-415-1002

**From:** [Tracy, Tennille](mailto:Tracy.Tennille)  
**To:** [Burnell, Scott](mailto:Burnell.Scott)  
**Subject:** RE:  
**Date:** Wednesday, April 06, 2011 11:55:08 AM

---

Hey ... Yeah, I know Virgilio said he had no evidence this breach had happened. I was there. But Virgilio also said Markey had clearly been told by someone from NRC that this had taken place. ... So we're wondering who at NRC told Markey this. And whether that person has information that's not in the situation reports.

t

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**From:** Burnell, Scott [[Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)]  
**Sent:** Wednesday, April 06, 2011 11:49 AM  
**To:** Tracy, Tennille  
**Subject:** RE:

Hi Tennille;

Please refer to the hearing transcript for Marty Virgilio's response to that statement, that speaks for the agency on this issue. Thanks.

Scott

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

**From:** Tracy, Tennille [<mailto:Tennille.Tracy@dowjones.com>]  
**Sent:** Wednesday, April 06, 2011 11:44 AM  
**To:** Burnell, Scott  
**Subject:** RE:

Hi ... I'm sure you're getting tons of emails on this now ... But Rep. Ed Markey is saying that the core of at least one unit at Fukushima (Unit Two) has melted through the reactor vessel. Martin Virgilio, who was at the hearing where Markey was speaking, said this is not the case. He said there was no evidence of this in the situation reports from this morning.

Do we have any evidence that the core has breached the reactor vessel?

Did NRC staff tell Markey that this had taken place?

---

**From:** Burnell, Scott [[Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)]  
**Sent:** Wednesday, April 06, 2011 11:09 AM  
**To:** Burnell, Scott  
**Cc:** Brenner, Eliot; Hayden, Elizabeth  
**Subject:**

Good Morning;

Here is the NRC response to the NY Times article:

AB1196

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

**From:** Hayden, Elizabeth  
**To:** Stuckle, Elizabeth; Brenner, Eliot; Harrington, Holly; Burnell, Scott; McIntyre, David  
**Subject:** RE: Suggestions for Additional Proactive Activities  
**Date:** Wednesday, April 06, 2011 12:35:34 PM

---

This is a good first step. We need you to pursue item "D" by going through the past 2 weeks of clips to identify a list of stories that report misinformation either about the NRC or about the Japan situation. It isn't our intent to go after the individuals responsible for starting the misinformation since we would focus on correcting the "bad information."

*Beth*

---

**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

AB/197

**From:** [Nelson, Robert](#)  
**To:** [LIA06 Hoc](#); [Burnell, Scott](#); [Guzman, Richard](#); [Lyon, Fred](#); [Markley, Michael](#); [Meighan, Sean](#); [Nguyen, Quynh](#); [Oesterle, Eric](#); [Polickoski, James](#); [Tam, Peter](#); [Thomas, Eric](#); [Wertz, Trent](#)  
**Subject:** FYI: Scan from Seabrook HP5035  
**Date:** Wednesday, April 06, 2011 12:50:34 PM  
**Attachments:** [Untitled].pdf

---

NELSON

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

From: Ennis, Rick  
Sent: Wednesday, April 06, 2011 11:21 AM  
To: Chernoff, Harold; Nelson, Robert; Markley, Michael  
Subject: FW: Scan from Seabrook HP5035

fyi

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

From: Burritt, Arthur  
Sent: Wednesday, April 06, 2011 10:59 AM  
To: Bower, Fred; Cline, Leonard; DeBoer, Joseph; Douglas, Christopher; Ennis, Rick; Johnson, Jonathan; Kern, Ludwig; McKenna, Philip; Miller, Ed; Patel, Amar; Raymond, William; Schroeder, Daniel; Smith, Brian; Turilin, Andrey  
Subject: FW: Scan from Seabrook HP5035

NEI presentation before the Senate subcommittee. Well worth the read, we have been independently working on a similar approach and key points for our discussions during the AAMs.

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

From: R1Scan [<mailto:R1Scan@nrc.gov>]  
Sent: Wednesday, April 06, 2011 10:53 AM  
To: Burritt, Arthur  
Subject: Scan from Seabrook HP5035

Please open the attached document. This document was digitally sent to you using an HP Digital Sending device.

AB1198

**STATEMENT**

*by*

**William Levis**

**President and Chief Operating Officer**

**PSEG Power LLC**

*to the*

**Subcommittee on Energy and Water Development**

**Committee on Appropriations**

**U.S. Senate**

**March 30, 2011**

Chairman Feinstein, Ranking Member Alexander, and members of the subcommittee, thank you for the opportunity to appear before you today.

My name is William Levis. I am President and Chief Operating Officer of PSEG Power which is a subsidiary of Public Service Enterprise Group, headquartered in Newark, New Jersey. PSEG Power is a merchant generating company and owns approximately 14,000 megawatts of electric generating capacity. We own 100 percent of the Hope Creek nuclear generating station, 57 percent of the Salem nuclear station, and 50 percent of the Peach Bottom nuclear station. PSEG Power operates Salem and Hope Creek; Exelon operates Peach Bottom. Salem consists of two pressurized water reactors; Hope Creek is a single boiling water reactor; the Peach Bottom station has two boiling water reactors.

I appreciate your invitation to testify at today's hearing to discuss the status of the U.S. nuclear energy industry and the implications of the Fukushima nuclear accident on nuclear energy in the United States. I am testifying today on behalf of the Nuclear Energy Institute, the nuclear energy industry's Washington-based policy organization. NEI members include all companies licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

My remarks will cover four major points:

First, U.S. nuclear power plants are safe.

Second, safety is the U.S. nuclear energy industry's top priority.

Third, the U.S. nuclear energy industry has a long history, over several decades, of continuous learning from operational events, and we have incorporated lessons learned into our nuclear plant designs and our operating practices and training. We will do the same as a result of the Fukushima accident.

And fourth, the U.S. nuclear energy industry has already taken pro-active steps to verify and validate our readiness to manage extreme events. We took these steps early – without waiting for clarity on the sequence of failures at Fukushima.

Before I address these four points, however, let me note that the U.S. nuclear energy industry works very hard not to grow complacent about safety. This is not always easy when our 104 nuclear power plants are operating well, with an average capacity factor above 90 percent for the last 10 years. Similarly, we cannot be complacent about the accident at Fukushima. I cannot tell you at this moment whether or not

we will discover previously unknown vulnerabilities at America's nuclear power plants, but I am quite confident that we will learn important lessons from Fukushima and identify additional steps we can and will take to further improve the margin of safety at our nuclear plants.

### **U.S. Nuclear Power Plants Are Safe**

That said, we do believe U.S. nuclear power plants are safe. They are designed and operated conservatively to manage the maximum credible challenges appropriate to each nuclear power plant site. U.S. nuclear power plants have also demonstrated their ability to maintain safety through extreme conditions, including floods and hurricanes and other natural disasters.

I can think of no better summary of the status of U.S. nuclear power plants than the one delivered by President Obama to the American people on March 17. Mr. Obama said: "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."

We invest heavily in our operating plants to ensure safe, reliable operation. The U.S. nuclear energy industry invested approximately \$6.5 billion in 2009 in our 104 operating plants – to replace steam generators, reactor vessel heads and other equipment and in other capital projects.

U.S. nuclear reactors are designed to withstand earthquakes, tsunamis, hurricanes, floods, tornadoes and other natural events equal to the most significant historical event or the maximum projected event, plus an added margin for conservatism, without any breach of safety systems. We have many, many examples of U.S. nuclear power plants achieving safe shutdown during extreme events where offsite power was lost. During Hurricane Katrina in 2005, for example, the Waterford nuclear power plant in Louisiana shut down safely, lost all off-site power, and maintained safe shutdown on emergency diesel generators for three-and-a-half days until grid power was restored.

For earthquakes, nuclear plants are designed and constructed to withstand the maximum projected earthquake that could occur in its area, with additional margin added. Plant earthquake-induced ground motion is developed using a wide range of data and review of the impacts of historical earthquakes up to 200 miles away. Those earthquakes within 25 miles are studied in great detail. This research is used to determine the maximum potential earthquake that could affect the site. Each reactor is built to withstand the respective strongest earthquake; for example, a site that features clay over bedrock will respond differently during an earthquake than a hard-rock site.

It is important not to extrapolate earthquake and tsunami data from one location of the world to another when evaluating these natural hazards. These catastrophic natural events are very region- and location-specific, based on tectonic and geological fault line locations. The Tohoku earthquake that struck the Fukushima nuclear power plant occurred on a "subduction zone," the type of tectonic region that produces earthquakes of the largest magnitude. A subduction zone is a tectonic plate boundary where one tectonic plate is pushed under another plate. Subduction zone earthquakes are also required to produce the kind of massive tsunami seen in Japan.

In the continental U.S., the only subduction zone is the Cascadia subduction zone which lies off the coast of northern California, Oregon and Washington. In an assessment released last week, the California Coastal Commission concluded that a "nuclear emergency such as is occurring in Japan is extremely unlikely at the state's two operating nuclear power plants. The combination of strong ground motion and massive tsunami that occurred in Japan cannot be generated by faults near the San Onofre Nuclear Generating Station and the Diablo Canyon Power Plant."

## **Safety Is the U.S. Nuclear Energy Industry's Top Priority**

This leads to my second point: Safety is the U.S. nuclear energy industry's top priority, and complacency about safety performance is not tolerated.

We know we operate in an unforgiving environment where the penalties for mistakes are high and where credibility and public confidence, once lost, are difficult to recover.

All of the safety-related metrics tracked by industry and the Nuclear Regulatory Commission demonstrate high levels of excellence. Forced outage rates, unplanned safety system actuations, worker radiation exposures, events with safety implications, and lost-time accident rates have all trended down, year over year, for a number of years.

We can have confidence in nuclear plant safety based on those indicators, but we should derive even greater confidence from the process that produces those indicators, from the institutions we have created to share best practices, to establish standards of excellence and to implement programs that hold us to those standards.

After the 1979 accident at Three Mile Island, the nuclear industry created the Institute of Nuclear Power Operations (INPO). In INPO, the nuclear industry — unique among American industries — has established an independent form of self-regulation through peer review and peer pressure. In fact, the President's Oil Spill Commission, in its report on the Deepwater Horizon accident, identified INPO as the model for self-regulation by the offshore oil and gas industry.

INPO is empowered to establish performance objectives and criteria, and nuclear operating companies are obligated to implement improvements in response to INPO findings and recommendations. At its headquarters in Atlanta, INPO has some 350 people monitoring nuclear plant operations and management on a daily basis. INPO evaluates every U.S. nuclear plant every two years, and deploys training teams to provide assistance to companies in specific areas identified as needing improvement during an evaluation.

INPO provides management and leadership development programs, and manages the National Academy of Nuclear Training, which conducts formal training and accreditation programs for those responsible for reactor operation and maintenance.

Among its many activities, INPO maintains an industrywide database called EPIX — for Equipment Performance and Information Exchange — and all companies are required to report equipment problems into EPIX. EPIX catalogues equipment problems and shows, for example, expected mean time between failures, which allows the industry to schedule predictive and preventive maintenance, replacing equipment before it fails, avoiding possible challenges to plant safety. INPO also maintains a system called Nuclear Network that allows companies to report and share information about operating events, to ensure that an unexpected event at one reactor is telegraphed to all, to ensure that an event at one plant is not repeated elsewhere, to ensure high levels of vigilance and readiness.

It may not be obvious to the outside world, but we have an enormous self-interest in safe operations. We preserve and enhance the asset value of our 104 operating plants first and foremost by maintaining focus on safety. Safety is the basis for regulatory confidence, and for political and public support of this technology.

## **The U.S. Nuclear Energy Industry Has a Long History of Continuous Learning**

My third point: The U.S. industry routinely incorporates lessons learned from operating experience into its reactor designs and operations. U.S. nuclear power plants have implemented numerous plant and procedural improvements over the past 30 years. Some of these improvements have been designed to mitigate severe natural and plant-centered events similar to those experienced at the Fukushima nuclear power plant. In addition, the equipment and procedures could be used to mitigate other severe abnormal events. The type of events include a complete and sustained loss of AC power, a sustained loss of vital cooling water pumps, major fires and explosions that would prevent access to critical equipment, hydrogen control and venting, and loss of multiple safety systems.

Starting in the 1990s, U.S. nuclear power plants developed guidelines to manage and mitigate these severe events that are beyond the normal design specifications. Plants evaluated site-specific vulnerabilities and implemented plant and procedural improvements to further improve safety. These severe accident management guidelines were developed in response to probabilistic risk assessments (PRAs), which identified several high-risk accident sequences. These guidelines provide operators and emergency managers with pre-determined strategies to mitigate these events. The strategies focus on protecting the containment as it assumes the fuel clad and reactor cooling system are lost.

I could point to many, many examples of improvements made to U.S. nuclear power plants over the years in response to lessons learned from operational events. Let me list just a few:

- In the 1970s, concerns were raised about the ability of the BWR Mark I containment to maintain its design during an event when steam is vented to the torus. Subsequently, every United States Operator with a Mark I containment implemented modifications to dissipate energy released to the suppression pool and stringent supports to accommodate loads that could be generated.
- As a result of the Three Mile Island accident, the industry made significant improvements to control room configuration and operator training. After that accident, which underscored the need for information to be better displayed in control rooms, all U.S. nuclear power plants installed safety parameter display systems. A safety parameter display system collects and displays critical safety information at a workstation in the control room and other locations in the plant. Information on the status of key conditions, such as reactor core cooling, is displayed in a clear format on a computer screen. The information displayed enables the nuclear plant operators to assess plant conditions rapidly and take corrective actions. Before the accident at Three Mile Island, many U.S. nuclear power plant trained their operators on generic simulators located off-site. Today, every U.S. nuclear reactor has a reactor-specific simulator on site, with one shift of operators always in training. Finally, our current emergency preparedness programs grew from the lessons we learned at TMI and we now routinely drill with our state and local emergency management agencies to ensure we can appropriately communicate with the public during emergencies.
- In 1988, the Nuclear Regulatory Commission concluded that additional Station Black Out (SBO) regulatory requirements were justified and issued the Station Black Out rule (10 CFR 50.63) to provide further assurance that a loss of both offsite and onsite emergency AC power systems would not adversely affect public health and safety. The SBO rule was based on several plant-specific probabilistic safety studies; operating experience; and reliability, accident sequence, and consequence analyses completed between 1975 and 1988.
- Since the terrorist events of September 11, 2001, U.S. nuclear plant operators identified other beyond-design-basis vulnerabilities. As a result, U.S. nuclear plant designs and operating practices since 9/11 are designed to mitigate severe accident scenarios such as aircraft impact, which include the complete loss of offsite power and all on-site emergency power sources *and* loss of large areas of the plant. The industry developed additional methods and procedures to provide cooling to the reactor and the spent fuel pool, and staged additional equipment at all U.S.

nuclear power plant sites to ensure that the plants are equipped to deal with extreme events and nuclear plant operations staff are trained to manage them. .

### **The U.S. Nuclear Energy Industry Has Already Taken Steps in Response to Fukushima**

The U.S. nuclear energy industry has already started an assessment of the events in Japan and is taking steps to ensure that U.S. reactors could respond to events that may challenge safe operation of the facilities. These actions include:

- Verifying each plant's capability to manage major challenges, such as aircraft impacts and losses of large areas of the plant due to natural events, fires or explosions. Specific actions include testing and inspecting equipment required to mitigate these events, and verifying that qualifications of operators and support staff required to implement them are current.
- Verifying each plant's capability to manage a total loss of off-site power. This will require verification that all required materials are adequate and properly staged and that procedures are in place, and focusing operator training on these extreme events.
- Verifying the capability to mitigate flooding and the impact of floods on systems inside and outside the plant. Specific actions include verifying required materials and equipment are properly located to protect them from flood.
- Performing walk-downs and inspection of important equipment needed to respond successfully to extreme events like fires and floods. This work will include analysis to identify any potential that equipment functions could be lost during seismic events appropriate for the site, and development of strategies to mitigate any potential vulnerabilities.

Until we understand clearly what has occurred at the Fukushima Daiichi nuclear power plants, and any consequences, it is difficult to speculate about the long-term impact on the U.S. nuclear energy program. The U.S. nuclear industry, the U.S. Nuclear Regulatory Commission, the Institute of Nuclear Power Operations, the World Association of Nuclear Operators and other expert organizations in the United States and around the world will conduct detailed reviews of the accident, identify lessons learned (both in terms of plant operation and design), and we will incorporate those lessons learned into the design and operation of U.S. nuclear power plants. When we fully understand the facts surrounding the event in Japan, we will use those insights to make nuclear energy even safer.

In the long-term, we believe that the U.S. nuclear energy enterprise is built on a strong foundation:

- reactor designs and operating practices that incorporate a defense-in-depth approach and multiple levels of redundant systems
- a strong, independent regulatory infrastructure, which includes continuous assessment of every U.S. reactor by the Nuclear Regulatory Commission, with independent inspectors permanently on site and additional oversight from NRC regional offices and headquarters
- a transparent regulatory process that provides for public participation in licensing decisions, and
- a continuing and systematic process to identify lessons learned from operating experience and to incorporate those lessons.

In conclusion, Madame Chairman, let me leave you with a short-term and a longer-term perspective.

In the short term, all of us involved with the production of electricity from nuclear energy in the United States stand in awe of the commitment and determination of our colleagues in Japan, as they struggle to bring these crippled reactors to safe shutdown.

In the longer term, it will be some time before we understand the precise sequence of what happened at Fukushima, before we have a complete analysis of how the reactor performed, how equipment and fuel performed, how the operators performed. As we learn from this tragic event, however, you may rest assured that we will internalize those lessons and incorporate them into our designs and training and operating procedures.

■

**From:** [Virgilio, Martin](#)  
**To:** [Burnell, Scott](#); [Powell, Amy](#); [Hayden, Elizabeth](#)  
**Subject:** Vessel Integrity  
**Date:** Wednesday, April 06, 2011 12:54:08 PM

---

On my way to the ops center to see if we can determine how this story started. Our Ops Center Status Updates does not reflect breach of the reactor vessel.

Marty

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

From: Burnell, Scott  
Sent: Wednesday, April 06, 2011 12:16 PM  
To: Powell, Amy; Hayden, Elizabeth; Virgilio, Martin  
Subject: FW:

Thoughts?

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

From: Tracy, Tennille [<mailto:Tennille.Tracy@dowjones.com>]  
Sent: Wednesday, April 06, 2011 12:10 PM  
To: Burnell, Scott  
Subject: RE:

Rep. Markey's office has just released the e-mail they received from NRC on this issue. The e-mail comes from Timothy Riley. The e-mail is dated Tuesday, April 5, and states:

>You had asked if the core of Unit 2 had melted into the torus. Here is  
>the view from the NRC Emergency Operations Center:  
>  
>Based on radiation readings in the drywell and the torus (3340 rem/hour  
>and 91 rem/hour, respectively), the NRC staff speculates that part of the  
>Unit 2 core may be out of the reactor pressure vessel and may be in the  
>lower space of the drywell. Lower radiation readings in the torus  
>suggest that there is not core material in the torus.

Is Markey's office interpreting this correctly? The e-mail - "that part of the Unit 2 core may be out of the reactor pressure vessel and may be in the lower space of the drywell" - suggests that NRC does in fact believe the core has melted through the reactor vessel. Was Martin Virgilio wrong when he said NRC had no evidence that the core had melted through the vessel? What is the belief of the NRC? Are there conflicting opinions within NRC? .... I'm getting a ton of pressure from editors to sort this out.

Thanks, t

---

From: Burnell, Scott [[Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)]  
Sent: Wednesday, April 06, 2011 11:49 AM  
To: Tracy, Tennille  
Subject: RE:

Hi Tennille;

Please refer to the hearing transcript for Marty Virgilio's response to that statement, that speaks for the agency on this issue. Thanks.

ABI 199

Scott

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

From: Tracy, Tennille [<mailto:Tennille.Tracy@dowjones.com>]

Sent: Wednesday, April 06, 2011 11:44 AM

To: Burnell, Scott

Subject: RE:

Hi ... I'm sure you're getting tons of emails on this now ... But Rep. Ed Markey is saying that the core of at least one unit at Fukushima (Unit Two) has melted through the reactor vessel. Martin Virgilio, who was at the hearing where Markey was speaking, said this is not the case. He said there was no evidence of this in the situation reports from this morning.

Do we have any evidence that the core has breached the reactor vessel?

Did NRC staff tell Markey that this had taken place?

---

From: Burnell, Scott [[Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)]

Sent: Wednesday, April 06, 2011 11:09 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

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 06, 2011 1:11:36 PM

---

**News**

**4 new results for Nuclear Regulatory Commission**

**Nuclear Agency Tests Pennsylvania Plant**

Wall Street Journal

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

[See all stories on this topic »](#)

**Dems slam NRC on nuclear safety**

Politico

AP Photos Close By DARIUS DIXON | 4/6/11 12:45 PM EDT House Democrats hammered federal regulators Wednesday on the safety of the US nuclear industry, casting skepticism on the **Nuclear Regulatory Commission's** assurances that plants here are safe despite ...

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Politico

**Group petitions NRC to halt review of Westinghouse reactor design**

Pittsburgh Tribune-Review

s proposed AP1000 nuclear reactor design and asks the **Nuclear Regulatory Commission** to halt its review. North Carolina Waste Awareness and Reduction Network, a nonprofit known as NC Warn, represents more than a dozen nuclear energy watchdog groups that ...

[See all stories on this topic »](#)

**Westchester legislators want 50-mile Indian Point evacuation zone**

The Journal News | LoHud.com

"The **NRC** sees no basis at this point for expanding the 10-mile-radius Emergency Planning Zone (EPZ) around US nuclear power plants," said agency spokesman Neil Sheehan. "That does not mean the protective actions could not expand beyond the 10-mile ...

[See all stories on this topic »](#)

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

[Remove](#) this alert.  
[Create](#) another alert.  
[Manage](#) your alerts.

ABI/200

**From:** [David Talbot](#)  
**To:** [McIntyre, David](#)  
**Subject:** RE: Media- data request from Technology Review magazine  
**Date:** Wednesday, April 06, 2011 1:41:01 PM

---

Thank you very much.

---

**From:** McIntyre, David [David.McIntyre@nrc.gov]  
**Sent:** Wednesday, April 06, 2011 1:31 PM  
**To:** David Talbot  
**Subject:** RE: Media- data request from Technology Review magazine

Hmm, you reminded me; someone forwarded this to me a few weeks ago during the initial frenzy. Note it is as of EOY2009. It mentions an annual survey but I don't have anything more recent.

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

**From:** David Talbot [<mailto:David.Talbot@TechnologyReview.com>]  
**Sent:** Wednesday, April 06, 2011 12:16 PM  
**To:** McIntyre, David  
**Subject:** RE: Media- data request from Technology Review magazine

You mean --- other journalists are asking for this, too? I'm shocked. Shocked!

Thanks. I will check with industry...

You don't happen to have the last inventory statement they made, do you?

---

**From:** McIntyre, David [David.McIntyre@nrc.gov]  
**Sent:** Wednesday, April 06, 2011 12:12 PM  
**To:** David Talbot  
**Subject:** RE: Media- data request from Technology Review magazine

From us, yes. We track Special Nuclear Material in a DOE/NRC database that is not public. That info does not distinguish fresh/spent. The industry has given out inventory information in the past. Believe me, as a PAO I wish I had a tidy little table in a pdf that I could attach to the numerous requests I've received for this info.

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

**From:** David Talbot [<mailto:David.Talbot@TechnologyReview.com>]  
**Sent:** Wednesday, April 06, 2011 12:07 PM  
**To:** McIntyre, David  
**Subject:** RE: Media- data request from Technology Review magazine

OK -- so the bottom line is that quantities of fuel and spent fuel on plant sites is not publicly releasable, no matter how I ask the question, right?

I assume this is a sensible Homeland Security measure. I would also assume that NEI wouldn't really be of a mind to release it, either....

But please just confirm that so I can save myself some time. (Or if there's a piece of the question you can answer, please let me know.)

ATB/201.

Thanks,  
Dave

---

From: McIntyre, David [David.McIntyre@nrc.gov]  
Sent: Wednesday, April 06, 2011 12:00 PM  
To: David Talbot  
Subject: RE: Media- data request from Technology Review magazine

Correct, not in that form, or publicly releasable.

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

From: David Talbot [mailto:David.Talbot@TechnologyReview.com]  
Sent: Wednesday, April 06, 2011 11:58 AM  
To: McIntyre, David  
Subject: RE: Media- data request from Technology Review magazine

David

Thanks for both emails. I got the spreadsheets. So -- NRC doesn't have data on how many "metric tons of uranium" are on plant sites and any breakdown of how much of this is fresh fuel vs. spent fuel, etc?

Thanks  
Dave

---

From: McIntyre, David [David.McIntyre@nrc.gov]  
Sent: Wednesday, April 06, 2011 11:53 AM  
To: McIntyre, David; David Talbot; Medina, Veronika  
Subject: RE: Media- data request from Technology Review magazine

Sheesh. Attachments here. Sorry about that.

From: McIntyre, David  
Sent: Wednesday, April 06, 2011 11:53 AM  
To: 'David Talbot'; Medina, Veronika  
Subject: RE: Media- data request from Technology Review magazine

"How much" is different than "radiological content". Plant-specific inventories are best gotten from the Nuclear Energy Institute; this is likely to be in terms of metric tons uranium, rather than isotopes or radioactivity.

Attached are a map and a spreadsheet of sites with "Independent Spent Fuel Storage Installations." All are dry cask except for G.E. Morris, which is a pool. The one in Utah, Private Fuel Storage, does not actually exist yet, but it is on here because we issued a license for it. The others are all current or former reactor sites, except for the two DOE licenses in Idaho at the Idaho National Laboratory.

There are two types of licenses, "general" and "specific." This distinction is meaningful only to regulators. I suggest you not worry about it. You will note though that four reactors have both types of licenses for their dry cask storage. So if you are parsing the total number of sites, there are 63 licenses (48 general + 15 specific). Subtract the four duplicates (59), plus the PFS in Utah that doesn't really exist and the two licenses in Idaho and the G.E. Morris pool (-4 = 55) and you have 55 current and former reactor sites with dry cask storage. At least, I think so.

David McIntyre  
Office of Public Affairs  
U.S. Nuclear Regulatory Commission  
(301) 415-8200

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

From: David Talbot [<mailto:David.Talbot@TechnologyReview.com>]  
Sent: Wednesday, April 06, 2011 11:21 AM  
To: McIntyre, David; Medina, Veronika  
Subject: RE: Media- data request from Technology Review magazine

David,

Thanks for your speedy reply. On #4 -- what's the best way to get a sense of how much spent fuel is present? For example, is the age of the plant a rough proxy for how much fuel is stored? (All fuel is still on all plant sites, right?)

On dry cask -- I know there's a plant in Maine that has already installed the casks, and that Indian Point is (or was) constructing a pad for them. There are a few here and there...

Thanks

Dave

---

From: McIntyre, David [[David.McIntyre@nrc.gov](mailto:David.McIntyre@nrc.gov)]  
Sent: Wednesday, April 06, 2011 10:47 AM  
To: Medina, Veronika; David Talbot  
Subject: RE: Media- data request from Technology Review magazine

David -

1. Population figures attached.
2. See Appendix A of our Information Digest <<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>> for lots of good info on operating reactors.
3. See Appendix I of the Info Digest. I'm afraid I don't have a handy list of plants that are planning to initiate dry storage; I'll see if I can find one.
4. I don't believe we have this information in any public, readily accessible form.

David McIntyre  
Office of Public Affairs  
U.S. Nuclear Regulatory Commission  
(301) 415-8200

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

From: David Talbot [<mailto:David.Talbot@TechnologyReview.com>]

Sent: Tuesday, April 05, 2011 3:51 PM

To: OPA Resource

Subject: data request from Technology Review magazine

Hi

Spoke with Brenda and she suggested I send this email.

For MIT's Technology Review magazine I am seeking a few basic datasets. Can you provide:

- 1: Population within 10 and 50 mile radius around all US nuclear power plants (two figures per plant).
- 2: Date of initial licensing of all US nuclear power plants
- 3: List of all plants that have dry cask storage (or where casks are under construction)
- 4: Total radiological content of stored spent fuel at each US nuclear power plant or plant site.

Thank you

Dave

David Talbot

Chief Correspondent

Technology Review

One Main Street

Cambridge, MA 02142

[www.technologyreview.com](http://www.technologyreview.com)

617-475-8057

Humboldt Bay  
Rancho Seco  
Diablo Canyon  
Private Fuel Storage  
North Anna\*  
Surry\*  
Robinson\*  
Oconee\*  
Prairie Island

Shearon Harris  
Summer  
Zion  
Beaver Valley  
Watts Bar

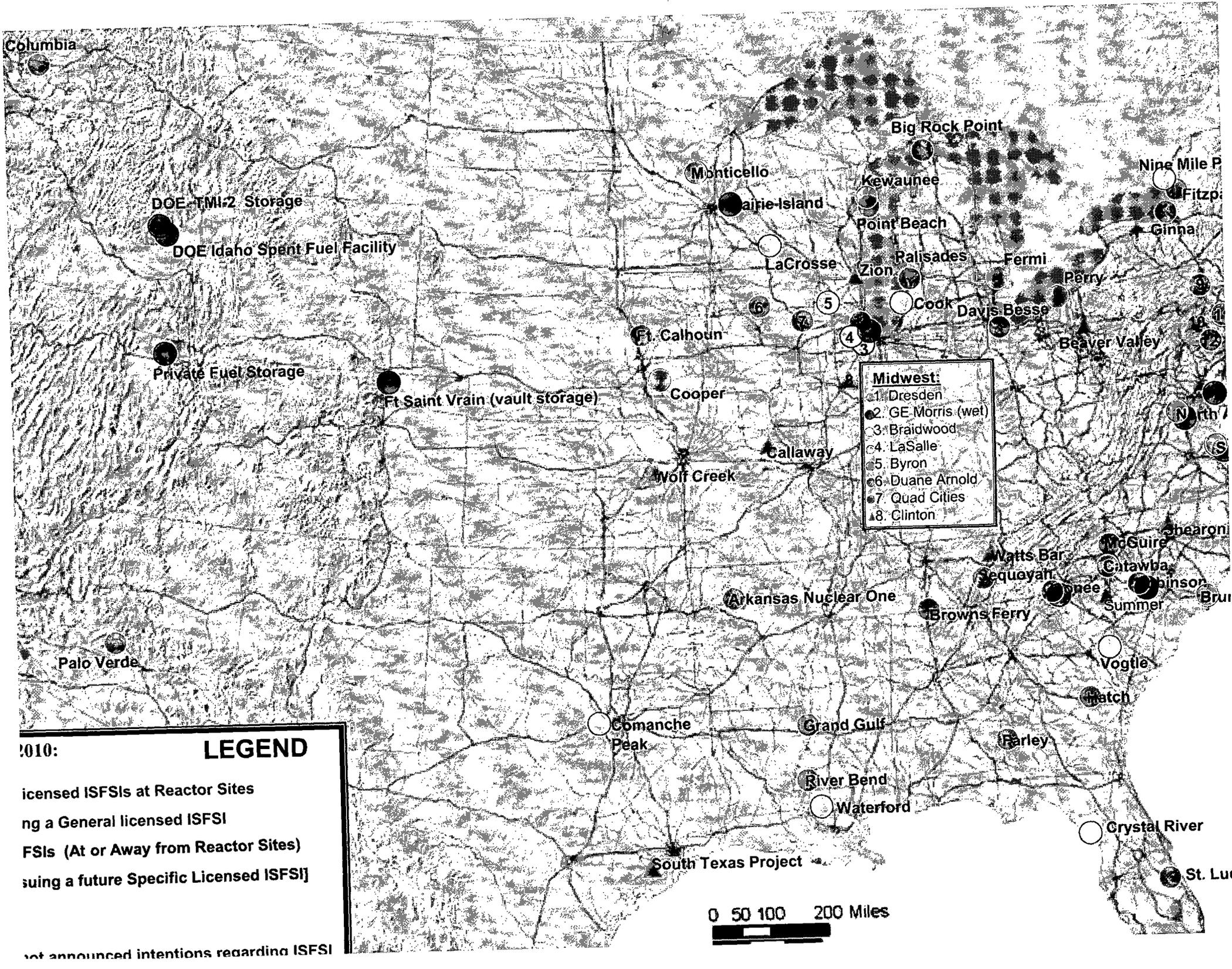
11

15

\*also General Licensees

Georgia  
Idaho  
Illinois  
Iowa  
Louisiana  
Maine  
Maryland  
Massachusetts  
Michigan  
Minnesota  
Mississippi  
Nebraska  
New Hampshire  
New Jersey  
New York  
North Carolina  
Ohio  
Oregon  
Pennsylvania  
South Carolina  
Tennessee  
Utah  
Vermont  
Virginia  
Washington  
Wisconsin

33



DOE TMI-2 Storage

DOE Idaho Spent Fuel Facility

Private Fuel Storage

Ft Saint Vrain (vault storage)

Ft. Calhoun

Cooper

Callaway

Wolf Creek

Palo Verde

Comanche Peak

Grand Gulf

River Bend

Waterford

South Texas Project

Big Rock Point

Monticello

Prairie Island

Kewaunee

Point Beach

LaCrosse

Zion

Palisades

Fermi

Perry

Davis Besse

Beaver Valley

Midwest:

- 1 Dresden
- 2 GE Morris (wet)
- 3 Braidwood
- 4 LaSalle
- 5 Byron
- 6 Duane Arnold
- 7 Quad Cities
- 8 Clinton

Nine Mile P

Fitzp

Ginna

North

South

Shearon

Watts Bar

Sequoyah

Arkansas Nuclear One

Browns Ferry

McGuire

Catawba

Summer

Bru

Vogle

Hatch

Barley

Crystal River

St. Lu

**LEGEND**

- licensed ISFSIs at Reactor Sites
- ing a General licensed ISFSI
- FSIs (At or Away from Reactor Sites)
- using a future Specific Licensed ISFSI]

not announced intentions regarding ISFSI

0 50 100 200 Miles

Data based on the 2000 U.S. Census

Nuclear Plant Site	Total Population w/in 10 Miles	Total Population w/in 20 Miles	Total Population w/in 50 Miles	STATE
Arkansas Nuclear	80519	138874	367242	AR
Beaver Valley	122728	679716	5549602	PA
Braidwood	57956	226256	6046594	IL
Browns Ferry	56214	370260	1412565	AL
Brunswick	38300	248332	642588	NC
Byron	41906	312272	1516732	IL
Callaway	7406	33388	356065	MO
Calvert Cliffs	69278	250174	3112254	MD
Catawba	240106	1158428	3691618	SC
Clinton	9077	44384	578969	IL
Columbia Generating Stat.	5649	10644	269807	WA
Comanche Peak	18996	101988	1954836	TX
Cooper	3653	15678	119930	NE
Crystal River	17863	78522	732600	FL
D.C. Cook	86136	269450	1750516	MI
Davis-Besse	10905	67740	1478114	OH
Diablo Canyon	61082	288602	841788	CA
Dresden	82958	546724	8799220	IL
Duane Arnold	83407	202450	504169	IA
Farley	14904	116678	683344	AL
Fermi	62413	353837	4683545	MI
Fitzpatrick	56074	100097	757173	NY
Fort Calhoun	14314	317142	817945	NE
Fort St. Vrain	24949	181967	2527075	CO
Ginna	40399	283631	1032615	NY
Grand Gulf	8633	27289	230135	MS
Harris	34269	326438	1850791	NC
Hatch	16272	98260	579434	GA
Hope Creek	45676	148219	4912642	NJ
Indian Point	414174	1890800	30552994	NY
Kewaunee	2378	38131	446016	WI
LaSalle County	22330	166600	1880046	IL
Limerick	278048	1186274	12144040	PA
McGuire	193716	1196038	4121840	NC
Millstone	206334	488066	3205206	CT
Monticello	37114	128789	1841198	MN
Nine Mile Point	56074	100097	757173	NY
North Anna	27944	153672	2621834	VA
Oconee	157800	464445	3174858	SC
Oyster Creek	112529	408268	2509452	NJ
Palisades	21260	68656	931620	MI
Palo Verde	6351	51714	2329275	AZ
Peach Bottom	66956	665376	7740274	PA
Perry	61940	202904	1831774	OH
Pilgrim	53216	208369	3146963	MA
Point Beach	32632	124824	916590	WI
Prairie Island	38720	171058	3320288	MN
Quad Cities	39784	333402	1107570	IL
River Bend	17187	101040	744871	LA
Robinson	27658	68841	620776	SC
Salem	45676	148219	4912642	NJ

Nuclear Plant Site	Total Population w/in 10 Miles	Total Population w/in 20 Miles	Total Population w/in 50 Miles	STATE
San Onofre	263883	1569927	18418041	CA
Seabrook	96032	314857	3612572	NH
Sequoyah	140200	736612	1766446	TN
South Texas	6604	67940	457006	TX
St. Lucie	290542	616654	1934786	FL
Summer	7282	105596	886217	SC
Surry	132574	609582	3313654	VA
Susquehanna	74682	429216	2222868	PA
Three Mile Island	162230	668263	1930904	PA
Turkey Point	161476	1144782	6161188	FL
Vermont Yankee	28486	111166	1001866	VT
Vogtle	8680	84112	1225912	GA
Waterford	74512	306948	1737556	LA
Watts Bar	12407	70597	653070	TN
Wolf Creek	4666	11479	145198	KS
<b>Total:</b>	<b>74704767</b>	<b>21914316</b>	<b>184299208</b>	

**From:** [Medina, Veronika](#)  
**To:** [Burnell, Scott](#)  
**Subject:** Media - Tokyo Public Broadcasting System-Question  
**Date:** Wednesday, April 06, 2011 1:49:21 PM

---

Scott,

Can you talk to this reporter?

Thanks,  
Veronika

---

**From:** Royer, Deanna  
**Sent:** Wednesday, April 06, 2011 1:41 PM  
**To:** Medina, Veronika  
**Subject:** Media - Tokyo Public Broadcasting System-Question

Eric Weiner  
Tokyo Public Broadcasting System  
202-393-3801

Re: Wants to confirm NY Times saying there are new threats to Fukushima's reactor.  
This is time sensitive.

Deanna Royer  
Contract Secretary  
Division of New Reactor Licensing  
(301) 415-7158  
Deanna.Royer@nrc.gov

AB/202

**From:** [Dolley, Steven](mailto:Dolley, Steven)  
**To:** [Burnell, Scott](mailto:Burnell, Scott)  
**Subject:** RE: House hearing, Markey  
**Date:** Wednesday, April 06, 2011 1:51:38 PM

---

Markey's staff says they were informed by NRC staff in an email Tuesday that (quoting NRC staffer's email here)

Based on radiation readings in the drywell and the torus (3340 rem/hour >and 91 rem/hour, respectively), the NRC staff speculates that part of >the Unit 2 core may be out of the reactor pressure vessel and may be in >the lower space of the drywell. Lower radiation readings in the torus >suggest that there is not core material in the torus.

Can you confirm, deny? Any comment? Thanks, Steve

---

**From:** Burnell, Scott [mailto:Scott.Burnell@nrc.gov]  
**Sent:** Wednesday, April 06, 2011 11:44 AM  
**To:** Dolley, Steven  
**Cc:** Hayden, Elizabeth  
**Subject:** RE: House hearing, Markey

Hi Steve;

Virgilio's comments speak for the agency regarding Rep. Markey's statement.

Scott

---

**From:** Dolley, Steven [mailto:Steven\_Dolley@platts.com]  
**Sent:** Wednesday, April 06, 2011 11:27 AM  
**To:** Burnell, Scott  
**Cc:** Hayden, Elizabeth; OPA Resource  
**Subject:** RE: House hearing, Markey

Scott – as you've likely heard by now, Rep. Ed Markey said at the hearing he was told Tuesday by "NRC" that the core at Fukushima I Unit 2 has likely melted through the reactor vessel.

Martin Virgilio told reporters after his testimony that information does not square with today's event report, and he has seen no info that there has been melt-thru at Unit 2.

Who briefed Markey Tuesday, and what was he told? Why is he alleging meltthru? Is there something that he was told in briefing that might have been misinterpreted?

Filing right after the hearing. Thanks, Steve

Steven Dolley  
Managing Editor, Inside NRC  
Platts Nuclear  
202-383-2166 Office  
202-383-2187 Fax

---

The information contained in this message is intended only for the recipient, and may be a confidential attorney-client communication or may otherwise be privileged

AB/203

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---

**To:** [Virgilio, Martin](#); [Wiggins, Jim](#); [RST06 Hoc](#)  
**Subject:** Proposed Unit 2 core response language  
**Date:** Wednesday, April 06, 2011 2:03:09 PM

---

There continues to be a great deal we don't know regarding the situation at Fukushima. One thing we do know with reasonable certainty is that the core of Unit 2 has been damaged. Beyond that, the NRC speculates there are possible leakage paths from the reactor vessel into the drywell. The NRC does not believe the reactor vessel has failed, and we do believe the core remains in the vessel. These two beliefs drive our continuing recommendation that every available method should be used to add fresh water to the Unit 2 reactor vessel and continue cooling the core.

AB/204

**From:** [McIntyre, David](#)  
**To:** [Hoc, PMT12](#); [Weil, Jenny](#)  
**Cc:** [Harrington, Holly](#)  
**Subject:** RE: Radiation question  
**Date:** Wednesday, April 06, 2011 2:11:00 PM  
**Attachments:** [Re Radiation Question.msg](#)

---

You may want to share the attached. This email made my day when I read it.

---

**From:** Hoc, PMT12  
**Sent:** Wednesday, April 06, 2011 1:06 PM  
**To:** Weil, Jenny  
**Cc:** Harrington, Holly; McIntyre, David  
**Subject:** RE: Radiation question

Jenny. The FAQ still stands true. There are no concerns about being in HI.

---

**From:** Weil, Jenny  
**Sent:** Wednesday, April 06, 2011 1:04 PM  
**To:** Hoc, PMT12  
**Subject:** RE: Radiation question

Hello PMT,

Congressman Garamendi (D-CA) received a call from a constituent worried about visiting Hawaii because of media reports of radiation reaching the United States. I see this FAQ has a question/answer on this subject (Question #7): <http://www.nrc.gov/japan/faq-need-to-know.pdf>. Does this FAQ sheet need to be updated? Anything else we should let the congressional office know about in regard to vacationing in Hawaii and eating/drinking food there?

Thank you,

Jenny

AB:205

Attachment Re Radiation Question.msg (2560 Bytes) cannot be converted to PDF format.

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 06, 2011 3:31:04 PM

---

**News**

**3** new results for **Nuclear Regulatory Commission**

**NRC threat assessment of Fukushima risks**

Energy Collective

The New York Times reports today that a March 26 threat assessment by the Reactor Safety Team of the **Nuclear Regulatory Commission (NRC)** warns that the crippled nuclear plant faces fresh threats that could persist indefinitely. ...

[See all stories on this topic »](#)

**NRC Thinks Japan Unit Pressure Vessel Damaged, Markey Says**

Bloomberg

By Jim Snyder and Jim Efstathiou Jr. - Wed Apr 06 19:01:06 GMT 2011 The **Nuclear Regulatory Commission** thinks the reactor in unit 2 of Japan's disabled power plant got so hot it "probably melted through the reactor pressure vessel," US Representative ...

[See all stories on this topic »](#)

**Getting Realistic About Evacuation Zone for Nuclear Plant Disaster**

OpEdNews

By Karl Grossman (about the author) Page 1 of 1 page(s) Among the many obvious lessons of the ongoing nuclear power disaster at the Fukushima nuclear complex in Japan is that the 10-mile evacuation zone the US **Nuclear Regulatory Commission** has insisted ...

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---

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

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AB/266

**From:** [Burnell, Scott](#)  
**To:** [Burnell, Scott](#)  
**Cc:** [Hayden, Elizabeth](#); [Brenner, Eliot](#)  
**Bcc:** [Wald, Matthew](#); [Dolley, Steven](#); [Tracy, Tennille](#)  
**Subject:** RE: This morning's hearing  
**Date:** Wednesday, April 06, 2011 3:46:00 PM

---

Good Afternoon;

Regarding questions following the House hearing this morning, the NRC has the following statement:

There continues to be a great deal we don't know regarding the situation at Fukushima. One thing we do know with reasonable certainty is that the core of Unit 2 has been damaged. Beyond that, the NRC speculates there are possible leakage paths from the reactor vessel into the drywell that could account for reports of high radiation levels in the drywell. The NRC does not believe the reactor vessel has given way, and we do believe practically all of the core remains in the vessel. These two beliefs drive our continuing recommendation that every available method should be used to add fresh water to the Unit 2 reactor vessel and continue cooling the core.

Please include [opa.resource@nrc.gov](mailto:opa.resource@nrc.gov) on any e-mails with additional questions. Thank you.

Scott Burnell  
Public Affairs Officer  
Nuclear Regulatory Commission

AB/207

**From:** Stuckle, Elizabeth  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; McIntyre, David  
**Subject:** review of clips so far  
**Date:** Wednesday, April 06, 2011 4:32:41 PM  
**Attachments:** Thematic Concerns Repeatedly Expressed after Japanese Nuclear Incident.docx

---

I have been through the news clips for April 1 – 6 so far. Attached is my working document with inaccuracies and concerning verbiage so far. I will continue to go through clips when I get back from the meeting tomorrow afternoon.

AS 208

## **Thematic Concerns Repeatedly Expressed after Japanese Nuclear Incident**

1. How can you guarantee that it's not going to happen here?
2. The NRC should do more to protect the public
3. Safety of spent fuel pools versus dry cask storage
4. Re-examination of evacuation zones (EPZs) – are they adequate. Many recommend expanding the EPZs.
5. Re-examination of whether there's sufficient backup power to reactors and to spent fuel pools
6. Fuel pools should be constructed with more safeguards and protection like reactors are.
7. Should there be a moratorium on the construction of new nuclear power plants?
8. Re-examination of what is the safety threshold for radiation amounts. Major fear and misunderstanding of radiation.
9. NRC is in bed with the industry since licensees pay fees to the NRC. They are more concerned about profit than safety.

## **Inaccuracies and/or Concerning Verbiage**

**From 4/1 through 4/6 clips (working my way backwards)**

### **NRC Focused On VY Safety, Not Shutdown (Bratboro Reformer VT 4/6)**

Robert Bady, Vermont coordinator of the Safe and Green Campaign

*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.*

### **NRC: Japanese Crisis Doesn't Support Pulling Oyster Creek's License. (AP 4/6)**

Jeff Tittel, director of the New Jersey Sierra Club

*"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 when it comes to relicensing."*

## **Concerns Expressed Over NRC Allowing Plants To Increase Output. KVNO-FM Omaha 4/4**

*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.*

## **Professor Calls For End of Nuclear Power. (The Independent 4/5)**

Chris Williams, professor at Pace University

*. . .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 (Forbes 4/5)**

Cato Institute senior fellows Jerry Taylor and Peter Van Doren

*. . .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."*

## **"Common Ground "program (KCRA-TV Sacramento 4/2)**

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."*

## **Some Fear 10-Mile Evacuation Zone Plans Do Not Reflect Real-World Risks (Miami Herald 4/3)**

*Activists and some political leaders say the NRC's evacuation plans "don't reflect real-world risks"*

## **WCBS-TV (New York 4/2)**

Tom Syracuse, noted protester

*"The Indian Point Power Plant is located near the intersection of two earthquake faults. Nuclear energy cannot be safe. Plutonium can contaminate the environment for hundreds of years. Studies show that New York City could not be evacuated in time."*

## **Indian Point Plant Called Too Dangerous To Continue Operating (Westchester NY 4/2)**

Gary Shaw, Indian Point Safe Energy Coalition

*...asserts mistakenly that "Indian Point 3 has just been named by the US Nuclear Regulatory Commission as the nuclear reactor in the US that is most likely to suffer reactor core damage due to an earthquake and the stated odds of that happening in any given year are higher than the odds of winning \$100 in the Powerball lottery." Shaw says he is not saying a "catastrophic event will definitely occur," but that one could happen, and "if the worst case happens, the consequences are simply too awful to imagine."*

## **Pasadena CA Weekly (4/1)**

Gula, PhD, Southern California Federation of Scientists

*"The unfolding nuclear disaster in Japan should put an end, once and for all, to recent calls for a nuclear power 'renaissance' in the US." The crisis instead demonstrates that "nuclear power should be phased out completely." Gula added that it will take "many years" to determine how many deaths and cancers will be caused by radiation releases from the apparent Fukushima plant meltdowns, but the casualties may "eventually exceed those caused by the 1986 nuclear accident at the Chernobyl plant in Ukraine." Gula closes by saying that further development of nuclear power should to be "stopped in its tracks."*

## **The Connecticut Post (4/1)**

*"...should something cause water to drain from a cooling pool, well, one doomsday scenario has a fire at the Millstone Nuclear Power Station in Waterford causing 29,000 square miles of land to become uninhabitable.."*

## **WVUE-TV (New Orleans, 3/31)**

*the NRC "issued a report to Congress today suggesting it has concerns with" the natural disaster preparedness of "only three plants in the US." WVUE-TV adds that, according to the NRC, "those plants are in South Carolina, Kansas and Nebraska. NRC workers say the plants are operating safety but they want to conduct a more intense study of them."*

**From:** [McIntyre, David](#)  
**To:** [Burnell, Scott](#)  
**Subject:** RE: comment on Markey core melt allegation? tnx  
**Date:** Wednesday, April 06, 2011 4:46:08 PM

---

Will do.

---

**From:** Burnell, Scott  
**Sent:** Wednesday, April 06, 2011 4:46 PM  
**To:** McIntyre, David  
**Subject:** RE: comment on Markey core melt allegation? tnx

Please, thought I already got him.

---

**From:** McIntyre, David  
**Sent:** Wednesday, April 06, 2011 4:45 PM  
**To:** Burnell, Scott  
**Subject:** FW: comment on Markey core melt allegation? tnx

Would you like me to send him the language you developed?

---

**From:** Lobsenz, George [<mailto:George.Lobsenz@ihs.com>]  
**Sent:** Wednesday, April 06, 2011 4:44 PM  
**To:** McIntyre, David; Burnell, Scott  
**Subject:** comment on Markey core melt allegation? tnx

AB/209

**From:** Santiago, Patricia  
**To:** Hayden, Elizabeth; Burnell, Scott; Chang, Richard  
**Subject:** RE: Need some talking points  
**Date:** Wednesday, April 06, 2011 6:31:02 PM

---

We certainly will do that. It will be in the afternoon as I would like to pass it by Kathy since she asked.

Thanks!

---

**From:** Hayden, Elizabeth  
**Sent:** Wednesday, April 06, 2011 6:16 PM  
**To:** Santiago, Patricia; Burnell, Scott; Chang, Richard  
**Subject:** RE: Need some talking points

It would be easier if you could craft some bullets covering the main points and then I can review them.

*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:** Santiago, Patricia  
**Sent:** Wednesday, April 06, 2011 4:53 PM  
**To:** Burnell, Scott; Chang, Richard  
**Cc:** Hayden, Elizabeth  
**Subject:** RE: Need some talking points

Yes tomorrow afternoon we can talk to Beth.  
thanks

---

**From:** Burnell, Scott  
**Sent:** Wednesday, April 06, 2011 4:50 PM  
**To:** Chang, Richard; Santiago, Patricia  
**Cc:** Hayden, Elizabeth  
**Subject:** RE: Need some talking points

Richard;

Please contact Beth tomorrow. Thanks.

Scott

---

**From:** Chang, Richard  
**Sent:** Wednesday, April 06, 2011 4:50 PM  
**To:** Burnell, Scott; Santiago, Patricia  
**Cc:** Hayden, Elizabeth  
**Subject:** RE: Need some talking points

AR/210

Scott,

I will try to work this issue and get you a response to you tomorrow.

Thanks,  
Richard

---

**From:** Burnell, Scott  
**Sent:** Wednesday, April 06, 2011 4:47 PM  
**To:** Chang, Richard; Santiago, Patricia  
**Cc:** Hayden, Elizabeth  
**Subject:** Need some talking points  
**Importance:** High

Pat, Richard;

I'll be out of the office tomorrow through Tuesday, and OPA will need some talking points to handle questions on this. I spoke to a USA Today reporter and focused on:

- a) The difference between SOARCA and "straight" PRA, that the SRAs were complaining they didn't have the kinds of reliability data they'd need to plug B.5.b into their PRA. SOARCA covers the "either/or" case without worrying about probabilities. I left it that the ongoing internal review process would address the SRA concerns.
- b) The second document rang a bell as a peer review issue, so I pointed out the ongoing review of SOARCA had appropriately resolved most peer review comments, including that one.

Please feel free to revise and extend those as necessary. Please work with Beth Hayden on providing the talking points as soon as possible. Thanks.

Scott

---

**From:** Sarah Goldberg [mailto:Sgoldberg@ucsusa.org]  
**Sent:** Wednesday, April 06, 2011 11:37 AM  
**To:** Malone, Scott (M Edit Ops)  
**Subject:** UCS: Internal NRC docs show doubts about US nuke safety

FOR IMMEDIATE RELEASE  
CONTACT: Elliott Negin, 202-331-5439

INTERNAL NRC DOCUMENTS REVEAL DOUBTS ABOUT MEASURES TO ENSURE U.S. PLANTS SURVIVE FUKUSHIMA-TYPE EVENTS

WASHINGTON (April 6, 2011) – In the weeks following the Fukushima accident, Nuclear Regulatory Commission (NRC) and nuclear industry officials have been asserting that U.S. nuclear plants are better prepared to withstand a catastrophic event like the March 11 earthquake and tsunami than Japanese plants because they have additional safety measures in place.

However, according to internal NRC documents (links provided below) released today by the Union of Concerned Scientists (UCS), there is no consensus within the NRC that U.S. plants are sufficiently

protected. The documents indicate that technical staff members doubt the effectiveness of key safety measures adopted after the September 11, 2001, terrorist attacks.

UCS obtained the documents on March 25 from a Freedom of Information Act (FOIA) request it made a month before the Japanese disaster.

"While the NRC and the nuclear industry have been reassuring Americans that there is nothing to worry about -- that we can do a better job dealing with a nuclear disaster like the one that just happened in Japan -- it turns out that privately NRC senior analysts are not so sure," said Edwin Lyman, a physicist with the UCS Global Security Program and an expert in nuclear plant design.

NRC and industry officials recently testified before Congress that U.S. reactors are fully prepared for the worst. For example, at a hearing hosted by the Senate Energy and Water Appropriations Subcommittee on March 30, NRC Chairman Gregory Jaczko testified: "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, the NRC requires licensees to have available and staged in advance, as well as new procedures and policies to help deal with a severe situation."

Likewise, William Levis, the president and COO of the Public Service Enterprise Group, which owns two nuclear plants in New Jersey, told the subcommittee that "U.S. nuclear plant designs and operating practices since 9/11 are designed to mitigate severe accident scenarios such as aircraft impact, which include the complete loss of off-site power and all on-site emergency power sources and loss of large areas of the plant."

NRC calls these post-9/11 procedures "B.5.b measures," referencing the section of the compensatory-measures order the agency issued in 2002 to all reactor licensees. The agency codified them in its regulations in 2009 in a document titled CFR 50.54(hh)(2), but because their details are security-related, they are not publicly available.

At the March 30 hearing, both Jaczko and Levis sounded confident that B.5.b measures would protect U.S. reactors from the kind of disaster that befell the Fukushima Daiichi nuclear complex, which lost off-site and on-site power for an extended period, eventually leading to the loss of all cooling. Internal NRC documents obtained by UCS tell a different story.

In February 2011, UCS filed a FOIA request for all information associated with a secretive NRC program known as the "State of the Art Reactor Consequence Analyses." SOARCA, according to the NRC, is "a research effort to realistically estimate the outcomes of postulated severe accident scenarios that might cause a nuclear power plant to release radioactive material into the environment. The SOARCA project applies many years of national and international nuclear safety research, and incorporates the improvements in plant design, operation and accident management to achieve a more realistic evaluation of the consequences associated with such accidents." The NRC also stated that SOARCA takes into account enhancements required by NRC after 9/11 -- the B.5.b measures.

The SOARCA program, which the agency initiated in 2006, focused on two plants: Surry in Virginia and Peach Bottom in Pennsylvania. Coincidentally, Peach Bottom is a Mark I boiling water reactor (BWR) like Fukushima Daiichi reactors 1 through 4. One of the hypothetical accidents that the SOARCA program analyzed was a station blackout at Peach Bottom where the plant failed to recover power before the backup batteries ran out -- the very situation that occurred at Fukushima. That analysis would be extremely useful to understand what happened at Fukushima. However, the NRC has withheld nearly all documents related to SOARCA from the public.

In most Mark I BWRs experiencing a station blackout, Lyman explained, a cooling system that runs on battery power, known as the Reactor Core Isolation Cooling system, or RCIC, is available. But when the battery runs down -- after eight hours or less -- the RCIC will stop operating. If plant workers do not restore alternating current power by then, no cooling systems will be available and the fuel in the reactor will overheat and eventually begin to melt. Most experts believe that is what happened at Fukushima Daiichi units 1 through 3.

According to the documents obtained by UCS, NRC's B.5.b measures contain unspecified strategies to continue operating the RCIC even after battery power is lost. However, the documents make clear that there are disagreements between NRC senior reactor analysts who work in NRC's regional offices under the Office of Nuclear Reactor Regulation and the staff conducting the SOARCA project, who are in the agency's Office of Research.

In particular, one NRC staff [email exchange](#), dated July 28, 2010, described senior analysts' objections to SOARCA as follows: "One concern has been that SOARCA credits certain B5b mitigating strategies (such as RCIC operation w/o DC power) that have really not been reviewed to ensure that they will work to mitigate severe accidents. Generally, we have not even seen licensees credit these strategies in their own [probabilistic risk assessments] but for some reason the NRC decided we should during SOARCA. My recollection is that [Region I senior reactor analysts] in particular have been vocal with their concerns on SOARCA for several years, probably because Peach Bottom is one of the SOARCA plants."

In other words, senior reactor analysts who work directly with the Peach Bottom Mark I BWR apparently do not have faith in the effectiveness of the very B.5.b measures that the NRC and nuclear industry officials are touting as a reason why the United States is better prepared to deal with a Fukushima-like event than Japan.

Another (undated) [document](#) reinforces this concern: "The application of 10 CFR 50.54(hh) [2009 regulations] mitigation measures still concerns a number of staff in [the Office of Nuclear Reactor Regulation]. The concern involves the manner in which credit is given to these measures such that success is assumed.... 10 CFR 50.54(hh) mitigation measures are just equipment on-site that can be useful in an emergency when used by knowledgeable operators if post-event conditions allow. If little is known about these post-event conditions, then assuming success is speculative."

"If we are going to have any confidence that U.S. plants are safe, the NRC and the industry has to be completely open and honest about what they know and what they don't know," said Lyman. "They are doing Americans a disservice if they are saying publicly that these untested measures are effective when privately they are expressing doubts that they will work."

Note: UCS also released another [NRC email](#) today that briefly discusses the schedule of the SOARCA analysis.

###

The Union of Concerned Scientists is the leading U.S. science-based nonprofit organization working for a healthy environment and a safer world. Founded in 1969, UCS is headquartered in Cambridge, Massachusetts, and also has offices in Berkeley, Chicago and Washington, D.C. For more information, go to [www.ucsusa.org](http://www.ucsusa.org).

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**From:** Burnell, Scott  
**To:** Vartabedian, Ralph  
**Subject:** Statement on NYT article  
**Date:** Wednesday, April 06, 2011 3:48:00 PM

---

Ralph;

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

AM/211

**From:** Harrington, Holly  
**To:** Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara  
**Subject:** Nice to not be the only voice of reason out there  
**Date:** Wednesday, April 06, 2011 4:08:19 PM

---

<http://thechart.blogs.cnn.com/2011/04/05/cdc-chief-no-risk-to-americans-from-japan-radiation/?hpt=T2>

AB12-12

**From:** [Harrington, Holly](#)  
**To:** [Hayden, Elizabeth](#); [Burnell, Scott](#)  
**Cc:** [Stuckle, Elizabeth](#)  
**Subject:** RE: FYI  
**Date:** Wednesday, April 06, 2011 4:20:38 PM

---

Beth – Yes, of course. Elizabeth and I will be there at 8:15 and Elizabeth will stay until the lunch break, even if no media attend.

---

**From:** Hayden, Elizabeth  
**Sent:** Wednesday, April 06, 2011 4:20 PM  
**To:** Burnell, Scott; Harrington, Holly  
**Cc:** Stuckle, Elizabeth  
**Subject:** RE: FYI

We still need to go over there at the start of the meeting to make sure no reporters show up.

*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 3:04 PM  
**To:** Harrington, Holly; Hayden, Elizabeth  
**Subject:** FYI

For what it's worth, I ran into Ed Hackett here in Ops and he confirmed no media interest to this point on the ACRS Japan session tomorrow.

AS/2/3

**From:** [Weber, Michael](#)  
**To:** [PMT01 Hoc](#); [Hoc, PMT12](#)  
**Cc:** [Zimmerman, Roy](#); [ET05 Hoc](#); [ET01 Hoc](#); [OST02 HOC](#); [LIA06 Hoc](#); [LIA08 Hoc](#); [Burnell, Scott](#)  
**Subject:** FYI - ENVIRONMENTAL PROTECTION ARTICLE ON TRACE LEVELS OF CONTAMINATION IN THE U.S. FROM FUKUSHIMA-DAIICHI  
**Date:** Wednesday, April 06, 2011 6:47:04 PM

---

Environmental Protection issued the article below in its daily online newsletter today...

## **Iodine-131 Levels Still Below Levels of Concern**

***EPA and USDA are monitoring food, rain, and potable water for levels of radioactivity that may have drifted to the United States from Japan.***

Mar 31, 2011

On April 4, the U.S. Environmental Protection Agency updated its report on monitoring for radioactive material.

The latest RadNet results include the first results for drinking water: [Samples from two locations](#), Boise, Idaho and Richland, Wash., showed trace amounts of Iodine-131 – about 0.2 picocuries per liter in each case. According to EPA, an infant would have to drink almost 7,000 liters of this water to receive a radiation dose equivalent to a day's worth of the natural background radiation exposure people experience continuously from natural sources of radioactivity in our environment. Earlier precipitation samples collected by EPA have shown trace amounts of radioactivity, so the agency has expected to find results such as these in some drinking water samples. Similar findings are to be expected in the coming weeks.

Results of EPA's precipitation sampling and air filter analyses continue to detect very low levels of radioactive material consistent with estimated releases from the damaged nuclear reactors. These detections were expected and the levels detected are far below levels of public-health concern.

For the latest air monitoring filter data, click [here](#).

For the latest milk sampling data, click [here](#).

For the latest precipitation sampling data, click [here](#).

EPA conducts radiological monitoring of milk under its RADNET program, while the [U.S. Food and Drug Administration](#) (FDA) has jurisdiction over the safety, labeling, and identity of milk and milk products in interstate commerce. States have jurisdiction over those facilities located within their territory.

Results from a screening sample taken March 25 from Spokane, Wash. detected 0.8 pCi/L of iodine-131, which is more than 5,000 times lower than FDA's Derived Intervention Level. These types of findings are to be expected in the coming days and are far below levels of public health concern, including for infants and children. Iodine-131 has a half-life of approximately eight days, and the level detected in milk and milk products is therefore expected to drop relatively quickly.

AB/214

“Radiation is all around us in our daily lives, and these findings are a minuscule amount compared to what people experience every day. For example, a person would be exposed to low levels of radiation on a round-trip cross country flight, watching television, and even from construction materials,” said Patricia Hansen, an FDA senior scientist.

EPA’s recommendation to state and local governments is to continue to coordinate closely with EPA, FDA, and the Centers for Disease Control. The environmental agency will continue to communicate nationwide sampling results as they come in.

Source:EPA

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*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:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 06, 2011 10:10:04 PM

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**News**

**5 new results for Nuclear Regulatory Commission**

**NRC examines nuclear plant risks in U.S.**

USA Today

By Oren Dorell, USA TODAY Japanese officials took some solace Wednesday in halting leaks of radioactive water from the nation's crippled nuclear plant. But in Washington, internal e-mails from the **Nuclear Regulatory Commission** revealed doubts within ...

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[USA Today](#)

**US Agency Warned of Risks in Repairs to Japanese Reactors**

Bloomberg

By Jim Snyder and Jim Efstathiou Jr. - Thu Apr 07 00:10:13 GMT 2011 The US **Nuclear Regulatory Commission** warned that fuel at the Fukushima Dai-ichi plant's crippled reactors in Japan had melted and that salt build-up in spray nozzles was probably ...

[See all stories on this topic »](#)

**US nuclear regulator split on Yucca report release**

Reuters Africa

By Roberta Rampton and Ayesha Rascoe WASHINGTON, April 6 (Reuters) - The five commissioners at the helm of the **Nuclear Regulatory Commission** were sharply divided last month over whether to release an incomplete, internal safety review of the ...

[See all stories on this topic »](#)

**NRC in Surry to discuss nuclear plant safety**

WAVY-TV

SURRY (WAVY) - The US **Nuclear Regulatory Commission** is holding a public meeting Wednesday night to discuss the safety performance of Dominion Virginia Power's Surry nuclear power plant. The federal agency said the meeting will focus on its assessment ...

[See all stories on this topic »](#)

**Beaver nuke plant was cited for having submerged cables**

Beaver County Times

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

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AB/215

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Thursday, April 07, 2011 3:50:43 AM

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**News**

**3 new results for Nuclear Regulatory Commission**

[Core of Stricken Reactor Probably Leaked, US Says](#)

New York Times



By MATTHEW L. WALD and ANDREW POLLACK WASHINGTON — The United States **Nuclear Regulatory Commission** said Wednesday that some of the core of a stricken Japanese reactor had probably leaked from its steel pressure vessel into the bottom of the ...

[New York Times](#)

[See all stories on this topic »](#)

[House bill would delay Indian Point relicensing pending Japan study](#)

The Journal News | LoHud.com

Edward Markey wants relicensing of existing nuclear plants and licensing of new plants to stop until the **Nuclear Regulatory Commission** completes its review of the disaster at the Fukushima Dai-ichi plant in northern Japan, and implements safety ...

[See all stories on this topic »](#)

[Hearing queries N-plant safety](#)

Boston Globe



Meanwhile, Governor Deval Patrick, Senate President Therese Murray, and Speaker of the House Robert A. DeLeo sent a detailed letter yesterday to the US **Nuclear Regulatory Commission**, asking about safety and emergency plans and what steps the agency is ...

[Boston Globe](#)

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AB/216

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Thursday, April 07, 2011 5:31:12 AM

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**News**

**2 new results for Nuclear Regulatory Commission**

[Patrick: Hold up new Pilgrim license](#)

Worcester Telegram

By John J. Monahan TELEGRAM & GAZETTE STAFF BOSTON — Fears that a Fukushima-style disaster could unfold in New England dominated activity on Beacon Hill yesterday, with the governor asking the **Nuclear Regulatory Commission** to hold up re-licensing of ...

[See all stories on this topic »](#)

[Delawareans stockpile radiation pills](#)

The News Journal

In a report released Wednesday, the Union of Concerned Scientists cited **Nuclear Regulatory Commission** documents that they believe show **NRC** analysts' concern about the reliability of a study of reactor accident consequences. During that study, some **NRC** ...

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ABI 217

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Thursday, April 07, 2011 10:22:35 AM

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## News

## 5 new results for **Nuclear Regulatory Commission**

### **NRC: Japan no reason to de-license NJ nuke plant**

BusinessWeek

By WAYNE PARRY The US **Nuclear Regulatory Commission** says nothing it has learned from the Japanese nuclear disaster warrants revoking the license of the nation's oldest nuclear power plant in New Jersey. The agency filed its response Tuesday to a ...

[See all stories on this topic »](#)

### Petition filed to stop new reactors in Ga.

Bizjournals.com

Environmental groups opposed to the **Nuclear Regulatory Commission's** plan to license two new AP1000 reactors at Plant Vogtle near Waynesboro, Ga., about 30 miles from Augusta, filed a new petition Wednesday asking the commission to suspend the licensing ...

[See all stories on this topic »](#)

### Interest in Surry **nuclear** safety is heightened

The Virginian-Pilot

By Linda McNatt Every spring, the US **Nuclear Regulatory Commission** holds public information meetings to advise the public about the safety of nuclear power plants. This year, Gerald McCoy of the **NRC** said the agency seems to be operating under an ...

[See all stories on this topic »](#)

### **NRC** to talk about NFS safety in Unicoi County

TriCities.com

By TriCities Staff The public will be able to attend a meeting between **Nuclear Regulatory Commission** officials and Nuclear Fuel Services management Thursday night. The purpose of the gathering is to discuss the performance and safety of NFS in Erwin. ...

[See all stories on this topic »](#)

### Town meeting in September about San Onofre **nuclear** plant

OCRegister

By FRED SWEGLES Southern California Edison and staff of the US **Nuclear Regulatory Commission** are expected to present information to the city of San Clemente and the public about lessons learned from Japan's nuclear-plant crisis following the ...

[See all stories on this topic »](#)

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AB/218

**From:** Harrington, Holly  
**To:** LIA06 Hoc; LIA08 Hoc; Anderson, Brian; Clark, Theresa; Stuckle, Elizabeth; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mityng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David  
**Cc:** LIA11 Hoc; LIA12 Hoc; LIA03 Hoc; Powell, Amy  
**Subject:** Blog Post Now Up: First Person Account from the NRC Team in Japan  
**Date:** Thursday, April 07, 2011 11:12:36 AM

---

This may be of interest to folks:

<http://public-blog.nrc-gateway.gov/>

AS 219

**From:** Moderator  
**Date:** Thursday, April 07, 2011 11:09:45 AM  
**Posted At:** U.S. NRC Blog  
**Conversation:** From Japan: A First Person Account  
**Subject:** From Japan: A First Person Account

---

Within about 16 hours after the massive earthquake and tsunami struck the Fukushima Dai'ichi nuclear power complex on the northeastern coast of Japan, two NRC reactor experts were throwing a few changes of clothing into suitcases and racing for the airport. They hit the ground in Tokyo with a single purpose – provide key technical support and advice to the U.S. Embassy.

Just over two days later, the vanguard of what has become a revolving team of more than 30 staff were on their way, including Chuck Casto, deputy regional administrator out of our Region II office. They were part of a U.S. Agency for International Development (USAID) assistance mission launched in response to a request for help from the Japanese government.

Now, over three weeks into this terrible tragedy for the Japanese people, the team of NRC experts is working closely with our counterparts in the Japanese government, as well as the power plant operator – TEPCO – other U.S. government agencies, and even the U.S. private sector.

We have received tremendous support from the embassy and USAID staff as we've taken over a chunk of the embassy's space as a base of operations and demand all manner of IT support, but we never seem to spend long there. Every day we are off in small groups to various locations around Tokyo to meet with our Japanese counterparts, gathering information on the most current understanding of conditions at the plant and the actions being taken by the Japanese.

When we get back to the embassy, we get on the phone to experts back in the states and obtain their best consensus view of the actions needed to stabilize the plants. Then we are off around Tokyo again to share and discuss our advice and recommendations. In addition to this, we are supporting project teams established by the Japanese government to develop long-term plans for clean-up and decommissioning of the site after it is stabilized. In this latter effort, we are receiving tremendous support from colleagues in the Department of Energy and the national labs.

When we are at the embassy, we are also working closely with the embassy staff, USAID, and other federal agencies to respond to the specific requests for assistance from the Japanese government. For example, we have supported them with provision of a back-up supply of freshwater and pumping capacity to ensure that stable and sustainable cooling will be available at the plant. Through the generosity of the U.S. nuclear industry, we have been able to supply thousands of sets of protective clothing, radiation dosimeters and

radiation monitoring equipment that will be important to ensuring protection of the workers at the site.

What has impressed all of us on the NRC team is the commitment of our Japanese counterparts to bring this very serious situation under control. Japan has long used nuclear power as a mainstay of its electrical generation system, so they have lots of experience.

This is a near overwhelming event that would challenge any nation, and I have been impressed at the effort being exerted by those most affected by this tragedy.

The nuclear community around the world is, in relative terms, small, and our thoughts are with the Japanese people and, in particular, with the workers at the site. Many of them have already suffered grievous loss of family and property from the earthquake and tsunami. They labor on in difficult conditions. The world has rallied to their aid, contributing protective clothing and equipment.

Our team in Japan continues to work with the Japanese government to ensure they have the resources to support and protect these workers. These are the true heroes of Fukushima Dai'ichi and they deserve our utmost respect, our fervent prayers and our continued support.

Thanks to Chuck Casto who contributed to this post.

*Dan Dorman*

*NRC Japan Team Member*

Filed under: [Emergency Preparedness and Response](#) Tagged: [nuclear](#)   


[View article...](#)

**From:** [Glazer, Adam](#)  
**To:** [McIntyre, David](#)  
**Subject:** RE: NYTimes.com: U.S. Sees Array of New Threats at Japan's Nuclear Plant  
**Date:** Thursday, April 07, 2011 12:01:59 PM

---

OK, thanks. If it had been available, I would have been interested in reading it.

Adam

---

**From:** McIntyre, David  
**Sent:** Thursday, April 07, 2011 12:00 PM  
**To:** Glazer, Adam  
**Subject:** RE: NYTimes.com: U.S. Sees Array of New Threats at Japan's Nuclear Plant

Hi Adam – it was a daily assessment prepared by the Reactor Safety Team in the Ops Center. I don't know if those are ever placed in ADAMS, and we don't know how the Times got ahold of it.

Dave

---

**From:** Glazer, Adam  
**Sent:** Thursday, April 07, 2011 11:39 AM  
**To:** McIntyre, David  
**Subject:** FW: NYTimes.com: U.S. Sees Array of New Threats at Japan's Nuclear Plant

David,

This NYT article refers to an assessment dated March 26. I can't find such a report in ADAMS. Can you tell me where it is, assuming I have access to it?

Thanks,  
Adam



---

WORLD | April 06, 2011

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

By JAMES GLANZ and WILLIAM J. BROAD

The nuclear plant in Japan faces an array of fresh threats that could persist indefinitely or increase as a result of stabilization efforts, according to the Nuclear Regulatory Commission.

AB/220

**From:** Brenner, Eliot  
**To:** Cappiello, Dina; McIntyre, David  
**Subject:** RE: AP Question  
**Date:** Thursday, April 07, 2011 12:37:09 PM

---

ACRS are not the folks to ask about something that is happening real time in Japan. The Japanese government might be the better place to look.

I talked to our ops center and we've heard nothing from USGS about any potential tsunami impact in this country. And our guys have been monitoring Japanese TV and seen nothing regarding any prospect for further damage to nuclear plants.

Bottom line: the number to call in Tokyo is BR-549.

Eliot

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

From: Cappiello, Dina [<mailto:DCappiello@ap.org>]  
Sent: Thursday, April 07, 2011 12:15 PM  
To: Brenner, Eliot; McIntyre, David  
Subject: Fw: AP Question

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

From: Cappiello, Dina  
Sent: Thursday, April 07, 2011 12:04 PM  
To: 'dave.mcintyre@nrc.gov' <dave.mcintyre@nrc.gov>  
Subject: AP Question

Dave,

I'm here at NRC attending ACRS meeting. I need the following question answered. I was hoping to talk to someone live, but Elizabeth indicated they would not be available for questions.

As you may know, another earthquake has struck Japan today and tsunami warnings have been issued.

1. How will this second natural disaster impact the nuclear crisis underway, and efforts to regain control of plants?
2. Are any other plants in danger from this latest natural disaster?

Dina

The information contained in this communication is intended for the use of the designated recipients named above. If the reader of this communication is not the intended recipient, you are hereby notified that you have received this communication in error, and that any review, dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify The Associated Press immediately by telephone at +1-212-621-1898 and delete this e-mail. Thank you.

[IP\_US\_DISC]

mks dccc60c6d2c3a6438f0cf467d9a4938

ABI/221

**From:** Stuckle, Elizabeth  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; McIntyre, David; Burnell, Scott  
**Subject:** brief notes from today's ACRS mtg  
**Date:** Thursday, April 07, 2011 1:43:23 PM

---

## **Advisory Committee on Reactor Safeguards (ACRS) meeting this morning**

### **Media present:**

Roberta Rampton	Reuters
Maureen Conley	Platts
Dina Cappiello	AP
Hannah Northey	Greenwire
Tammille Tracy	Dow Jones

### **Attendance:**

Packed room – some people standing

### **Probable news stories (in addition to stories about the Japanese incident itself):**

1. The NRC issued their 50-mile evacuation recommendation without enough data to provide a sound basis for the decision.
2. The NRC staff were not able to answer many of the Committee's questions.

### **Handouts:**

I will make you copies of the slides with my notes this afternoon.

AB/222

**From:** [Brenner, Eliot](#)  
**To:** [McIntyre, David](#)  
**Subject:** RE: Interview with Charles Miller  
**Date:** Thursday, April 07, 2011 2:30:08 PM

---

Think we want to let them do their work until the first reporting period. My two cents. Also, I am trying to set up the chairman with 60 minutes coincident with that event and don't want to overshadow it.

eliot

---

**From:** McIntyre, David  
**Sent:** Thursday, April 07, 2011 2:07 PM  
**To:** Brenner, Eliot  
**Subject:** FW: Interview with Charles Miller

Have we established a policy on this?

---

**From:** Sarah Anderson [<mailto:sarah@exchangemonitor.com>]  
**Sent:** Thursday, April 07, 2011 2:06 PM  
**To:** McIntyre, David  
**Subject:** Interview with Charles Miller

Hello Dave! How are you?

I was wondering if there was a time next week that I could set up an interview with Charles Miller to discuss the Fukushima Task Force.

I'm in all week, but it would be great just to ask Dr Miller about what the task force will be doing, on what timeline, etc, just some basic questions.

Thanks so much,

Sarah E. Anderson  
Reporter, Radwaste Monitor  
Exchange Monitor Publications  
(202) 296-2814 x 110  
[anderson@exchangemonitor.com](mailto:anderson@exchangemonitor.com)

'  
AB/223

**From:** [Akstulewicz, Brenda](#)  
**To:** [WebContractor Resource](#); [WebWork Resource](#)  
**Cc:** [Harrington, Holly](#)  
**Subject:** Fact Sheet  
**Date:** Thursday, April 07, 2011 2:28:00 PM  
**Attachments:** [FS\\_IncidentRespons.doc](#)  
[FS\\_IncidentRespons.pdf](#)

---

***Please post the attached fact sheet to the live web as soon as possible.  
(ML110940518)***

Brenda Akstulewicz  
Administrative Assistant  
Office of Public Affairs  
301-415-8209  
[brenda.akstulewicz@nrc.gov](mailto:brenda.akstulewicz@nrc.gov)



AB/224



# FACT SHEET

Office of Public Affairs

Phone: 301-415-8200

Email: [opa.resource@nrc.gov](mailto:opa.resource@nrc.gov)

## Incident Response

### NRC Response to Emergency Events

In the unlikely event of a serious emergency involving an NRC-license facility or material, the agency is prepared to respond immediately. Trained personnel continuously monitor licensee activities and are available to take information about a variety of threats from other federal agencies. In addition, specially trained responders in a variety of disciplines are always on call and able to respond quickly. Equipment, policies, and procedures for these response activities are regularly tested, re-evaluated, and updated so that the agency is ready at all times.

If a significant incident occurs, the NRC activates its Headquarters Operations Center (HOC) and one or more of its four Regional Incident Response Centers (IRCs). Specially trained and qualified personnel work in the HOC at all times. They take emergency information from a licensee and immediately notify key NRC managers and staff. These managers and staff are trained as responders in their areas of expertise and assemble in the HOC and IRC to support NRC response activities. The responders' activities are defined by the agency's incident response program.



### Incident Response Program

The NRC incident response program uses a flexible system to tailor its response to the significance of an event. In the different modes of the system, NRC responders' activities change in order to best support the event. For example, in an event involving an NRC-licensed facility, the agency might decide to move from its "normal" response mode to "monitoring mode". In this level of response, key regional experts staff the appropriate IRC to respond to

the event. If necessary, the NRC could then enter "activation mode". In this mode, the necessary safety, security, and preparedness specialists report to the HOC. The final emergency response mode is called "expanded activation". It is entered when an incident's severity or uncertainty warrants sending a team of NRC experts directly to the site of the event. Once the team arrives at the site and assesses the situation, oversight of the incident may be transferred from Headquarters to the Site Team.

When the NRC incident response program is activated to any mode beyond normal, the agency notifies skilled and trained responders who assemble and begin working directly with various counterparts. In the example of an event involving an NRC-licensed facility, some responders will work directly with the nuclear power plant operators to assess the condition of the plant and local officials.

These protective actions may include sheltering, evacuation, or the use of potassium iodide where appropriate. Other NRC responders will relay information about the incident to the media, states, local governments, tribal entities, other federal agencies, Congress, the White House, and international governments.

Although the licensee has primary responsibility to stabilize their facility or material and return it to a safe condition, the NRC Chairman has the authority to intervene and direct the licensee's on-site response if necessary to protect public health and safety and the environment.

Equipment, policies, and procedures for response activities are regularly tested, reevaluated, and updated so that the agency is ready at all times. The NRC tests itself many times each year with drills and exercises that mimic safety or security incidents and test the response plans of the agency and licensed facilities. In addition to full-scale exercises, the HOC and IRCs are periodically activated throughout the year for small emergencies or potential emergencies.

## Licensee Response

NRC regulations require licensees to have plans for responding to incidents, protecting against radiological releases, and reducing the impacts of incidents. The NRC reviews these plans on a regular basis and tests them through exercises.

If a significant incident or emergency occurs, licensees are required to take immediate actions to ensure safety and security. They must also provide timely notifications to the NRC and state and local government authorities, and recommend how to protect the public from potential consequences.

Based on NRC regulations, licensees classify incidents according to the plant conditions and the level of risk to the public. Nuclear power plants, for example, use four emergency classifications:

- **Notification of Unusual Event** - Under this category, events are in process or have occurred that indicate a potential decline in the level of safety of the plant. No release of radioactive material requiring offsite response or monitoring is expected at that time.
- **Alert** - If an alert is declared, events are in process or have occurred that involve an actual or potentially substantial decline in the level of plant safety. However, any release of radioactive material is expected to be only a small fraction of the Environmental Protection Agency (EPA) protective action guidelines.
- **Site Area Emergency** - A site area emergency involves events in progress or which have occurred that result in an actual or likely a major failure of the plant's ability to protect the public. Any releases of radioactive material are not expected to exceed the EPA guidelines except near the site boundary.
- **General Emergency** - A general emergency involves actual or imminent severe damage or melting of radioactive fuel in the reactor core with the potential for loss of containment integrity. Radioactive releases during a general emergency can be expected to exceed the EPA guidelines beyond the immediate site area.

## State and Local Government Response

State governments, and in some locations, local and/or tribal governments, develop and implement emergency plans for incidents involving an NRC-licensed facility or material. Although the licensee is the primary party responsible for what occurs *onsite*, state and local governments are responsible for protecting life, property, and the environment *offsite*.

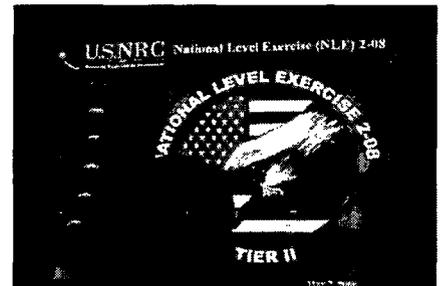
Through drills and exercises, state and local governments work closely with the Federal Emergency Management Agency, and when appropriate, the NRC, to ensure that their plans and procedures will protect their community's health and safety.

During an emergency incident, the NRC communicates directly with state and local governments to share information. The NRC may also offer technical advice and assistance if requested.

## Federal Response

The NRC works within the National Response Framework to respond to events. The framework guides the nation in how to respond to complex events that may involve a variety of agencies and hazards.

Under this framework, the NRC retains its independent authority and ability to respond to emergencies that involve NRC-licensed facilities or materials. The NRC coordinates the federal technical response to an incident that involves one of its licensees.



The NRC may request the support of the Department of Homeland Security (DHS) in responding to an emergency at an NRC-licensed facility or involving NRC-licensed materials. DHS may lead and manage the overall federal response to an event, according to Homeland Security Presidential Directive-5. In this case, the NRC would perform an important role in providing technical expertise and helping share information among the various organizations and licensees.

April 2011

**From:** RMTFACTSU\_ELNRC  
**To:** LIA06 Hoc; LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; LIA12 Hoc; Harrington, Holly; McIntyre, David; Burnell, Scott; ET07 Hoc  
**Subject:** FW: Radiation Safety Hazard at 30Km Radius for Dai-Ichi Nuclear Power PLant  
**Date:** Thursday, April 07, 2011 2:28:22 PM  
**Attachments:** Radiation Dose at 30 Km.pptx

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**From:** Hughart, Joe  
**Sent:** Thursday, April 07, 2011 6:21 AM  
**To:** DART\_PACTSU; RMT\_PACTSU  
**Cc:** Cohen, Harold(GC/DCHA) [USAID]; Catlin, Steve(DCHA/OFDA) [USAID]; john.holland@foh.hhs.gov; kiel.fisher@foh.hhs.gov; timothy.jiggins@foh.hhs.gov; bradley.christ@foh.hhs.gov; martin.sanders@foh.hhs.gov  
**Subject:** Radiation Safety Hazard at 30Km Radius for Dai-Ichi Nuclear Power PLant

One of the more exciting aspects of a DART CBRNE Officer's job is poring through reams of monitoring data on a daily basis.

Monitoring data provided by the Government of Japan indicates that several stations located along the northwest side of the Japanese 30-kilometer radius from the Dai Ichi nuclear power plant have shown steadily increasing accumulated doses for beta and gamma radiation (please see page 1 of attachment).

Comparing these accumulated doses to US occupational and general public health standards indicates that several of the standards have been exceeded, and that radiation in the vicinity of Monitoring Point 32 east of Fukushima City poses a public health hazard (please see page 2 at the attachment).

The Government of Japan established a 20-kilometer (12-mile) evacuation zone around the site. Japanese citizens living 20 to 30 kilometers from the site have been advised to remain indoors.

The 30-kilometer radius around the site may not adequately protect the health of DART and other U.S. Government employees working outdoors.

The accumulated radiation doses in the vicinity of Monitoring Point 32 are consistent with elevated pen dosimeter readings issued to a DART Military Liaison officer stationed at Sendai in March 2011. Japanese SPEEDI air monitoring data also show elevated doses of ionizing radiation being carried by winds from the Dai-Ichi nuclear power plant northwest to the vicinity of Monitoring Point 32.

Therefore, I recommend that DART staff continue to adhere to the U.S. Embassy's recommendation for Americans to remain outside a 50-mile radius from the site, especially when planning field assessments that require travel through Fukushima Prefecture.

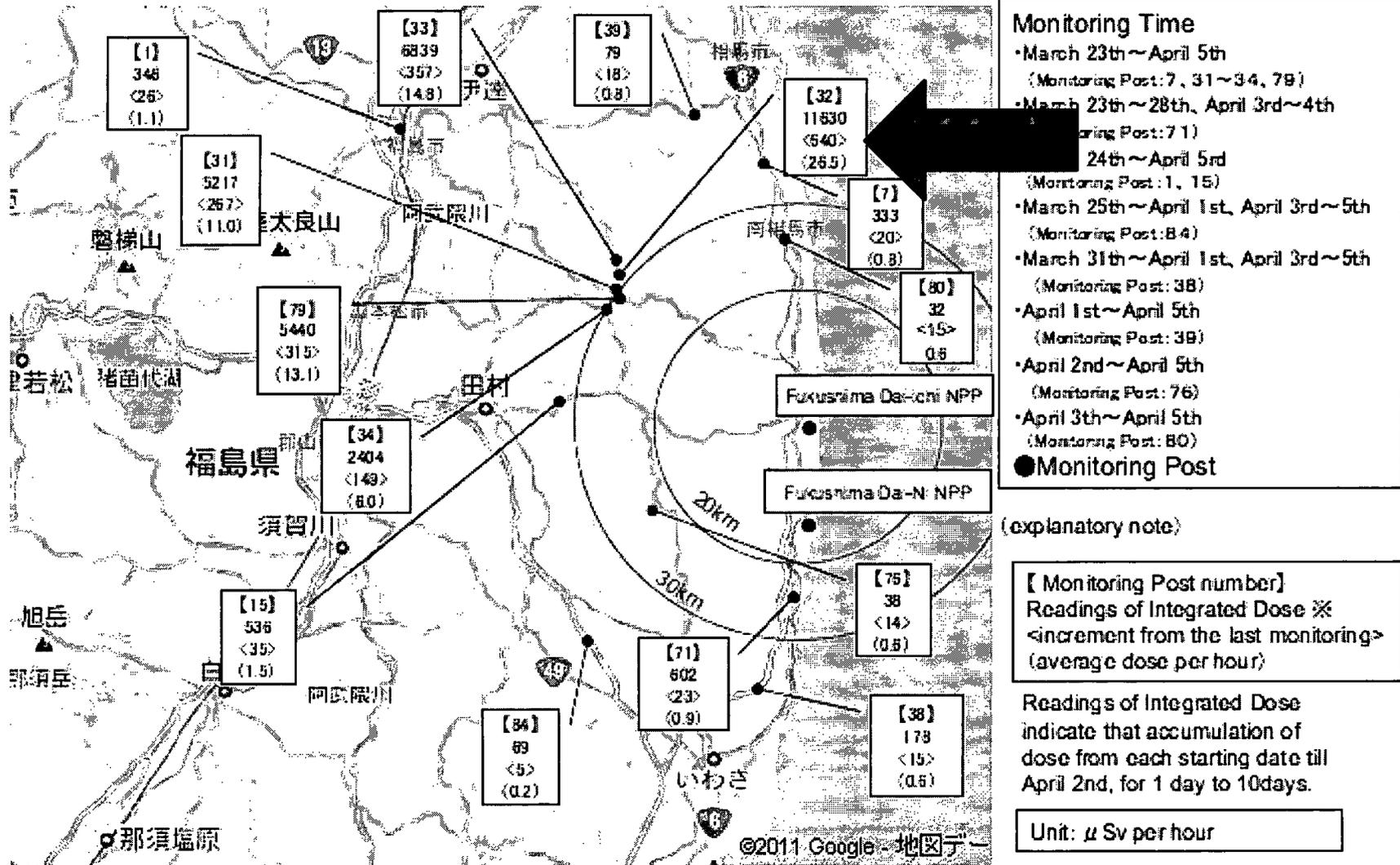
Best,

Joe Hughart  
CAPT USPHS  
USAID OFDA MLU  
CBRNE Officer  
[jhughart@ofda.gov](mailto:jhughart@ofda.gov)

AB/225

# MEXT: Radiation Dose at 30 Km

Readings of Integrated Dose at Monitoring Post out of Fukushima Dai-ichi NPP

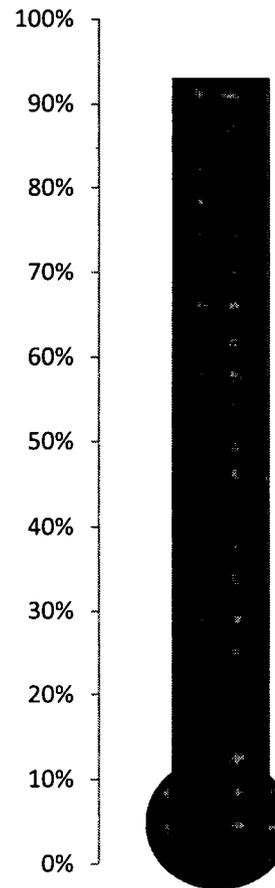


# Radiation Dose at 30 Km

**MP 32 Mar 23-Apr 5, 2011**

**OSHA 90-Day Exposure Limit  
(At 93% of Limit in 14 Days)**

Standard	Accumulated Dose ( $\mu\text{Sv}$ )	Comment
ATSDR Min Risk Level (1 yr exposure)	1000	Exceeded
OSHA Limit General Public 1 Yr Exposure	1000	Exceeded
ATSDR Min Risk Level (14-Day Exposure)	4000	Exceeded
OSHA Limit Pregnant Worker 1 Yr Exposure	5000	Exceeded
<b>MP 32 (NW side of 30 km radius)</b>	<b>11630</b>	<b>Detected</b>
OSHA 90-day Limit Radiation Worker	12500	93%
OSHA Annual Limit Radiation Worker	50000	Annual Limit

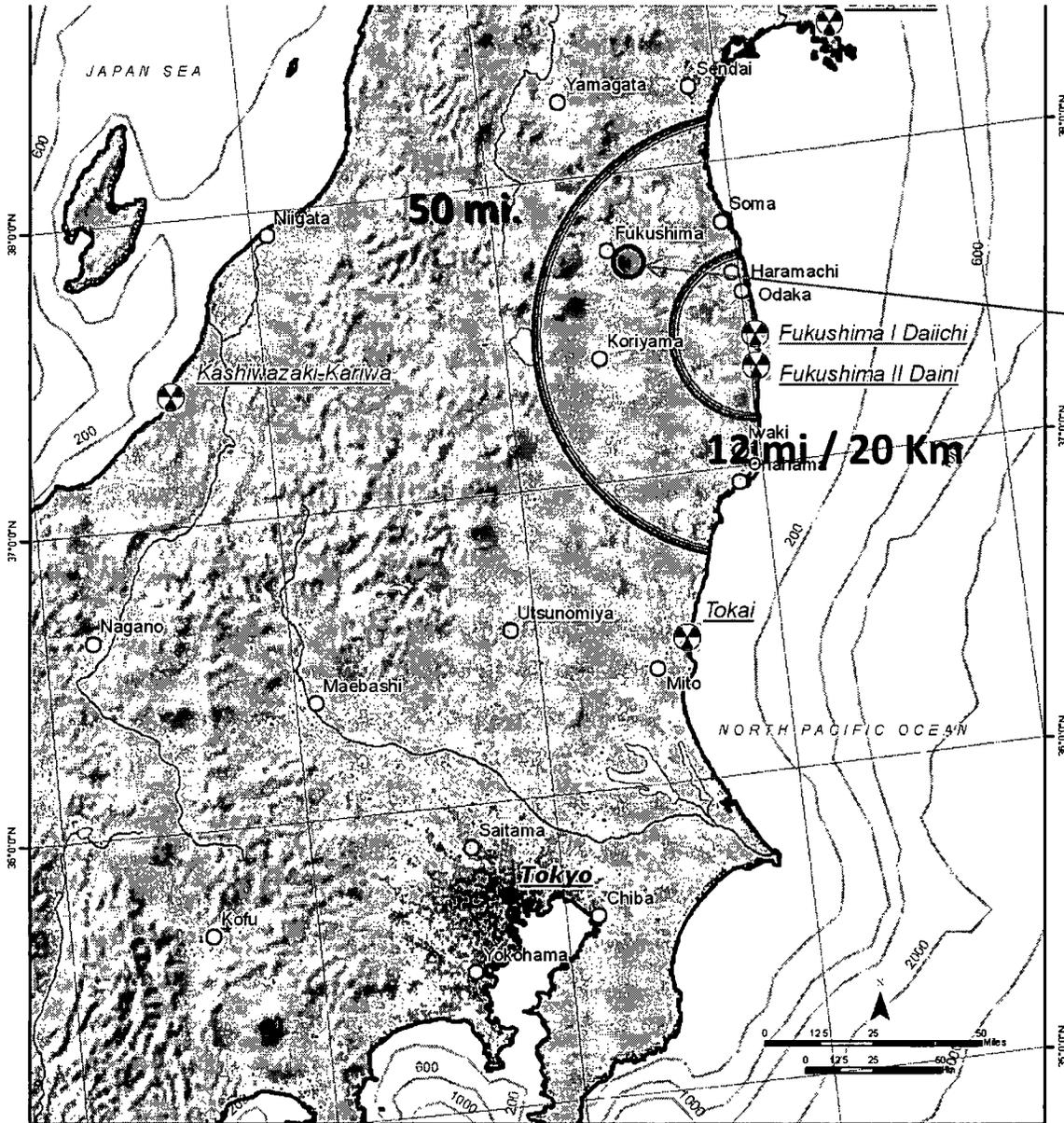


# Evacuation Radii

MP 32

The U.S. 50-mile radius adequately protects public health, but the Japanese 20-kilometer (12 mile) radius may not protect the health of the general public, pregnant female radiation workers, or radiation workers who remain longer than 2 weeks near MP 32.

- Map by WFP



**From:** RMTPACTSU\_ELNRC  
**To:** LIA06 Hoc; LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; LIA12 Hoc; Harrington, Holly; McIntyre, David; Burnell, Scott; ET07 Hoc  
**Subject:** FYI -- FW: Japan News (Reuters): Japan eyes 20 pct cut in foreign aid to fund disaster relief-media  
**Date:** Thursday, April 07, 2011 2:30:44 PM

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**From:** RMTPACTSU\_INC  
**Sent:** Thursday, April 07, 2011 10:19 AM  
**To:** RMT\_PACTSU  
**Cc:** Lapp, Alison (DCHA/OFDA) [USAID]  
**Subject:** Japan News (Reuters): Japan eyes 20 pct cut in foreign aid to fund disaster relief-media

Source: Reuters  
April 7, 2011

## **Japan eyes 20 percent cut in foreign aid to fund disaster relief-media**

TOKYO, April 7 (Reuters) - Japan, the world's No. 5 donor, is considering cutting foreign aid by 20 percent this fiscal year to help fund its extra budget for disaster relief after last month's massive quake and tsunami, media reported on Thursday.

The government is unlikely to issue new debt to fund the initial extra budget of more than \$35 billion for disaster relief, domestic media reported this week, in a sign the authorities are wary of alarming bond investors by adding too much to Japan's already huge debt pile.

For the current fiscal year to next March, Japan has set aside 572.7 billion yen (\$6.7 billion) for official development assistance (ODA). Now, the ruling Democratic Party and the government are considering cutting that by 20 percent to help fund the extra budget, the Yomiuri newspaper reported.

Japan, the world's No.1 donor in the 1990s, has been cutting official development assistance in recent years as Tokyo focuses on tackling a mountain of public debt that is nearly twice the size of its \$5 trillion economy.

The more than 3 trillion yen (\$35 billion) in the supplemental budget will pay for repairing roads, ports and schools, as well as helping those in quake-hit regions in Japan's northeast find new jobs, the Asahi newspaper reported on Wednesday. (\$1 = 85.475 Japanese Yen) (Reporting by Yoko Nishikawa, editing by Jonathan Thatcher)

Lily Frey  
Information Coordinator  
Pacific Tsunami and Japan Earthquake Response Management Team  
[RMTPACTSU\\_INC@ofda.gov](mailto:RMTPACTSU_INC@ofda.gov)  
202-712-0039

AB/226

**From:** [McIntyre, David](#)  
**To:** [Thompson, Jon](#)  
**Cc:** [Kulesa, Gloria](#)  
**Subject:** RE: Media - MOX questions  
**Date:** Thursday, April 07, 2011 4:59:00 PM

---

Perfect. Thanks.

---

**From:** Thompson, Jon  
**Sent:** Thursday, April 07, 2011 4:59 PM  
**To:** McIntyre, David  
**Cc:** Kulesa, Gloria  
**Subject:** RE: Media - MOX questions

Dave,

Duke is already authorized to reinsert any or all of the 4 MOX Lead Test Assemblies (LTAs) for a 3<sup>rd</sup> cycle (within certain licensing and technical constraints). They have no plans to do so because of prior performance issues, but they are not barred from doing so.

Any other use of MOX at Catawba (whether additional LTAs or full implementation) would need a new license amendment. Any use of MOX at other reactors would need an amendment.

Jon

---

**From:** McIntyre, David  
**Sent:** Thursday, April 07, 2011 4:54 PM  
**To:** Thompson, Jon  
**Subject:** FW: Media - MOX questions

Jon – as Catawba PM, can you tell me if I'm correct in saying that Duke would need to apply for another license amendment if they wanted to use MOX again at Catawba?

Thanks,  
Dave Mc, OPA

---

**From:** Donna Deedy [<mailto:deedy@optonline.net>]  
**Sent:** Thursday, April 07, 2011 4:59 PM  
**To:** McIntyre, David  
**Subject:** Re: Media - MOX questions

Dear David,

Okay, So if Duke wanted to use MOX again, would they need to go through all the steps again? Or has the fuel been certified for use in Duke's reactor, the main objective of the two test cycles?

Donna Deedy

AB/227

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Thursday, April 07, 2011 6:24:47 PM

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**News**

**3** new results for **Nuclear Regulatory Commission**

**NRC: US 50-mile evacuation based on assumptions**

The Seattle Times

Members of the **Nuclear Regulatory Commission's** Advisory Committee on Reactor Safeguards pressed officials Thursday to explain how they concluded that 50 miles was a safe distance from the crippled reactors. The Japanese government had set a 12-mile ...

[See all stories on this topic »](#)

**Surry County residents assured of nuclear plant's safety**

Daily Press

Officials from the US **Nuclear Regulatory Commission** tried to dispel safety concerns residents had due to the recent earthquake, tsunami and nuclear disaster in northeast Japan. "It was a perfect storm" of events, said Roger Hannah with the commission. ...

[See all stories on this topic »](#)

**Small Amounts Of Japan Radiation Reaches Kansas**

KAKE

Recent state environmental samplings have detected miniscule levels of iodine-131 in Kansas from the Japanese nuclear reactors in Fukushima Dai-ichi. According to the Environmental Protection Agency (EPA), the **Nuclear Regulatory Commission** (NCR) and ...

[See all stories on this topic »](#)

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[Create another alert.](#)  
[Manage your alerts.](#)

AB/228

**From:** [Campbell, Larry](#)  
**To:** [McIntyre, David](#)  
**Subject:** FW: Action: Q&A's on MOX for Congressional response  
**Date:** Friday, April 08, 2011 9:07:36 AM  
**Attachments:** [Action Questions from Congressional staffer.msg](#)  
[MOX fuel.docx](#)  
**Importance:** High

---

These are related to the questions you received. It would be nice to have all of them sorted and in one place. Perhaps you can get something going. Not sure what the answers are, but they seem similar or related to those you received Cheers, Larry

---

**From:** Oesterle, Eric  
**Sent:** Tuesday, March 29, 2011 1:27 PM  
**To:** Tiktinsky, David; Thompson, Jon  
**Cc:** Campbell, Larry; Kulesa, Gloria; Markley, Michael  
**Subject:** Action: Q&A's on MOX for Congressional response  
**Importance:** High

David & Jon,

Sorry, for the surprise email! I'm working on the NRR Communications Team helping to coordinate Q&A's in response to the events in Japan. I am working on some responses to Congressional inquiries rec'd through HOC regarding MOX fuel use. Please review the attached Q&A's for accuracy. I'm particularly interested in whether or not testing of MOX has been completed at Catawba and what is Duke doing with the MOX fuel now. Any future plans for MOX use by Duke? I'm hoping for a quick turnaround, so let me know what you can do. Thanks!

*Eric*

Eric R. Oesterle  
NRR Communications Team  
Senior Policy Analyst (NRO/DNRL)  
U.S. Nuclear Regulatory Commission  
301-415-1365

AB/229

Attachment Action Questions from Congressional staffer.msg (2560 Bytes) cannot be converted to PDF format.

**Q: Where in the U.S. are commercial nuclear power reactors currently licensed to use MOX fuel. Where is MOX fuel currently in use?**

There are currently no nuclear power plants in the U.S. that are licensed to use mixed-oxide (MOX) fuel. In response to a license amendment request from Duke Energy Corporation, the NRC authorized in the use of four MOX fuel lead test assemblies in one of the two units at the Catawba Nuclear Station. Testing and evaluation of the of the MOX fuel lead test assemblies at Catawba has been completed. Additional information on MOX fuel and its use in power reactors are available at the following links: <http://www.nrc.gov/materials/fuel-cycle-fac/mox/reactors.html> and <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/mox-bg.html>.

**Q: Are there any active license applications for MOX fuel use or production?**

There are currently no active license applications for use of MOX fuel in nuclear power reactors in the U.S. The U.S. Department of Energy (DOE) applied to the NRC for approval to construct a MOX Fuel Fabrication Facility at the Savannah River site in Aiken, South Carolina. The NRC issued a construction authorization in March 2005 for this facility. In December 2010, the NRC published its Final Safety Evaluation Report (SER) for the license application to possess and use radioactive material at the MOX Fuel Fabrication Facility at DOE's Savannah River Site. Upon inspection and verification by the NRC that the MOX Fuel Fabrication Facility has been constructed in accordance with the approved design, the NRC may authorize operation of the facility. The NRC understands that the schedule for completion of construction is expected to be in the 2016 timeframe. The NRC also understands that the DOE has solicited the commercial nuclear power industry to assess interest in future use of MOX fuel that will be produced at this facility.

**Categories:** MOX fuel

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Friday, April 08, 2011 10:28:14 AM

---

**News**

**1** new result for **Nuclear Regulatory Commission**

**Nuclear Officials Worry about Safety Plans Despite Public Assurances**

AllGov

The **Nuclear Regulatory Commission (NRC)** is not as confident as its public declarations would indicate about the survival of US nuclear reactors against disasters like the kind happening in Japan. This conclusion was reached by the Union of Concerned ...

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[Manage](#) your alerts.

AS 230

**From:** [Brenner, Eliot](#)  
**To:** [Batkin, Joshua](#); [Harrington, Holly](#)  
**Cc:** [McIntyre, David](#)  
**Subject:** RE: Question about the 50-mile recommendation  
**Date:** Friday, April 08, 2011 11:21:45 AM

---

Josh, it does not mean the decision was wrong. However, Bullet two on page 6 of the DOE material made public yesterday suggests that circumstances have changed so that there is now no evidence that would support evacuation beyond 25 miles. That raises the question ... is the NRC considering changing the recommendation?

Trish got a question overnight from a Japanese reporter and the WSJ already raised it at DOE and was pointed in our direction.

---

This is probably the point at which we would say ... we will study all available information, but for now we will hold with the 50 mile recommendation because this remains a very fluid situation.

Just looking for a wink and a nod to say we will study all available information, etc.

Eliot

**From:** Batkin, Joshua  
**Sent:** Friday, April 08, 2011 11:16 AM  
**To:** Harrington, Holly  
**Cc:** Brenner, Eliot; McIntyre, David  
**Subject:** RE: Question about the 50-mile recommendation

That statement doesn't mean that 50-miles is wrong. It was a prudent precaution based on what could happen, not a decision based on waiting until we had harmful dose levels. Don't think there's a lot of space between us there.

---

**From:** Harrington, Holly  
**Sent:** Friday, April 08, 2011 11:04 AM  
**To:** Batkin, Joshua  
**Subject:** RE: Question about the 50-mile recommendation

See slide 6

---

**From:** Batkin, Joshua  
**Sent:** Friday, April 08, 2011 11:02 AM  
**To:** Harrington, Holly  
**Cc:** Brenner, Eliot; McIntyre, David

AB/231

**Subject:** RE: Question about the 50-mile recommendation

Who at doe said what?

---

**From:** Harrington, Holly  
**Sent:** Friday, April 08, 2011 11:01 AM  
**To:** Batkin, Joshua  
**Cc:** Brenner, Eliot; McIntyre, David  
**Subject:** Question about the 50-mile recommendation

We're continuing to receive questions related to our 50-mile recommendation, particularly in light of a DOE statement that it's no longer necessary. Below is our response, coordinated with the PMT folks. Eliot wants your OK.

Q. Will NRC be relaxing its Protective Action Recommendation based on the information provided to the public by the Department of Energy that says the radiation levels beyond 25 miles are decreasing and do not support evacuation or relocation?

A. The NRC, in conjunction with other federal agencies, is reviewing current information on environmental conditions as part of its ongoing assessment related to the protective action recommendation for US citizens in Japan. Protective action recommendations are based on many factors, including the progression of plant safety system degradation, the actual or projected occurrence of significant releases of radiological material, and the time necessary to provide notice and implementation of protective actions. The NRC provided recommendations on March 16 based on the deteriorating conditions at Fukushima Daiichi Nuclear Power Plant at the time and a need to provide advance actions in the face of considerable uncertainty about the outcome of events.

Considerable data collection by Japan government organizations and US government support organizations, including radiological monitoring results in the NISA and the US Department of Energy report that you reference, are being evaluated to determine an appropriate and reasonable timeframe for relaxing the existing protective action recommendations. Comparison to US protective action guidelines regarding radioactive material exposure are ongoing to make sure that returning populations will not exceed those guidelines. Once the NRC and other US government agencies have reasonable assurance that plant conditions will continue to improve and radiological exposure information is thoroughly analyzed, relaxation of the US recommendations will be considered for the area around the Fukushima Daiichi Nuclear Power Plant.

**From:** Milligan, Patricia  
**To:** McIntyre, David; Harrington, Holly; Brenner, Eliot; Hayden, Elizabeth  
**Subject:** RE: Statement approved by Josh  
**Date:** Friday, April 08, 2011 11:33:34 AM

---

Understand but before we can even begin to think about relaxing PARs, the releases have to be minimized and then analyzed

---

**From:** McIntyre, David  
**Sent:** Friday, April 08, 2011 11:33 AM  
**To:** Milligan, Patricia; Harrington, Holly; Brenner, Eliot; Hayden, Elizabeth  
**Subject:** RE: Statement approved by Josh

The release may be minimized ("conditions are improving"), but the statement is referring to information being analyzed – how do we minimize that?

---

**From:** Milligan, Patricia  
**Sent:** Friday, April 08, 2011 11:31 AM  
**To:** Harrington, Holly; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** McIntyre, David  
**Subject:** RE: Statement approved by Josh

Rather than say analyzed, we need to say that radiological releases are minimized and analyzed. We want them minimized first and then analyzed.

---

**From:** Harrington, Holly  
**Sent:** Friday, April 08, 2011 11:29 AM  
**To:** Brenner, Eliot; Hayden, Elizabeth  
**Cc:** Milligan, Patricia; McIntyre, David  
**Subject:** Statement approved by Josh

Once the NRC and other US government agencies have reasonable assurance that plant conditions are improving and radiological exposure information is thoroughly analyzed, relaxation of the US recommendations will be considered for the area around the Fukushima Daiichi Nuclear Power Plant.

Additional background: The NRC, in conjunction with other federal agencies, is reviewing current information on environmental conditions as part of its ongoing assessment related to the protective action recommendation for US citizens in Japan. Protective action recommendations are based on many factors, including the progression of plant safety system degradation, the actual or projected occurrence of significant radiological releases, and the time necessary to provide notice and implementation of protective actions. The NRC provided recommendations on March 16 based on the deteriorating conditions at Fukushima Daiichi Nuclear Power Plant and a need to provide advance actions in the face of considerable uncertainty about the outcome of events.

AB 232

Considerable data collection by Japan government organizations and US government support organizations, including radiological monitoring results by the NISA and the US Department of Energy are being evaluated to determine an appropriate and reasonable timeframe for relaxing the existing protective action recommendations. Comparison to US protective action guidelines regarding radioactive material exposure are ongoing to make sure that returning populations will not exceed those guidelines.

**From:** [Campbell, Larry](#)  
**To:** [McIntyre, David](#)  
**Subject:** FW: Action: Please review attached draft Q&As  
**Date:** Friday, April 08, 2011 11:51:48 AM  
**Attachments:** [Additional MOX fuel Q&As.docx](#)

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FYI

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**From:** Oesterle, Eric  
**Sent:** Friday, April 08, 2011 10:56 AM  
**To:** Carlson, Donald  
**Cc:** Campbell, Larry; Morrissey, Kevin; Tiktinsky, David; Markley, Michael  
**Subject:** Action: Please review attached draft Q&As

Don,

You were highly recommended to help prepare or review answers to questions that were proposed on use of MOX fuel in nuclear power reactors. I took a shot at providing high level answers to proposed questions that were developed by the good folks in NMSS/MODB. I took the liberty of editing out a couple of questions. Please have a look at the attached Q&As, if you don't mind, and let me know if I'm tragically off-base. Thanks! The good folks in NMSS/MODB are welcome to chime in too!

The end goal for these Q&As is to get them approved by OPA and be available for inclusion in an NRC Q&A database that can be used to respond to external stakeholders. Thanks!

*Eric*

Eric R. Oesterle  
NRR Communications Team  
Senior Policy Analyst (NRO/DNRL)  
U.S. Nuclear Regulatory Commission  
301-415-1365

AB/233

**Q: Given the situation in Japan where a radioactive release is anticipated, is the radiation release associated with MOX fuel that has plutonium in it worse than a release from fuel initially made from uranium?**

Mixed oxide (MOX) fuel refers to nuclear fuel made from a mixture of uranium oxide and plutonium oxide. Because plutonium is created by the absorption of neutrons by uranium, even nuclear power reactors that are using "traditional" uranium fuel create plutonium as the uranium atoms split (i.e., fission). Some of the neutrons released during the fissioning of uranium interact with yet other uranium atoms to form plutonium. Some of this plutonium created in the fuel of the reactor core is itself fissioned thereby helping to sustain the chain reaction of splitting atoms. The plutonium which does not fission by the end of the core's life remains in the fuel rod.

The NRC reviewed and approved the use of four lead test assemblies containing MOX fuel in at the Catawba Nuclear Power Station. As part of the review, the impact of having MOX fuel in the reactor on the design basis accidents previously analyzed for Catawba was analyzed. The results of the review determined that the radiological consequences of these design basis accidents would continue to meet the NRC's regulatory requirements when using MOX fuel assemblies in the reactor.

**Q: Is the risk of fuel failure more likely because of the use of MOX fuel?**

For conventional nuclear power plants (i.e., those using low enriched fuel and light water cooling) the mechanisms associated with fuel failure are not dependent on fuel type, particularly when comparing uranium oxide fuel with mixed oxide fuel. Fuel failure mechanisms are predominantly associated with loss of sufficient heat removal capacity to the fuel rods.

**Q: Is the heat released from MOX fuel greater than the heat released from traditional uranium fuel?**

MOX fuel is a mixture of nuclear fuel made from uranium oxide and plutonium oxide. When used in a nuclear power reactor, both the uranium oxide and plutonium oxide take part in a fissioning process that releases energy which is transferred as heat to the cooling water. When using traditional uranium fuel in a nuclear power reactor, the nuclear fissioning process in the uranium fuel produces plutonium. This resultant plutonium also takes part in the fissioning process, in the same manner as what occurs in the MOX fuel, thus releasing energy which is transferred as heat to the cooling water. There is no measurable difference in heat released from MOX fuel versus traditional uranium fuel.

**Q: Does the latest accident in Japan show that MOX fuel shouldn't be used in BWRs because it was never tested for these types of reactors?**

It has been reported in a March 2011 Technical Brief from the American Nuclear Society that Fukushima Daiichi Unit 3 was operating with 32 MOX fuel assemblies and 516 low enriched uranium (LEU) fuel assemblies. The type of fuel used in these reactors had no impact on the

occurrence of events that resulted in the current situation at the Fukushima Daiichi facility in Japan. Testing of MOX fuel in both BWRs and PWRs has been conducted both domestically and internationally for many years. There is considerable international experience using MOX fuel in nuclear power reactors in both BWRs and PWRs. There are several dozen nuclear reactors worldwide that use MOX fuel. Additional information on experience using MOX in nuclear power reactors is available on the NRC's public website and may be accessed at the following link: <http://www.nrc.gov/materials/fuel-cycle-fac/mox/reactors.html>.

**Categories:** MOX fuel

**From:** Milligan, Patricia  
**To:** Harrington, Holly; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** McIntyre, David  
**Subject:** RE: Statement approved by Josh  
**Date:** Friday, April 08, 2011 12:23:18 PM

---

Thanks! ☺

---

**From:** Harrington, Holly  
**Sent:** Friday, April 08, 2011 12:01 PM  
**To:** Milligan, Patricia; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** McIntyre, David  
**Subject:** RE: Statement approved by Josh

We can go with this:

Once the NRC and other US government agencies have reasonable assurance that plant conditions are improving, radiation is minimized and radiological exposure information is thoroughly analyzed, relaxation of the US recommendations will be considered for the area around the Fukushima Daiichi Nuclear Power Plant.

---

**From:** Milligan, Patricia  
**Sent:** Friday, April 08, 2011 11:40 AM  
**To:** Harrington, Holly; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** McIntyre, David  
**Subject:** RE: Statement approved by Josh

Please use minimize.

---

**From:** Harrington, Holly  
**Sent:** Friday, April 08, 2011 11:40 AM  
**To:** Milligan, Patricia; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** McIntyre, David  
**Subject:** RE: Statement approved by Josh

I think this is fine as is. Plant conditions are improving means less radiation; analysis means we have to look at it thoroughly first, and caveat of "will be considered" covers anything in between.

---

**From:** Milligan, Patricia  
**Sent:** Friday, April 08, 2011 11:31 AM  
**To:** Harrington, Holly; Brenner, Eliot; Hayden, Elizabeth  
**Cc:** McIntyre, David  
**Subject:** RE: Statement approved by Josh

Rather than say analyzed, we need to say that radiological releases are minimized and analyzed. We want them minimized first and then analyzed.

AS/234

**From:** Harrington, Holly  
**Sent:** Friday, April 08, 2011 11:29 AM  
**To:** Brenner, Eliot; Hayden, Elizabeth  
**Cc:** Milligan, Patricia; McIntyre, David  
**Subject:** Statement approved by Josh

Once the NRC and other US government agencies have reasonable assurance that plant conditions are improving and radiological exposure information is thoroughly analyzed, relaxation of the US recommendations will be considered for the area around the Fukushima Daiichi Nuclear Power Plant.

Additional background: The NRC, in conjunction with other federal agencies, is reviewing current information on environmental conditions as part of its ongoing assessment related to the protective action recommendation for US citizens in Japan. Protective action recommendations are based on many factors, including the progression of plant safety system degradation, the actual or projected occurrence of significant radiological releases, and the time necessary to provide notice and implementation of protective actions. The NRC provided recommendations on March 16 based on the deteriorating conditions at Fukushima Daiichi Nuclear Power Plant and a need to provide advance actions in the face of considerable uncertainty about the outcome of events.

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**From:** RMTFACTSU\_ELNRC  
**To:** LIA06 Hoc; LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; LIA12 Hoc; Harrington, Holly; McIntyre, David; Burnell, Scott; ET07 Hoc  
**Subject:** FYI -- FW: Impact of 7.4 Aftershock on Japanese Nuclear Facilities  
**Date:** Friday, April 08, 2011 12:52:28 PM

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**From:** Hughart, Joe  
**Sent:** Thursday, April 07, 2011 9:18 PM  
**To:** DART\_PACTSU; RMT\_PACTSU  
**Cc:** Catlin, Steve(DCHA/OFDA) [USAID]; Cohen, Harold(GC/DCHA) [USAID]; john.holland@foh.hhs.gov; kiel.fisher@foh.hhs.gov  
**Subject:** Impact of 7.4 Aftershock on Japanese Nuclear Facilities

Spent fuel reprocessing plant at Rokkasho-mura: outside power lost, on emergency diesel power.

Higashi-Dori nuclear power plant: outside power lost, on emergency diesel power.

Onagawa nuclear power plant: two of 3 outside power lines cut, 1 line functional for cooling.

Fukushima Dai-Ichi nuclear power plant: no change.

Tokai Dai- ni nuclear power plant (closest to Tokyo): no problems.

Joe Hughart  
CAPT USPHS  
USAID OFDA MLU  
CBRNE Officer  
[jhughart@ofda.gov](mailto:jhughart@ofda.gov)

AB.235

**From:** [Medina, Veronika](#)  
**To:** [McIntyre, David](#)  
**Subject:** FW: media request re: Japan relief mission/shutdown  
**Date:** Friday, April 08, 2011 2:30:10 PM

---

Another Japan and shutdown question.

---

**From:** OPA Resource  
**Sent:** Friday, April 08, 2011 2:15 PM  
**To:** Medina, Veronika  
**Subject:** FW: media request re: Japan relief mission/shutdown

---

**From:** Nico Pandi [<mailto:pandin@jjjdc.com>]  
**Sent:** Friday, April 08, 2011 12:57 PM  
**To:** OPA Resource  
**Subject:** media request re: Japan relief mission/shutdown

1. What effect would a government shutdown have on the NRC's ability to conduct support for the nuclear crisis mission in Japan?
2. How many NRC personnel are currently working on the Japan relief mission in both Japan and the United States?

Thank you for your attention. We would greatly appreciate your response before this evening.

Best,  
Nico Pandi  
Jiji Press

529 14th St. NW, Suite 550  
Washington DC, 20045

AB1236

**From:** Harrington, Holly  
**To:** Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara  
**Cc:** Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David  
**Subject:** In case you get questions about the INES Scale 7 for Japan  
**Date:** Tuesday, April 12, 2011 1:40:59 PM

---

These are talking points from DOE, blessed by Eliot:

While this accident is now the second most severe in history, there are some important differences from Chernobyl. This new rating does not mean that the ultimate health effects on those living near the plant will be anything like the Chernobyl disaster, which involved an explosion and intense fire in the reactor that quickly lofted radioactive materials over a large area before people had evacuated or taken health precautions.

In this case, the effects on public health are likely to be much lower because many fewer people have been exposed and because protective measures have been implemented promptly, in sharp contrast to Chernobyl. While there are still risks of additional releases, the situation is steadily being stabilized, and the potential danger to the public is declining over time. The change in the accident severity rating results from a reassessment of the amount of radioactive material released previously, not a change in the expected course of the accident or the affect on public health.

AB/237

**From:** Parker, LaShawn  
**To:** McIntyre, David; Medina, Veronika  
**Subject:** RE: Media- Interview with High School students  
**Date:** Tuesday, April 12, 2011 3:31:00 PM

---

*Good Evening Dave and Veronika,*

*I apologize for any confusion this may have caused. Mr. Deck actually did not leave a number, so I pulled his information from the call log. If in the event he calls with the same request/inquiry I will be sure to point him in Dave's direction.*

*Thank you,*

*LaShawn Parker  
Office of Public Affairs  
Administrative Assistant  
Phone: 301-415-8200  
Fax: 301-415-3714  
MS: 0-16D3  
LaShawn.Parker@nrc.gov*

---

**From:** McIntyre, David  
**Sent:** Tuesday, April 12, 2011 3:21 PM  
**To:** Medina, Veronika  
**Cc:** Parker, LaShawn  
**Subject:** RE: Media- Interview with High School students

This number is not in service.

---

**From:** Medina, Veronika  
**Sent:** Tuesday, April 12, 2011 1:37 PM  
**To:** McIntyre, David  
**Subject:** Media- Interview with High School students

Dave,

There are a group of students who would like to ask questions about the crisis in Japan. Can you follow up? The teacher's name is Benjamin Dech and he can be reached at 252-946-3362.

Thanks,  
Veronika

---

**From:** Parker, LaShawn  
**Sent:** Tuesday, April 12, 2011 1:33 PM  
**To:** Medina, Veronika  
**Subject:** Phone Message

AB: 238

*Good Afternoon Veronika,*

*Benjamin Deck, a school teacher at Washington High School in NC, who would like his students to speak with someone in our office. His students have conducted interviews on the crisis in Japan. He can be reached on 252-946-3362*

*Thank you,*

*LaShawn Parker  
Office of Public Affairs  
Administrative Assistant  
Phone: 301-415-8200  
Fax: 301-415-3714  
MS: O-16D3  
LaShawn.Parker@nrc.gov*

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Tuesday, April 12, 2011 4:05:11 PM

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**News**

**2 new results for Nuclear Regulatory Commission**

[Spent rods fill U.S. nuke pools, NRC says](#)

USA Today

In the US, more than 75% of the radioactive waste at the nation's 104 commercial nuclear reactors sits in pools, according to the **Nuclear Regulatory Commission**. The rest is in dry storage casks. The pools were intended as temporary rest stops before ...

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[USA Today](#)

[US begins to reconsider nuclear risks in light of Japan crisis](#)

McClatchy Washington Bureau

Germany responded to Japan's nuclear crisis by shutting down its seven oldest reactors for three months for safety checks. The US **Nuclear Regulatory Commission** and the industry say there's no need to do that here. "The next generation will be a safer ...

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AC | 239

**From:** McIntyre, David  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Uselding, Lara; Dricks, Victor  
**Subject:** SNF Talking Points and Qs.docx  
**Date:** Tuesday, April 12, 2011 5:14:00 PM  
**Attachments:** SNF Talking Points and Qs.docx

---

All – the attached talking points and Q&As on spent fuel pools and casks have been blessed (finally) by NMSS, NRR and NSIR. Many thanks to Theresa for helping with these.

Dave

ACI/240

# OPA Talking Points and Qs&As

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## Spent Fuel Pools and Storage

[Revision 2, April 12, 2011]

### **Talking Points:**

1. All U.S. nuclear power plants store spent nuclear fuel in “spent fuel pools.” These pools are robust constructions made of reinforced concrete several feet thick, with steel liners. The water is typically about 40 feet deep, and serves both to shield the radiation and cool the rods.
2. As the pools near capacity, utilities move some of the older spent fuel into “dry cask” storage. Fuel is typically cooled at least 5 years in the pool before transfer to cask. NRC has authorized transfer as early as 3 years; the industry norm is about 10 years.
3. The NRC believes spent fuel pools and dry casks both provide adequate protection of the public health and safety and the environment. Therefore there is no pressing safety or security reason to mandate earlier transfer of fuel from pool to cask. *(Note: We do not say they are “equally” safe. We say they are both safe.)*
4. After the September 11, 2001, terrorist attacks, the NRC issued orders to plant operators requiring several measures aimed at mitigating the effects of a large fire, explosion, or accident that damages a spent fuel pool. These were meant to deal with the aftermath of a terrorist attack or plane crash; however, they would also be effective in responding to natural phenomena such as tornadoes, earthquakes or tsunamis. These mitigating measures include:
  - a. Controlling the configuration of fuel assemblies in the pool to enhance the ability to keep the fuel cool and recover from damage to the pool.
  - b. Establishing emergency spent fuel cooling capability.
  - c. Staging emergency response equipment nearby so it can be deployed quickly
5. According to the Congressional Research Service (using NEI data), there were 62,683 metric tons of commercial spent fuel accumulated in the United States as of the end of 2009.
  - a. Of that total, 48,818 metric tons – or about 78 percent – were in pools.
  - b. 13,856 metric tons – or about 22 percent – were stored in dry casks.

- c. The total increases by 2,000 to 2,400 tons annually.

### ***Questions and Answers – General***

**Q1:** What is spent nuclear fuel?

**A1:** “Spent nuclear fuel” refers to fuel elements that have been used at commercial nuclear reactors, but that are no longer capable of economically sustaining a nuclear reaction. Periodically, about one-third of the nuclear fuel in an operating reactor needs to be unloaded and replaced with fresh fuel.

**Q2:** Why is spent fuel hot?

**A2:** Spent fuel generates what is called “residual heat” because of radioactive decay of the elements inside the fuel. After the fission reaction is stopped and the reactor is shut down, the products left over from the fuel’s time in the reactor are still radioactive and emit heat as they decay into more stable elements. Although the heat production drops rapidly at first, heat is still generated many years after shutdown. Therefore, the NRC sets requirements on the handling and storage of this fuel to ensure protection of the public and the environment.

### ***Questions and Answers – Spent Fuel Inventories***

**Q3:** Why doesn’t the NRC have up-to-date figures on how much spent fuel is stored at U.S. nuclear plants? Doesn’t the regulator have a clue about how much of this stuff is out there?

**A3:** The NRC and Department of Energy (NNSA) operate the Nuclear Material Management and Safeguards System (NMMSS), a database that tracks Special Nuclear Material (enriched uranium and plutonium). This database does not distinguish between fresh and irradiated material, and the information is withheld from the public for security reasons. That’s why figures on spent fuel inventory come from the industry.

**Q4:** How much fuel is currently in dry cask storage?

**A4:** As of November 2010, there were 63 “independent spent fuel storage installations” (or ISFSIs) licensed to operate at 57 sites in 33 states. These locations are shown on a map on the NRC website at: <http://www.nrc.gov/waste/spent-fuel-storage/locations.pdf>. Over 1400 casks are stored in these independent facilities.

**Q5:** How much fuel is stored at decommissioned reactors? Is it in pools or casks?

**A5:** There are currently 10 decommissioned nuclear power reactors at 9 sites with no other nuclear operations. According to a 2008 Department of Energy report to Congress, approximately 2800 metric tons of spent fuel is stored at these nine sites. As of the writing of

that report, seven of the sites had independent spent fuel storage installations, or ISFSIs. Two additional sites had approximately 1000 metric tons of spent fuel remaining in pool storage.

### ***Questions and Answers – ISFSIs***

**Q6:** What is dry cask storage?

**A6:** Dry cask storage allows spent fuel that has already been cooled in the spent fuel pool for several years to be surrounded by inert gas inside a container called a cask. The casks are typically steel cylinders that are either welded or bolted closed. The steel cylinder provides containment of the spent fuel. Each cylinder is surrounded by additional steel, concrete, or other material to provide radiation shielding to workers and members of the public.

**Q7:** What is an “ISFSI”?

**A7:** An independent spent fuel storage installation, or ISFSI, is a facility that is designed and constructed for the interim storage of spent nuclear fuel. These facilities are licensed separately from a nuclear power plant and are considered independent even though they may be located on the site of another NRC-licensed facility.

**Q8:** What kind of license is required for an ISFSI?

**A8:** NRC authorizes storage of spent nuclear fuel at an ISFSI in two ways: site-specific or general license. For site-specific applications, the NRC reviews the safety, environmental, physical security and financial aspects of the licensee and proposed ISFSI and, if we conclude it can operate safely, we issue a license valid. This license contains requirements on topics such as leak testing and monitoring and specifies the quantity and type of material the licensee is authorized to store at the site. A general license authorizes storage of spent fuel in casks previously approved by the NRC at a site already licensed to possess fuel for or operate a nuclear power plant. Licensees must show the NRC that it is safe to store spent fuel in dry casks at their site, including analysis of earthquake intensity and tornado missiles. Licensees also review their programs (such as security or emergency planning) and make any changes needed to incorporate an ISFSI at their site. Of the currently licensed ISFSIs, 48 are operating under general licenses and 15 have specific licenses.

### ***Questions and Answers – Dry Cask Safety***

**Q9:** How do you know the dry casks are safe? Does the NRC inspect these facilities, or just the reactor and spent fuel pool?

**A9:** The NRC is responsible for inspection of dry cask storage. Before casks are loaded, inspectors with specific knowledge of ISFSI operations assess the adequacy of a “dry run” by the

licensee; they then observe all initial cask loadings. The on-site resident inspectors or region-based inspectors may observe later cask loadings, and the regional offices also perform periodic inspections of routine ISFSI operations.

**Q10:** What keeps fuel cool in dry casks?

**A10:** Fuel is often moved to dry cask storage after several years in spent fuel pools, so the residual heat given off by the fuel has significantly decreased. These casks are typically thick, leak-tight steel containers inside a robust steel or concrete overpack. The fuel is cooled by natural airflow around the cask.

### ***Questions and Answers – Spent Fuel Pool Safety***

**Q11:** What do you look at when you license a fuel storage facility? How do I know it can withstand a natural disaster?

**A11:** The NRC's requirements for both wet and dry storage can be found in Title 10 of the Code of Federal Regulations (10 CFR), including the general design criteria in Appendix A to Part 50 and the spent-fuel storage requirements in Part 72. The staff uses these rules to determine that the fuel will remain safe under anticipated operating and accident conditions. There are requirements on topics such as radiation shielding, heat removal, and criticality. In addition, the staff reviews fuel storage designs for protection against:

- natural phenomena, such as seismic events, tornados, and flooding
- dynamic effects, such as flying debris or drops from fuel handling equipment and drops of fuel storage and handling equipment
- hazards to the storage site from nearby activities

**Q12:** How do you know the fuel pools are safe? Does the NRC inspect these facilities, or just the reactor itself?

**A12:** NRC inspectors are responsible for verifying that spent fuel pools and related operations are consistent with a plant's license. For example, our staff inspects spent fuel pool operations during each refueling outage. We also performed specialized inspections to verify that new spent fuel cooling capabilities and operating practices were being implemented properly.

**Q13:** What would happen to a spent fuel pool during an earthquake? How can I be sure the pool wouldn't be damaged?

**A13:** All spent fuel pools are designed to seismic standards consistent with other important safety-related structures on the site. The pool and its supporting systems are located within structures that protect against natural phenomena and flying debris. The pools' thick walls and floors provide structural integrity and further protection of the fuel from natural phenomena and debris. In addition, the deep water above the stored fuel (typically more than 20 feet above the top of the spent fuel rods) would absorb the energy of debris that could fall into the pool. Finally,

the racks that support the fuel are designed to keep the fuel in its designed configuration after a seismic event.

**Q14:** Can spent fuel pools leak?

**A14:** Spent fuel pools lined with stainless steel are designed to protect against a substantial loss of the water that cools the fuel. Pipes typically enter the pool above the level of the stored fuel, so that the fuel would stay covered even if there were a problem with one of the pipes. The only exceptions are small leakage-detection lines and, at two pressurized water reactor (PWR) sites, robust fuel transfer tubes that enter the spent fuel pool directly. The liner normally prevents water from being lost through the leak detection lines, and isolation valves or plugs are available if the liner experiences a large leak or tear.

**Q15:** How would you know about a leak in such a large pool of water?

**A15:** The spent fuel pools associated with all but one operating reactor have liner leakage collection to allow detection of very small leaks. In addition, the spent fuel pool and fuel storage area have diverse instruments to alert operators to possible large losses of water, which could be indicated by low water level, high water temperature, or high radiation levels.

**Q16:** How can operators get water back in the pool if there is a leak or a failure?

**A16:** All plants have systems available to replace water that could evaporate or leak from a spent fuel pool. Most plants have at least one system designed to be available following a design basis earthquake. In addition, the industry's experience indicates that systems not specifically designed to meet seismic criteria are likely to survive a design basis earthquake and be available to replenish water to the spent fuel pools. Furthermore, plant operators can use emergency and accident procedures that identify temporary systems to provide water to the spent fuel pool if normal systems are unavailable. In some cases, operators would need to connect hoses or install short pipes between systems. The fuel is unlikely to become uncovered rapidly because of the large water volume in the pool, the robust design of the pool structure, and the limited paths for loss of water from the pool.

**Q17:** Do U.S. nuclear power plants store their fuel above grade? Why is this considered safe?

**A17:** For boiling water reactor (BWR) Mark I and II designs, the spent fuel pool structures are located in the reactor building at an elevation several stories above the ground (about 50 to 60 feet above ground for the Mark I reactors). The spent fuel pools at other operating reactors in the U.S. are typically located with the bottom of the pool at or below plant grade level. Regardless of the location of the pool, its robust construction provides the potential for the structure to withstand events well beyond those considered in the original design. In addition, there are multiple means of restoring water to the spent fuel pools in the unlikely event that any is lost.

**Q18:** How are spent fuel pools kept cool? What happens if the cooling system fails?

**A18:** The spent fuel pool is cooled by an attached cooling system. The system keeps fuel temperatures low enough that, even if cooling were lost, operators would have substantial time to recover cooling before boiling could occur in the spent fuel pool. Licensees also have backup ways to cool the spent fuel pool, using temporary equipment that would be available even after fires, explosions, or other unlikely events that could damage large portions of the facility and prevent operation of normal cooling systems. Operators have been trained to use this backup equipment, and it has been evaluated to provide adequate cooling even if the pool structure loses its water-tight integrity.

**Q19:** What keeps spent fuel from re-starting a nuclear chain reaction in the pool?

**A19:** Spent fuel pools are designed with appropriate space between fuel assemblies and neutron-absorbing plates attached to the storage rack between each fuel assembly. Under normal conditions, these design features mean that there is substantial margin to prevent criticality (i.e., a condition where nuclear fission would become self-sustaining). Calculations demonstrate that some margin to criticality is maintained for a variety of abnormal conditions, including fuel handling accidents involving a dropped fuel assembly.

### ***Questions and Answers – Waste Confidence & Future Plans***

**Q20:** How long is spent fuel allowed to be stored in a pool or cask?

**A20:** NRC regulations do not specify a maximum time for storing spent fuel in pool or cask. The agency's "waste confidence decision" expresses the Commission's confidence that the fuel can be stored safely in either pool or cask for at least 60 years beyond the licensed life of any reactor without significant environmental effects. At current licensing terms (40 years of initial reactor operation plus 20 of extended operation), that would amount to at least 120 years of safe storage.

However, it is important to note that this does not mean NRC "allows" or "permits" storage for that period. Dry casks are licensed or certified for 20 years, with possible renewals of up to 40 years. This shorter licensing term means the casks are reviewed and inspected, and the NRC ensures the licensee has an adequate aging management program to maintain the facility.

**Q21:** The most recent waste confidence findings say that fuel can be stored safely for 60 years beyond the reactor's licensed life. Does this mean fuel will be unsafe starting in 2059 [60 years after Dresden 1's original license ended]? What if the spent fuel pool runs out of room even before the end of a reactor license? What is the NRC going to do about this?

**A21:** The NRC staff is currently developing an extended storage and transportation (EST) regulatory program. One aspect of this program is a safety and environmental analysis to support long-term (up to 300 years) storage and handling of spent fuel, as well as associated updates to the "waste confidence" rulemaking. This analysis will include an Environmental Impact Statement (EIS) on the environmental impacts of extended storage of fuel. The 300-year

timeframe is appropriate for characterizing and predicting aging effects and aging management issues for EST. The staff plans to consider a variety of cask technologies, storage scenarios, handling activities, site characteristics, and aging phenomena—a complex assessment that relies on multiple supporting technical analyses. Any revisions to the waste confidence rulemaking, however, would not be an “approval” for waste to be stored longer than before—we do that through the licensing and certification of ISFSIs and casks. More information on the staff’s plan can be found in SECY-11-0029.

**Q22:** Does the waste confidence decision mean that a particular cask is safe?

**A22:** Not specifically. When the NRC issues certificates and licenses for specific dry cask storage systems, the staff makes a determination that the designs provide reasonable assurance that the waste will be stored safely for the term of the license or certificate. The Commission’s Waste Confidence Decision is a generic action where the Commission found reasonable assurance that the waste from the nation’s nuclear facilities can be stored safely and with minimal environmental impacts until a repository becomes available.

**Q23:** The waste-confidence revision seems like a long-term effort. What is the NRC doing to improve safety of spent fuel storage now?

**A23:** The NRC staff is currently reviewing its processes to identify near-term ways to improve efficiency and effectiveness in licensing, inspection, and enforcement. We expect to identify enhancements to the certification and licensing of storage casks, to the integration of inspection and licensing, and to our internal procedures and guidance. More information on the staff’s plans can be found in COMSECY-10-0007.

**Q24:** The NRC is reviewing applications for new nuclear power plants. What is the environmental impact of all that extra fuel?

**A24:** Continued use and potential growth of nuclear power is expected to increase the amount of waste in storage. This increased amount of spent fuel affects the environmental impacts to be assessed by the NRC staff, such as the need for larger storage capacities. In the staff’s plan to develop an environmental impact statement for longer-term spent fuel storage, a preliminary scoping assumption is that nuclear power grows at a “medium” rate (as defined by the Department of Energy), in which nuclear power continues to supply about 20 percent of U.S. electricity production.

### ***Questions and Answers – Security***

**Q25:** What about security? How do you know terrorists won’t use all of this waste against us?

**A25:** For spent fuel, as with reactors, the NRC sets security requirements and licensees are responsible for providing the protection. We constantly remain aware of the capabilities of potential adversaries and threats to facilities, material, and activities, and we focus on physically protecting and controlling spent fuel to prevent sabotage, theft, and diversion. Some key features

of these protection programs include intrusion detection, assessment of alarms, response to intrusions, and offsite assistance when necessary. Over the last 20 years, there have been no radiation releases that have affected the public. There have also been no known or suspected attempts to sabotage spent fuel casks or storage facilities. The NRC responded to the terrorist attacks on September 11, 2001, by promptly requiring security enhancements for spent fuel storage, both in spent fuel pools and dry casks.

G:\Crisis Communication\Japan Quake and Tsunami\SNF Talking Points and Qs.docx

**From:** [McIntyre, David](#)  
**To:** [Hayden, Elizabeth](#); [Brenner, Eliot](#); [Harrington, Holly](#); [Burnell, Scott](#); [Couret, Ivonne](#); [Screnci, Diane](#); [Janbergs, Holly](#); [Sheehan, Neil](#); [Clark, Theresa](#); [Hannah, Roger](#); [Ledford, Joey](#); [Mitlyng, Viktoria](#); [Chandrathil, Prema](#); [Uselding, Lara](#); [Dricks, Victor](#)  
**Subject:** RE: SNF Talking Points and Qs.docx  
**Date:** Wednesday, April 13, 2011 10:32:00 AM  
**Attachments:** [Early removal of spent fuel from the pool.doc](#)

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The regulations @ 72.2(a)(1) actually state: “ ... for storage of power reactor spent fuel aged for at least one year ... “ The real limitation is the heat load. The attached includes decay graphs of typical SNF assemblies – you’ll see it starts out very hot, then drops precipitously for the first 5 years before leveling out. That’s where the 5 years comes from. The individual cask designs are certified to contain a certain heat load. Therefore, the older the fuel, the more assemblies can be fit in a cask, and thus the more economical. Hotter fuel = fewer assemblies per cask, ergo more expensive. If the goal is to create space in the pool, either to reduce density or make room for new fuel, you would want to move older fuel, because you can fit more assemblies per cask, opening more spaces on the racks in the pool.

---

**From:** Hayden, Elizabeth  
**Sent:** Wednesday, April 13, 2011 9:33 AM  
**To:** McIntyre, David; Brenner, Eliot; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Uselding, Lara; Dricks, Victor  
**Subject:** RE: SNF Talking Points and Qs.docx

Dave,  
Should we consider putting these on the public website under Japan FAQs and on the Spent Fuel page?

Also, am I correct in understanding that there are no regulations identifying a required minimum amount of time for spent fuel to be cooled in pools before it can be transferred to dry casks? What would preclude a licensee from taking the spent fuel from the reactor and putting it in a dry cask right away? What is the safety requirement?

*Beth*

---

**From:** McIntyre, David  
**Sent:** Wednesday, April 13, 2011 8:02 AM  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Uselding, Lara; Dricks, Victor  
**Subject:** SNF Talking Points and Qs.docx

All – the attached talking points and Q&As on spent fuel pools and casks have been blessed (finally) by NMSS, NRR and NSIR. Many thanks to Theresa for helping with these.

Dave

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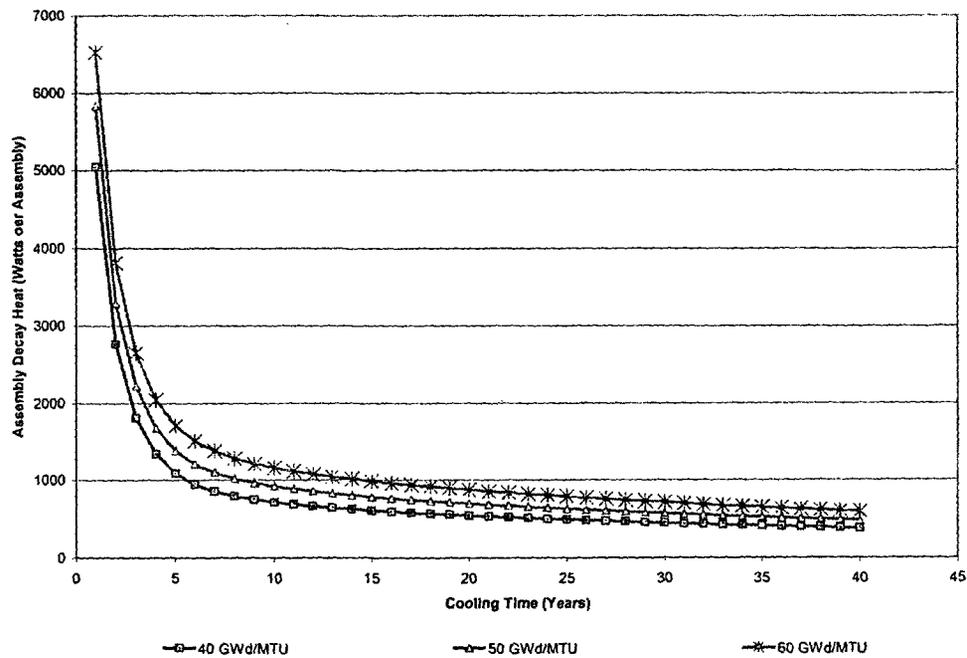
## Impact of Loading Spent Fuel less than Three to Five Years Old into Dry Cask Storage.

### The major impacts are for the SFST program:

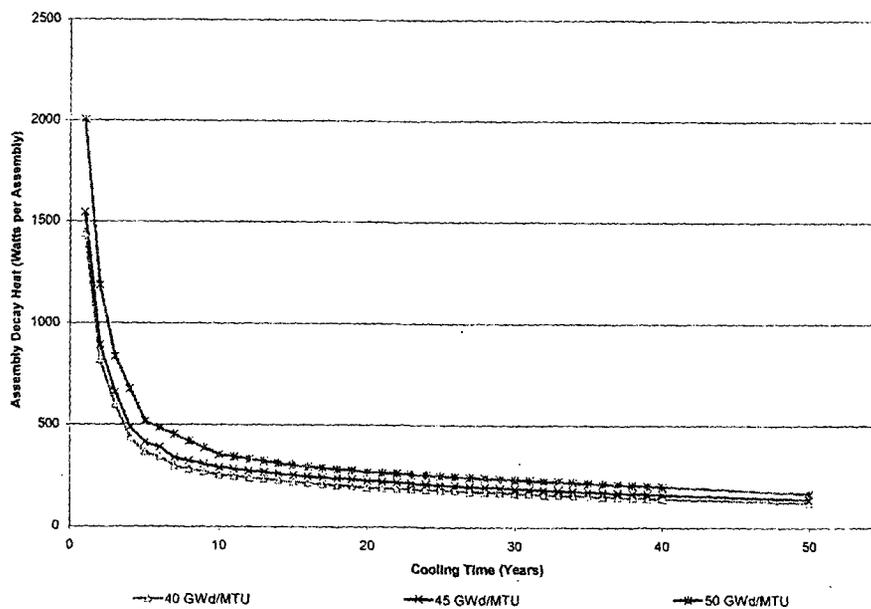
1. **Increased Inspection and Oversight.** Storing spent fuel less than three years old could result in an increased number of casks and cask loadings. Storage cask designs are based on passive cooling and have upper limits on the number of spent fuel assemblies allowed in each cask based on cumulative heat generation. Spent fuel out of a reactor less than three years has a significant higher (2-4 times) heat load than 5 year cooled fuel and would result in partial utilization of existing cask capacities. Increased inspection of cask fabricators and vendors, and regional oversight of cask loadings may be required.
2. **New Storage Cask Designs.** Applicants could propose new (and smaller) cask designs to accommodate the additional heat load for < 3 year old fuel. However, applicants may question the idea of designing casks for a heat load that would decrease by one half in a year. Alternatively, applicants could propose new or amended cask designs to increase current heat loads, or allow a mix of old and new fuels to meet heat generation and shielding requirements.

### Thought:

1. It is not clear what problem storing <3 year old fuel in dry casks would solve. For example, is it to reduce the consequences of a spent fuel accident by reducing the amount of spent fuel in a pool, or is it to control the heat generation and time that it would take for the spent fuel to become uncovered? These objectives could be achieved by removing old (> 5 years old) fuel.



**Figure 2-2**  
**PWR SNF Assembly Decay Heat as a Function of Burnup and Cooling Time [BSC 2001, DOE 1992]**



**Figure 2-3**  
**BWR SNF Assembly Decay Heat as a Function of Burnup and Cooling Time [NRC 1999, DOE 1992]**

**From:** [McConnell, Keith](#)  
**To:** [McIntyre, David](#); [Burnell, Scott](#); [Watson, Bruce](#)  
**Subject:** RE: NRC Presenting at National Academy of Sciences Meeting April 18 in Chicago Regarding NRC-Sponsored Cancer Risk Study  
**Date:** Wednesday, April 13, 2011 10:49:56 AM

---

John Hickman is prepared to help.

---

**From:** McIntyre, David  
**Sent:** Wednesday, April 13, 2011 10:36 AM  
**To:** Burnell, Scott; McConnell, Keith; Watson, Bruce  
**Subject:** RE: NRC Presenting at National Academy of Sciences Meeting April 18 in Chicago Regarding NRC-Sponsored Cancer Risk Study

Hickman. ☺ Buckley. ☺ They're both really good.

---

**From:** Burnell, Scott  
**Sent:** Wednesday, April 13, 2011 9:59 AM  
**To:** McConnell, Keith; Watson, Bruce  
**Cc:** McIntyre, David  
**Subject:** FW: NRC Presenting at National Academy of Sciences Meeting April 18 in Chicago Regarding NRC-Sponsored Cancer Risk Study

Keith, Bruce;

I'm going to steer this reporter away from TMI, since that's a special case. Who's the most experienced/media-savvy reactor decommissioning PM I could arrange an interview with? Thanks.

Scott

---

**From:** David Biello [<mailto:dbiello@sciam.com>]  
**Sent:** Tuesday, April 12, 2011 9:30 AM  
**To:** Burnell, Scott  
**Subject:** RE: NRC Presenting at National Academy of Sciences Meeting April 18 in Chicago Regarding NRC-Sponsored Cancer Risk Study

You earned it for sure, but get ready for the tsunami to keep breaking over you when you return now that Fukushima's bumped up to 7. I am actually out of the office reporting today so let's talk about the study tomorrow when you're officially back, along with any decommissioning experts you may have (Three Mile Island?)

David Biello  
Associate Editor, Environment & Energy  
Scientific American  
75 Varick Street, 9th Floor  
New York, NY 10013-1917  
o: 212.451.8833  
f: 212.755.1976  
Twitter: [@dbiello](#)  
[www.scientificamerican.com](http://www.scientificamerican.com)

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On Mon, April 11, 2011 7:04 pm, Burnell, Scott wrote:

> Hi David;

>

> Not sure if you got my out-of-office, but I'm actually finishing a  
> well-needed vacation. We can talk about the study tomorrow afternoon  
> (even though I'm not in the office until Wed.), and I can check on who's  
> around with Maine Yankee experience. Chernobyl is entirely out of our  
> baliwick. Thanks.

>

> Scott

>

>

>

From: David Biello [dbiello@sciam.com]

> Sent: Monday, April 11, 2011 10:21 AM

> To: Burnell, Scott

> Subject: Fwd: NRC Presenting at National Academy of Sciences Meeting April  
> 18 in Chicago Regarding NRC-Sponsored Cancer Risk Study

>

> What \*is\* the latest on the cancer risk study? Also, got anyone there who  
> worked on decommission of (take your pick) Chernobyl or Maine Yankee?

>

> David Biello

> Associate Editor, Environment & Energy

> Scientific American

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> New York, NY 10013-1917

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> f: 212.755.1976

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> [www.scientificamerican.com](http://www.scientificamerican.com)<<http://www.sciam.com/>>

>

>

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>

>

>

>

> Begin forwarded message:

>

>

From: "opa administrators" <[opa@nrc.gov](mailto:opa@nrc.gov)<<mailto:opa@nrc.gov>>>

> Date: April 8, 2011 10:46:58 AM EDT

> To: [dbiello@sciam.com](mailto:dbiello@sciam.com)<<mailto:dbiello@sciam.com>>

> Subject: NRC Presenting at National Academy of Sciences Meeting April 18  
> in Chicago Regarding NRC-Sponsored Cancer Risk Study

**From:** Hayden, Elizabeth  
**To:** Screnci, Diane; Sheehan, Neil; Clark, Kenneth; Strasma, Jan; Burnell, Scott; Couret, Ivonne; Harrington, Holly; Janbergs, Holly; McIntyre, David  
**Subject:** FW: Interesting history  
**Date:** Wednesday, April 13, 2011 10:57:23 AM

---

*Beth*

---

**From:** Droggitis, Spiros  
**Sent:** Wednesday, April 13, 2011 10:27 AM  
**To:** Brenner, Eliot; Schmidt, Rebecca; Leeds, Eric  
**Cc:** Combs, Thomas; Hayden, Elizabeth  
**Subject:** Interesting history

<http://cityroom.blogs.nytimes.com/2011/04/13/when-con-ed-wanted-a-nuclear-plant-on-the-east-river/?partner=rss&emc=rss>

AB/243

**From:** [Clarice E Ransom](mailto:Clarice.E.Ransom@usgs.gov)  
**To:** [Burnell, Scott](mailto:Burnell.Scott@nrc.gov)  
**Cc:** [Kammerer, Annie](mailto:Kammerer.Annie@nrc.gov); [Ake, Jon](mailto:Ake.Jon@nrc.gov); [Manoly, Kamal](mailto:Manoly.Kamal@nrc.gov); [Khanna, Meena](mailto:Khanna.Meena@nrc.gov); [Harley M Benz](mailto:Harley.M.Benz@nrc.gov); [William S Leith](mailto:William.S.Leith@nrc.gov); [Harrington, Holly](mailto:Harrington.Holly@nrc.gov)  
**Subject:** RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report  
**Date:** Wednesday, April 13, 2011 10:58:59 AM

---

Thanks, Scott. What is your phone number? I am copying Harley and Bill to see if they can get a timeline for us identified.

Sincerely,

Clarice Nassif Ransom  
Public Affairs Specialist  
Office of Communications  
U.S. Geological Survey  
703-648-4299  
[cransom@usgs.gov](mailto:cransom@usgs.gov)  
[www.usgs.gov](http://www.usgs.gov)

From: "Burnell, Scott" <[Scott.Burnell@nrc.gov](mailto:Scott.Burnell@nrc.gov)>  
To: Clarice E Ransom <[cransom@usgs.gov](mailto:cransom@usgs.gov)>  
Cc: "Ake, Jon" <[Jon.Ake@nrc.gov](mailto:Jon.Ake@nrc.gov)>, "Kammerer, Annie" <[Annie.Kammerer@nrc.gov](mailto:Annie.Kammerer@nrc.gov)>, "Manoly, Kamal" <[Kamal.Manoly@nrc.gov](mailto:Kamal.Manoly@nrc.gov)>, "Khanna, Meena" <[Meena.Khanna@nrc.gov](mailto:Meena.Khanna@nrc.gov)>  
Date: 04/13/2011 10:03 AM  
Subject: RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

---

Good morning, Clarice;

Looks like we'll need press releases to give reporters the proper context on this report – work done prior to Japan quake, "more robust" monitoring network needed for completeness, etc. We really do need to understand your timeline for publishing the report. Thanks.

Scott Burnell

**From:** Clarice E Ransom [<mailto:cransom@usgs.gov>]  
**Sent:** Tuesday, April 12, 2011 2:48 PM  
**To:** William S Leith; Harley M Benz; David Applegate  
**Cc:** Harrington, Holly; Burnell, Scott  
**Subject:** Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Bill, Harley and Dave:

Please see Holly's questions below -- she is from NRC and would value your feedback to decide next steps in planning a response for the upcoming report and/or including a quote in our news release.

Thanks in advance for your help.

AB/244

Sincerely,

Clarice Nassif Ransom  
Public Affairs Specialist  
Office of Communications  
U.S. Geological Survey  
703-648-4299  
cransom@usgs.gov  
[www.usgs.gov](http://www.usgs.gov)

----- Forwarded by Clarice E Ransom/DO/USGS/DOI on 04/12/2011 02:46 PM -----

From: "Harrington, Holly" <Holly.Harrington@nrc.gov>  
To: "cransom@usgs.gov" <cransom@usgs.gov>  
Cc: "Burnell, Scott" <Scott.Burnell@nrc.gov>  
Date: 04/12/2011 02:34 PM  
Subject: Earthquake Monitoring and Nuclear Power Plants Report

---

Clarice – thank you for the press release and draft report. I'm cc'ing my colleague, Scott Burnell, who is our "reactor guy," and will be probably be organizing our response.

I do have two questions:

Do you know who in the NRC requested the report (we can find out, but it might saw us some trouble).  
Do you know when you plan to release it? (and is that timeframe at all negotiable should we have some need to control release date for some reason?)

Best,

Holly Harrington

**From:** [Hardy, Sally](#)  
**To:** [Harrington, Holly](#)  
**Cc:** [Hayden, Elizabeth](#)  
**Subject:** Blog - Japan Question  
**Date:** Wednesday, April 13, 2011 12:09:43 PM

---

Holly

Can you tell me if you added all the Japan Articles on the blog to a specific category? If so, we could link to that category on the Japan web page.....It looks like most if not all are under emergency preparedness.

Sally

AB/245

**From:** [Taylor, Robert](#)  
**To:** [Harrington, Holly](#); [McIntyre, David](#); [Burnell, Scott](#)  
**Subject:** FW: OSC: Japan: Events of Fukushima Nuclear Crisis Re-examined Month After Quake Hits  
**Date:** Wednesday, April 13, 2011 12:10:28 PM

---

Interesting stuff.

---

**From:** NPP News [<mailto:russ@earthtabi.com>]  
**Sent:** Wednesday, April 13, 2011 11:38 AM  
**To:** Collins, Elmo; Tony Ulses; Trapp, James; Taylor, Robert  
**Subject:** Fwd: OSC: Japan: Events of Fukushima Nuclear Crisis Re-examined Month After Quake Hits

Begin forwarded message:

**From:** [OSCINFO@rccb.osis.gov](mailto:OSCINFO@rccb.osis.gov)  
**Date:** April 13, 2011 11:43:51 PM GMT+09:00  
**Subject: OSC: Japan: Events of Fukushima Nuclear Crisis Re-examined Month After Quake Hits**  
**Reply-To:** [OSCINFO@rccb.osis.gov](mailto:OSCINFO@rccb.osis.gov)

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Japan: Events of Fukushima Nuclear Crisis Re-examined Month After Quake Hits

JPP20110413176001 Tokyo Asahi Shimbun Online in English 0138 GMT 13 Apr 11

[Unattributed article: "Asahi: What Went Wrong: Fukushima Flashback a Month After Crisis Started"]

One month after the Great East Japan Earthquake struck, Asahi Shimbun re-examined the events surrounding the accident at the Fukushima No. 1 nuclear power plant to determine what exactly happened.

\* \* \*

At 3:42 p.m. March 11, 56 minutes after the Great East Japan Earthquake struck, all but one of the emergency diesel generators at the Fukushima No. 1 nuclear power plant were knocked out after a tsunami that exceeded 14 meters engulfed

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the six reactors at the plant.

An official at the emergency response center of the Nuclear and Industrial Safety Agency (NISA), located in the annex building of the Ministry of Economy, Trade and Industry, ran out into the hallway and read out a memo in a loud voice.

"All AC power sources lost at the No. 1 to No. 5 reactors at the Fukushima No. 1 nuclear power plant! Only the B emergency diesel generator at the No. 6 reactor is working!"

All lights and instruments at the central control rooms of the Fukushima No. 1 plant had gone out. Workers connected car batteries to the instruments and used flashlights to read the data that showed what was happening in the reactor cores.

At the headquarters of Tokyo Electric Power Co., the plant operator, in Tokyo's Uchisaiwaicho district, executives were ashen-faced when they were told, "The reactor cores cannot be cooled without power sources."

TEPCO President Masataka Shimizu was in the Kansai region on a business trip, and Chairman Tsunehisa Katsumata was also in China on a business trip.

The seven NISA officials who were at the Fukushima No. 1 plant headed for the off-site center located about five kilometers away. The center is where the headquarters is set up locally to deal with any natural disaster that hits the nuclear plant and is designed to allow for constant monitoring of the plant.

However, the power outage and the loss of communications channels in the immediate aftermath of the quake and tsunami meant no data was reaching the officials at the center.

At 5:45 p.m., NISA official Koichiro Nakamura said at a news conference, "While water continues to be pumped into (the reactor cores), we do not know what the water level is."

The reactor cores were, in fact, gradually heading out of control.

When the earthquake struck, Prime Minister Naoto Kan was facing a crisis of a political nature.

At an Upper House Audit and Oversight of Administration Committee session, Kan was asked about political donations his political fund management organization had received from a foreigner.

While he was responding, the chandelier in the committee room began swaying wildly. Committee Chairman Yosuke Tsuruho said, "Please take cover under the desks."

The committee session immediately went into recess.

At about 2:50 p.m., Chief Cabinet Secretary Yukio Edano arrived at the Prime Minister's Official Residence and ran to the crisis management center in the basement. A few minutes later, Kan also returned from the Diet.

Goshi Hosono, Kan's special adviser, told reporters, "All the Cabinet ministers will be called together."

Although the ministers began arriving, a few minutes later Edano instructed all the ministers except himself and Ryu Matsumoto, the state minister in charge of disaster management, to return to their respective ministry offices.

As the ministers left the Prime Minister's Official Residence, Justice Minister Satsuki Eda said, "I don't know who gave the instruction (to return to the ministries)."

There were already signs of confusion from the very beginning within the chain of command.

The No. 1 to No. 3 reactors at the Fukushima No. 1 nuclear power plant that were operating stopped automatically immediately after the earthquake hit.

About an hour later came the announcement that all AC power sources to the No. 1 to No. 5 reactors had been lost. At about 4:30 p.m., cooling water was no longer being pumped into the No. 1 and No. 2 reactors.

At about that time, TEPCO officials issued a report to those at the Prime Minister's Official Residence that said in part, "There will be no problem for eight hours even if no cooling (of the reactors) occurs."

The eight hours is the length of time emergency batteries can be used if all AC power sources are lost.

TEPCO officials likely believed that the cooling function could be restored within that time frame.

That evening, Haruki Madarame, chairman of the Nuclear Safety Commission of Japan, visited the Prime Minister's Official Residence and said, "The situation is not one in which radiation is leaking to the outside atmosphere. While there are problems with the power source, the nuclear chain reaction has been completely stopped. The only thing left is to cool the reactors."

At about 5 p.m., Kan addressed the nation and said, "While some of the nuclear power plants automatically stopped operations, there has been no confirmation so far of any effects from the radioactive materials to the outside atmosphere."

His comment clearly reflects the opinions of experts within the government.

At a news conference at 7:45 p.m., Edano explained why the government had issued a declaration of a state of emergency at the nuclear power plant.

"If a response can be made within a certain amount of time, concerns and problems will be resolved," Edano said. "At present, the situation is not one in which damage is likely. Because the effects from what might remotely occur are so severe, we have responded by issuing the declaration to ensure that nothing wrong happens."

Meanwhile, Fukushima prefectural government officials said they could no longer wait for a decision by the central government and asked residents living within a 2-kilometer radius of the Fukushima plant to evacuate at 8:50 p.m.

The cooling functions had not been restored even after the eight-hour time frame mentioned by TEPCO officials.

The remote possibility of severe consequences that Edano touched upon was moving toward reality by the minute.

At 1:30 a.m. March 12, Madarame and TEPCO officials visited the Prime Minister's Official Residence and informed Kan and Banri Kaieda, the industry minister, that pressure was rising within the No. 1 reactor at the Fukushima No. 1 plant.

A large volume of steam had accumulated within the reactor's containment vessel.

Madarame said, "In order to secure the soundness of the containment vessel, there is a need to implement a measure to release internal pressure."

If the pressure within the containment vessel continued to increase, there was the danger of damage to the vessel. One way to avoid that was to vent the steam inside the vessel to decrease the pressure.

While there was the strong possibility such a move would release radioactive materials into the outside atmosphere, Kan and other government officials agreed that such a move was unavoidable.

At a news conference from about 3 a.m., Edano touched upon the venting process. He also announced that Kan would inspect the nuclear plant site.

Edano was asked if the venting process would be completed before Kan's visit.

"TEPCO is now conducting final preparations and the measure will be conducted in the near future," Edano said.

No word about the start of venting reached the Prime Minister's Official Residence by 6 a.m. When TEPCO officials were asked about when the venting would start, they said, "The power source for the venting has been cut off" and

"Workers cannot approach the site to manually vent the pressure because of the high level of radiation."

At 7 a.m., Kan decided he could not wait any longer and flew to the Fukushima No. 1 plant on a Self-Defense Forces helicopter.

In a van at the site, Kan sat next to TEPCO Executive Vice President Sakae Muto.

In an angry tone, Kan asked Muto, "Why don't you hurry with the venting?"

Failing to receive a clear answer from Muto, Kan's anger remained as he entered the local headquarters to deal with the natural disaster.

Banging a desk with his hand, Kan shouted, "Do you know why I decided to come here?"

Kan calmed down when Masao Yoshida, the head of the Fukushima No. 1 plant, told the prime minister the situation would be handled appropriately.

After that exchange, officials of the Prime Minister's Official Residence began dealing directly with Yoshida and others at the Fukushima plant. That led to a growing gap with TEPCO headquarters in Tokyo.

TEPCO officials began the venting process after 9 a.m., about an hour after Kan left the Fukushima site.

The actual work of opening valves began from after 10 a.m. With pressure within the No. 1 reactor containment vessel falling, the venting process appeared to have worked.

However, at 3:36 p.m., a hydrogen explosion occurred at the No. 1 reactor, blowing away the ceiling of the building housing the reactor.

At a meeting on the evening of March 13 of the Fukushima prefectural government, which was dealing with the natural disaster, Fukushima Governor Yuhei Sato turned his anger on TEPCO officials.

"This is a problem that involves the entire electric power industry," Sato said. "I hope you will lay your life on the line to deal with the situation."

In the end, it was unclear who and when the decision to begin venting was made.

At an April 9 news conference at TEPCO headquarters, Muto avoided giving a clear answer, only saying, "Amid a very serious situation, there was a need to make a number of different actions. A clear answer will require further study."

Opposition party members intend to press the government about when the decision was made as they feel an error was made at the initial stages of dealing with the reactor situation.

On the evening of March 14, officials working at the off-site center near the Fukushima No. 1 plant received word of abnormalities at the No. 2 reactor.

At 6:22 p.m., word was received about the possibility that fuel rods had become exposed above water.

At 8:22 p.m., officials were told of the possibility of a core meltdown.

At 10:22 p.m., word came about the possibility of damage to the core containment vessel.

At about that time, officials at the Prime Minister's Official Residence were told informally by TEPCO officials that they wanted to evacuate their employees from the Fukushima No. 1 plant.

When he heard that, Kan raised his voice and said, "Is TEPCO planning to abandon its role as an electric power company? Call the company president."

At about 3:30 p.m. March 15, Kan gathered a few Cabinet ministers and staff members at the Prime Minister's Official Residence to discuss whether he should go to TEPCO headquarters.

While some participants at the meeting raised legal questions, Edano told Kan, "We shouldn't be concerned about laws now. You should go to the company headquarters."

The decision was made at that meeting to set up an integrated headquarters to deal with the nuclear accident. The body would be established at TEPCO headquarters.

Shortly thereafter, Kan met with Shimizu, the TEPCO president.

"What do you intend to do?" Kan asked.

"We will make every effort to protect Fukushima," Shimizu replied.

"We will set up an integrated headquarters between the government and TEPCO," Kan said. "Do you agree?"

"Fine," Shimizu replied.

Shimizu never openly said anything about pulling out of the Fukushima plant.

However, when Kan went to TEPCO headquarters at about 5:30 a.m. and faced company executives in a meeting room, he raised his voice and said, "Pulling

out is not an option. We want you to decide on your resolve. If you do decide to pull out, that will mean the total collapse of TEPCO."

Kan remained at TEPCO headquarters for about three hours. Moving to another room, Kan fell asleep while seated.

Ever since the earthquake, Kan had remained at his office and did not return to his living quarters, working almost around the clock .

From about that time, Kan began taking on more work, telling his aides, "Bring all information to me. I will make the decision" and "I will contact that individual directly."

That led to a situation described by one high-ranking industry ministry official of "not releasing any information before it was first submitted to the Prime Minister's Official Residence."

There was the possibility that such an arrangement affected cooperation among the central government ministries.

Letting Kan sleep for a while at TEPCO headquarters, his staff members finally returned with the prime minister to his official residence at about 8:30 a.m.

In the meantime, strange noises and white smoke emerged from the No. 2 reactor of the Fukushima No. 1 plant. That led to suspicions of damage to the suppression pool.

On the morning of March 14, the upper part of the building housing the No. 3 reactor at the Fukushima No. 1 plant was blown away by a hydrogen explosion.

On the following day, an explosion was heard at the suppression pool of the No. 2 reactor and the building housing the No. 4 reactor was damaged by fire.

White smoke was observed rising from the storage pools containing spent nuclear fuel rods at the No. 3 and No. 4 reactors.

Large volumes of radioactive materials continued to be spewed into the atmosphere.

On March 15, Defense Minister Toshimi Kitazawa held a meeting with high-ranking ministry officials about whether SDF helicopters should be used to dump water on the reactors.

One participant said, "We can estimate how much remains in the storage pool by the way in which steam rises after spraying water."

Another participant said, "However, if the storage pool is close to empty, a steam explosion could occur if water was suddenly sprayed into it."

While different opinions were raised, the general mood was to proceed with the water dumping operation.

There was some hesitation, however, because U.S. officials had said that dumping water from the air would be inefficient.

What finally pushed Kitazawa to give the go-ahead was a comment from Kan.

Kitazawa visited the Prime Minister's Official Residence at about noon on March 16. Kan told him, "I want you to first use SDF helicopters."

Kitazawa decided to go ahead with the water dumping and agreed with Kan that the sooner the better.

At 4 p.m., Ground SDF helicopters dangling large buckets approached the Fukushima plant, but had to abandon the operation because of unexpectedly high radiation levels.

On the morning of March 17, two helicopters dumped a total of 30 tons of water from above the No. 3 reactor on the condition that each helicopter would only be in the area for about 40 minutes.

At about 7 p.m. March 17, a high-pressure water cannon of the Tokyo Metropolitan Police Department's riot police began spraying the reactors from the ground. About 44 tons of water was sprayed toward the No. 3 reactor over about 10 minutes. Five SDF firefighting trucks also took part.

On the evening of March 17, Kan asked Tokyo Governor Shintaro Ishihara to deploy units from the Tokyo Fire Department.

Anticipating such a request, the fire department had conducted a training session the previous day along the banks of the Arakawa river. The exercise was conducted to determine the best way to deploy firefighters to minimize their exposure to radiation.

At 3:20 p.m. March 18, 30 units, including a special rescue unit, with a total of 139 members left Tokyo for Fukushima.

The members were, in principle, all above 40 years in age and had given their approval to take part in the operation.

Water spraying at the No. 3 reactor continued for 13 and a half hours and a total of 2,400 tons of seawater was sprayed.

A news conference was held March 19 by three high-ranking officers of the Tokyo Fire Department after they returned to Tokyo.

With tears in his eyes, Toyohiko Tomioka, the head of the special rescue unit, said, "Everyone did their utmost. I want to apologize to the family members

who were left behind. I want to use this opportunity to offer my apology and gratitude to them."

Meanwhile, U.S. government officials became increasingly concerned at the Japanese response to the Fukushima accident.

Earlier on March 17, at about 10 a.m., Kan received a call from U.S. President Barack Obama.

The first thing Obama said was that the conversation would not be a perfunctory one.

Obama said the United States was prepared to provide every form of assistance, from the dispatch of nuclear energy experts to support from the mid- to long term for the rebuilding process.

That was in sharp contrast to the telephone conversation early on March 12, soon after the earthquake struck. According to Foreign Minister Takeaki Matsumoto, Obama only offered his condolences without going into specific assistance measures.

In the initial stages of the twin disasters, Kan told an acquaintance, "Should we always depend on the United States when something goes wrong? If it is a crisis for Japan, the Japanese should first try to handle the matter. We should depend on the United States only after we have made the effort."

A high-ranking government official admitted that when the Fukushima nuclear accident first broke out, from the very beginning, the government posture was not one of depending on foreign governments. The official added, "That may have been taken as a sign of our refusal (of help)."

When officials of NISA and TEPCO held a meeting with officials of the U.S. Nuclear Regulatory Commission (NRC), U.S. officials were visibly angered at the failure of TEPCO to provide sufficient information.

Those factors led to increasing concerns among U.S. government officials.

On March 17, a high-ranking NRC official met with Kitazawa and told him that water had to be pumped into the storage pool for spent fuel rods at the No. 4 reactor because it was empty of water.

The comment was made based on aerial photos taken by the unmanned reconnaissance aircraft Global Hawk.

The following day, U.S. Ambassador John Roos met with a lawmaker close to Kan at a Tokyo hotel and complained that serious information was not being shared by Japan with the United States.

On the evening of March 19, Kan invited Roos to the Prime Minister's Official Residence and told him, "We will continue to share information with the

international community."

On March 20, Kan instructed a lawmaker close to him to create a framework for cooperation between Japan and the United States.

From March 21, full-fledged discussions began to deal with the Fukushima nuclear accident. Among the representatives in the panel were those from the U.S. military, the NRC, the U.S. Embassy, while from the Japanese side were officials of the prime minister's staff, NISA and TEPCO. Officials in the nuclear energy sector from both nations also took part in the talks.

At a news conference on April 1, Kan was asked if he had shifted his emphasis toward one of seeking greater international cooperation.

In a strong tone, Kan said, "We received various proposals from the United States from an early stage and it is my understanding that we took the position of asking for almost all the measures that were considered necessary."

[Description of Source: Tokyo Asahi Shimbun Online in English -- Website of Asahi Shimbun, Japan's second-largest daily; URL: <http://www.asahi.com/english>]

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UNCLASSIFIED

**From:** McIntyre, David  
**To:** Janbergs, Holly; akuffner@projo.com  
**Subject:** RE: Federal review of nuclear reactors  
**Date:** Wednesday, April 13, 2011 12:51:00 PM

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Hi Alex –

The Task Force review mentioned in the March 23 press release, and our subsequent release on April 1 with the Task Force Charter, will give you a broad outline of our review. The Task Force is to examine the Fukushima situation for any and all lessons relevant to our regulation of US nuclear power plants – so I imagine the issues you mention will definitely be included among the subjects it will look at.

**David McIntyre**  
*Office of Public Affairs*  
*U.S. Nuclear Regulatory Commission*  
*(301) 415-8200*

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

**From:** Janbergs, Holly  
**Sent:** Wednesday, April 13, 2011 12:45 PM  
**To:** McIntyre, David  
**Subject:** FW: Federal review of nuclear reactors

He would like someone to speak to on-record about the questions below. He may reference New England plants, but he's more interested in general issues than specifics. I also directed him to our March 23 press release on the review, since he hadn't seen it yet.

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

**From:** Janbergs, Holly On Behalf Of OPA Resource  
**Sent:** Wednesday, April 13, 2011 12:20 PM  
**To:** Janbergs, Holly  
**Subject:** FW: Federal review of nuclear reactors

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

**From:** Alex Kuffner [mailto:akuffner@projo.com]  
**Sent:** Wednesday, April 13, 2011 11:47 AM  
**To:** OPA Resource  
**Subject:** Federal review of nuclear reactors

Below is the result of your feedback form. It was submitted by

AB/247

Alex Kuffner (akuffner@projo.com) on Wednesday, April 13, 2011 at 11:46:47

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comments: Hi,

I'm a reporter with the Providence Journal in Rhode Island working on a story about nuclear power. Could you tell me what the federal review of U.S. nuclear reactors in the wake of Fukushima will entail. Will it include a review of plant design and equipment? Emergency procedures? Storage of spent fuel rods? Thanks for your time.

-Alex Kuffner

organization: Providence Journal

address1: 75 Fountain St.

address2:

city: Providence

state: RI

zip: 02902

country: USA

phone: 401-277-7457

---

**From:** Salus, Amy  
**To:** Evans, Michele; Virgilio, Martin; Weber, Michael; Case, Michael; Skeen, David; Harrington, Holly; Emche, Danielle; Weaver, Doug; Deegan, George; Dudek, Michael; McDermott, Brian; Morris, Scott; Marshall, Jane; Ciocco, Jeff; Gibson, Kathy; Hiland, Patrick; Lewis, Robert; Kevern, Thomas; Bloom, Steven  
**Subject:** Discuss Roles and Responsibilities for Japan transition - POCs

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When: Thursday, April 14, 2011 11:00 AM-12:00 PM (GMT-05:00) Eastern Time (US & Canada).  
Where: OPS Center

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

POC Michael Dudek  
Posted by ASalus

AB/248

**From:** [McIntyre, David](#)  
**To:** [Harrington, Holly](#)  
**Subject:** RE: SNF Talking Points and Qs.docx  
**Date:** Thursday, April 14, 2011 11:14:00 AM

---

No and yes.

---

**From:** Harrington, Holly  
**Sent:** Thursday, April 14, 2011 11:14 AM  
**To:** McIntyre, David; Clark, Theresa  
**Subject:** RE: SNF Talking Points and Qs.docx

Oh, cool. Did this get added to the Q&As?

Did you get to Prema?

---

**From:** McIntyre, David  
**Sent:** Thursday, April 14, 2011 11:09 AM  
**To:** Harrington, Holly; Clark, Theresa  
**Subject:** RE: SNF Talking Points and Qs.docx

Answer from John Hickman of FSME attached.

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**From:** Harrington, Holly  
**Sent:** Thursday, April 14, 2011 11:02 AM  
**To:** Clark, Theresa  
**Cc:** McIntyre, David  
**Subject:** FW: SNF Talking Points and Qs.docx

This is a decent question.

Theresa – would you mind adding this Q and finding the A?

What emergency plans are required for nuclear power plants undergoing decommissioning?

---

**From:** Chandrathil, Prema  
**Sent:** Wednesday, April 13, 2011 12:58 PM  
**To:** McIntyre, David; Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Uselding, Lara; Dricks, Victor  
**Subject:** RE: SNF Talking Points and Qs.docx

What about sites undergoing decommissioning activities and those emergency plans. I'm told sites are required to have emergency plans but EPZ's are not necessarily required because of several variable factors like the amount of fuel, how hot it is and the low probability of release. But do we require the utility to have some sort of coordination with the local, county and state folks for spent fuel pools at non-operating sites.

Prema

AB/249

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**From:** McIntyre, David

**Sent:** Wednesday, April 13, 2011 7:02 AM

**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Uselding, Lara; Dricks, Victor

**Subject:** SNF Talking Points and Qs.docx

All – the attached talking points and Q&As on spent fuel pools and casks have been blessed (finally) by NMSS, NRR and NSIR. Many thanks to Theresa for helping with these.

Dave

Attachment RE SNF at decommissioned reactor sites.msg (2560 Bytes) cannot be converted to PDF format.

**From:** Chandrathil, Prema  
**To:** McIntyre, David; Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Uselding, Lara; Dricks, Victor  
**Subject:** RE: SNF Talking Points and Qs.docx  
**Date:** Wednesday, April 13, 2011 12:58:28 PM

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What about sites undergoing decommissioning activities and those emergency plans. I'm told sites are required to have emergency plans but EPZ's are not necessarily required because of several variable factors like the amount of fuel, how hot it is and the low probability of release. But do we require the utility to have some sort of coordination with the local, county and state folks for spent fuel pools at non-operating sites.

Prema

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**From:** McIntyre, David  
**Sent:** Wednesday, April 13, 2011 7:02 AM  
**To:** Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Screnci, Diane; Janbergs, Holly; Sheehan, Neil; Clark, Theresa; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Uselding, Lara; Dricks, Victor  
**Subject:** SNF Talking Points and Qs.docx

All – the attached talking points and Q&As on spent fuel pools and casks have been blessed (finally) by NMSS, NRR and NSIR. Many thanks to Theresa for helping with these.

Dave

AB/250

**From:** [Manoly, Kamal](#)  
**To:** [Burnell, Scott](#)  
**Cc:** [Couret, Ivonne](#); [Harrington, Holly](#); [Khanna, Meena](#); [Hiland, Patrick](#)  
**Subject:** RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report  
**Date:** Wednesday, April 13, 2011 1:35:43 PM

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Scott,

NRR does **not** have a direct contact with USGS. NRO and RES do have periodic communications with USGS since they have all the seismologist within the NRC other than one I know in NMSS who is not directly involved in GI-199.

Kamal

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**From:** Burnell, Scott  
**Sent:** Tuesday, April 12, 2011 3:42 PM  
**To:** Manoly, Kamal; Khanna, Meena  
**Cc:** Couret, Ivonne; Harrington, Holly  
**Subject:** FW: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Folks;

This seems to be GI-199 related, are you the proper NRR contacts for this USGS/NRC report?

## **Strategies for Improved Earthquake Monitoring in Support of Nuclear Power Plant Safety in the Central and Eastern United States**

Thanks.

Scott

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**From:** Clarice E Ransom [mailto:[cransom@usgs.gov](mailto:cransom@usgs.gov)]  
**Sent:** Tuesday, April 12, 2011 2:48 PM  
**To:** William S Leith; Harley M Benz; David Applegate  
**Cc:** Harrington, Holly; Burnell, Scott  
**Subject:** Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Bill, Harley and Dave:

Please see Holly's questions below -- she is from NRC and would value your feedback to decide next steps in planning a response for the upcoming report and/or including a quote in our news release.

Thanks in advance for your help.

Sincerely,

Clarice Nassif Ransom  
Public Affairs Specialist  
Office of Communications  
U.S. Geological Survey

ABI 251

703-648-4299  
cransom@usgs.gov  
[www.usgs.gov](http://www.usgs.gov)

----- Forwarded by Clarice E Ransom/DO/USGS/DOI on 04/12/2011 02:46 PM -----

From: "Harrington, Holly" <Holly.Harrington@nrc.gov>  
To: "cransom@usgs.gov" <cransom@usgs.gov>  
Cc: "Burnell, Scott" <Scott.Burnell@nrc.gov>  
Date: 04/12/2011 02:34 PM  
Subject: Earthquake Monitoring and Nuclear Power Plants Report

---

Clarice – thank you for the press release and draft report. I'm cc'ing my colleague, Scott Burnell, who is our "reactor guy," and will be probably be organizing our response.

I do have two questions:

Do you know who in the NRC requested the report (we can find out, but it might saw us some trouble).

Do you know when you plan to release it? (and is that timeframe at all negotiable should we have some need to control release date for some reason?)

Best,

Holly Harrington

**From:** [McIntyre, David](#)  
**To:** [Harrington, Holly](#)  
**Subject:** RE: for the insurance guy with questions  
**Date:** Friday, April 15, 2011 11:01:00 AM

---

Thanks.

---

**From:** Harrington, Holly  
**Sent:** Friday, April 15, 2011 10:13 AM  
**To:** McIntyre, David  
**Subject:** for the insurance guy with questions

2. What is the NRC's position on the current state of the emergency response programs it oversees for nuclear incidents in the US?

All U.S. nuclear power plants have an emergency plan approved by the NRC (plant actions) and FEMA (offsite response). Licensee compliance with the emergency plan is inspected annually by NRC and response is demonstrated to NRC and FEMA inspectors every two years. NRC regulations for emergency planning are strictly enforced and all plants must comply with NRC regulations. In addition, the NRC relies on FEMA's assessments of local community preparedness to protect public health and safety in the event of a radiological release. There is a high level of emergency preparedness around U.S. nuclear plants and NRC believes that these plans provide protection of public health and safety.

The NRC has formed a Task Force to review the adequacy of our current requirements for Nuclear Power Plants in light of the events at the Fukushima site in Japan. The Task Force will report on short term enhancements as well as recommend longer term changes over the next 90 days.

3. From what we understand, individual states (could be local communities, counties, etc.) are largely responsible for formulating their own emergency response plan, using certain criteria set forth by both the NRC and FEMA. Given that the NRC is likely to review nuclear emergency preparedness models across the US, what are the elements of the existing arrangement that are could be included in that review?

Yes, offsite response organizations develop site specific plans for response within nuclear plant emergency planning zones. However, those plans must be compliant with NRC and FEMA regulations and consistent with supporting guidance. Each plan has been individually reviewed and approved by FEMA. The newly formed NRC taskforce will be conducting a near-term review in 90 days to identify near-term actions that could affect U.S. nuclear power plants and to identify topics for a longer-term assessment. One of the specific elements under review is emergency preparedness. The Task Force is empowered to review all aspects of emergency preparedness for adequacy in light of the Fukushima accident.

AB/252

However, it's premature to speculate what the taskforce report will say on the subject.

**From:** [McIntyre, David](#)  
**To:** [Matthew Dunning](#)  
**Subject:** NRC on emergency preparedness  
**Date:** Friday, April 15, 2011 11:02:00 AM

---

Matthew – these responses to your emergency preparedness questions are from our incident response folks:

2. What is the NRC's position on the current state of the emergency response programs it oversees for nuclear incidents in the US?

All U.S. nuclear power plants have an emergency plan approved by the NRC (plant actions) and FEMA (offsite response). Licensee compliance with the emergency plan is inspected annually by NRC and response is demonstrated to NRC and FEMA inspectors every two years. NRC regulations for emergency planning are strictly enforced and all plants must comply with NRC regulations. In addition, the NRC relies on FEMA's assessments of local community preparedness to protect public health and safety in the event of a radiological release. There is a high level of emergency preparedness around U.S. nuclear plants and NRC believes that these plans provide protection of public health and safety.

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**From:** [McIntyre, David](#)  
**To:** [DeCicco, Joseph](#)  
**Cc:** [Foster, Jack](#)  
**Subject:** RE: Products coming from Japan  
**Date:** Friday, April 15, 2011 11:41:00 AM

---

Cool – thanks, Joe!

---

**From:** DeCicco, Joseph  
**Sent:** Friday, April 15, 2011 11:32 AM  
**To:** McIntyre, David  
**Cc:** Foster, Jack  
**Subject:** Products coming from Japan

I looked at the Health Physics Society web site and it has a section on Fukushima. It can be found at <http://hps.org/fukushima/>

I could not find a specific link that would address the specific answer to the issue of products coming from Japan, but there is a broad coverage of issues that may be helpful to companies looking for additional information about monitoring being done.

Sorry I could not find anything more specific.

Joe DeCicco  
(301) 415-7833  
[Joseph.DeCicco@nrc.gov](mailto:Joseph.DeCicco@nrc.gov)

AB/253

**From:** [McIntyre, David](#)  
**To:** [Couret, Ivonne](#)  
**Subject:** FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown  
**Date:** Friday, April 15, 2011 11:41:00 AM

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**From:** Burnell, Scott  
**Sent:** Friday, April 15, 2011 10:42 AM  
**To:** Dolley, Steven  
**Cc:** Brenner, Eliot  
**Subject:** RE: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

Hi Steve;

The NRC always documents any inspection findings of importance, although reports dealing with security-related information are not made public. The NRC will take any regulatory actions deemed necessary in our ongoing response to events in Japan.

As we've pointed out repeatedly, the NRC's response goes far beyond resident inspector activities at operating reactors. The residents' work is meant to ensure the plants have in place the means to deal with design-basis events. The residents are also ensuring the plants adhere to the NRC's post-9/11 requirements to have additional resources for dealing with beyond design-basis events. The residents are well-positioned to monitor how the plants use their corrective action programs to deal with any discrepancies in these areas.

The overall review effort, including the 90-day examination of potential actions for reactors and spent-fuel pools, will include regular public meetings and its results will be publicly available. Thanks.

Scott

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**From:** Dolley, Steven [[mailto:Steven\\_Dolley@platts.com](mailto:Steven_Dolley@platts.com)]  
**Sent:** Friday, April 15, 2011 10:16 AM  
**To:** Burnell, Scott  
**Subject:** FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

Hi Scott, writing a short item for our wire service, following for Inside NRC next Weds.

Any initial comment from the agency for my story today? I'll be filing in about an hour or so.

Thanks,  
Steve

---

**From:** Barry, Giselle [<mailto:Giselle.Barry@mail.house.gov>]  
**Sent:** Friday, April 15, 2011 10:03 AM  
**To:** Barry, Giselle  
**Subject:** Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

AB/254

FOR IMMEDIATE RELEASE

Contact: Giselle Barry 202-225-2836, Eben Burnham-Snyder 202-225-6065

## **Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown**

### *Limits Placed on Time, Scope, Transparency of Inspections Designed to Assess U.S. Vulnerability*

WASHINGTON (April 15, 2011) – In the wake of the Fukushima disaster, the Nuclear Regulatory Commission (NRC) set out to inspect the U.S. fleet of nuclear reactors to ensure their safety and report publicly on its findings. Yet today, Rep. Edward J. Markey (D-Mass.) revealed that significant limits may be imposed on the inspections, and that inspectors also have been directed to keep many of the most serious vulnerabilities secret.

In a letter sent to Greg Jaczko, the Chairman of the Nuclear Regulatory Commission, Rep. Markey notes that he has been informed that inspectors are limited to 40 hours to check a nuclear power plant with only one unit, and 50-60 hours to check a plant with multiple units. Inspectors were also initially instructed to limit their inspections only to the adequacy of safety measures needed to respond to “Design Basis Events.” These inspections were therefore looking at the vulnerabilities to events that have already been contemplated and analyzed by the NRC, but not to many of the events that occurred in Fukushima which were previously considered to be impossible and therefore not subject to regulation. When NRC's own inspectors complained about this limitation, it was removed, but inspectors were then directed not to record any observations or findings of vulnerabilities that went beyond design-basis events in any document that would eventually become public as part of the NRC's review.

“These limitations, if true, severely undermine my confidence in the Commission’s interests in conducting a full and transparent assessment of the ability of U.S. nuclear power plants to be kept safe in the event of an incident that exceeds the current design basis assumptions regarding earthquakes or electricity outages -- such as the ones that occurred in Japan,” wrote Rep. Markey, who is the top Democrat on the Natural Resources Committee and a senior member of the Energy and Commerce Committee. “This also seems entirely at odds with the Commission-approved direction to study the implications of the Fukushima meltdown on U.S. facilities and report publicly on the findings of the study. We should stand prepared to learn from the catastrophe in Japan and plan ahead to address what was unforeseen but occurred anyway, rather than attempting to hide our vulnerabilities from public view and, potentially, use the fact that the information will be kept secret to avoid taking all necessary regulatory action.”

“The fact that they plan to keep the most serious vulnerabilities secret raises questions about whether the Nuclear Regulatory Commission is more interested in public relations than public safety,” said Rep. Markey in additional comments.

In the letter, Rep. Markey asks Chairman Jaczko and the NRC to respond to these reports, and ensure that the decision to hide some of the results from public view is reversed. Rep. Markey also asks whether U.S. nuclear power plants' vulnerability to events that are known or thought to have occurred in Japan – such as more severe earthquakes and tsunamis than expected, the melting of core nuclear fuel rods through the reactor pressure vessel, hydrogen explosions in reactor cores and spent nuclear fuel areas, long electricity outages and losses of cooling to reactor cores and spent nuclear fuel storage areas, and the failure of multiple safety systems and diagnostic capabilities – will be both analyzed and reported on publicly as the Commission was supposed to do.

The full letter is available [HERE](#).

###

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**From:** McIntyre, David  
**To:** Foggie, Kirk  
**Subject:** Japan inquiry LLW  
**Date:** Monday, April 18, 2011 4:05:00 PM

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Kirk – I can't imagine we'd generally want to speak to such a question, but is there some info we can point her to?

Thanks,  
Dave

---

**From:** Sarah Anderson [mailto:sarah@exchangemonitor.com]  
**Sent:** Monday, April 18, 2011 12:12 PM  
**To:** McIntyre, David  
**Subject:** This week!

Hey Dave, how are you? Thanks so much for getting those Vermont answers for me last week.

This week I'm hoping to look into Fukushima a little more, from the perspective of figuring out how exactly Japan is regulating and disposing of its LLRW normally, and what possibilities there are for where this waste might end up. Is there someone at the NRC I can talk to about current regulations there?

Thanks again!

Sarah Anderson  
Reporter, RadWaste Monitor  
(202) 296-2814 x110

AB/255

**From:** [Hayden, Elizabeth](#)  
**To:** [Hardy, Sally](#)  
**Cc:** [McIntyre, David](#)  
**Subject:** Additional item--request to post to spent fuel page  
**Date:** Tuesday, April 19, 2011 10:04:09 AM  
**Attachments:** [SpentFuelTalking Points and Qs.docx](#)  
**Importance:** High

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This attachment (once it is posted) should also be linked to from this page:  
<http://www.nrc.gov/waste/spent-fuel-storage/pools.html>

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-----  
Sally,---Please disregard previous e-mail as it had an error in the attachment. This is the correct one.

Can you check with NMSS about adding a link in the box on the upper right of this page:  
<http://www.nrc.gov/waste/spent-fuel-storage.html> for the attached document? NMSS and others have chopped on it.

*Beth*

AB/256

# Spent Fuel Pools and Storage

## Key Points and Qs&As

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### ***Key Points:***

1. All U.S. nuclear power plants store spent nuclear fuel in “spent fuel pools.” These pools are robust constructions made of reinforced concrete several feet thick, with steel liners. The water is typically about 40 feet deep, and serves both to shield the radiation and cool the rods.
2. As the pools near capacity, utilities move some of the older spent fuel into “dry cask” storage. Fuel is typically cooled at least 5 years in the pool before transfer to cask. NRC has authorized transfer as early as 3 years; the industry norm is about 10 years.
3. The NRC believes spent fuel pools and dry casks both provide adequate protection of the public health and safety and the environment. Therefore there is no pressing safety or security reason to mandate earlier transfer of fuel from pool to cask.
4. After the September 11, 2001, terrorist attacks, the NRC issued orders to plant operators requiring several measures aimed at mitigating the effects of a large fire, explosion, or accident that damages a spent fuel pool. These were meant to deal with the aftermath of a terrorist attack or plane crash; however, they would also be effective in responding to natural phenomena such as tornadoes, earthquakes or tsunamis. These mitigating measures include:
  - a. Controlling the configuration of fuel assemblies in the pool to enhance the ability to keep the fuel cool and recover from damage to the pool.
  - b. Establishing emergency spent fuel cooling capability.
  - c. Staging emergency response equipment nearby so it can be deployed quickly
5. According to the Congressional Research Service (using NEI data), there were 62,683 metric tons of commercial spent fuel accumulated in the United States as of the end of 2009.
  - a. Of that total, 48,818 metric tons – or about 78 percent – were in pools.
  - b. 13,856 metric tons – or about 22 percent – were stored in dry casks.
  - c. The total increases by 2,000 to 2,400 tons annually.

## ***Questions and Answers – General***

**Q1:** What is spent nuclear fuel?

**A1:** “Spent nuclear fuel” refers to fuel elements that have been used at commercial nuclear reactors, but that are no longer capable of economically sustaining a nuclear reaction. Periodically, about one-third of the nuclear fuel in an operating reactor needs to be unloaded and replaced with fresh fuel.

**Q2:** Why is spent fuel hot?

**A2:** Spent fuel generates what is called “residual heat” because of radioactive decay of the elements inside the fuel. After the fission reaction is stopped and the reactor is shut down, the products left over from the fuel’s time in the reactor are still radioactive and emit heat as they decay into more stable elements. Although the heat production drops rapidly at first, heat is still generated many years after shutdown. Therefore, the NRC sets requirements on the handling and storage of this fuel to ensure protection of the public and the environment.

## ***Questions and Answers – Spent Fuel Inventories***

**Q3:** Why doesn’t the NRC have up-to-date figures on how much spent fuel is stored at U.S. nuclear plants? Doesn’t the regulator have a clue about how much of this stuff is out there?

**A3:** The NRC and Department of Energy (NNSA) operate the Nuclear Material Management and Safeguards System (NMMSS), a database that tracks Special Nuclear Material (enriched uranium and plutonium). This database does not distinguish between fresh and irradiated material, and the information is withheld from the public for security reasons. That’s why figures on spent fuel inventory come from the industry.

**Q4:** How much fuel is currently in dry cask storage?

**A4:** As of November 2010, there were 63 “independent spent fuel storage installations” (or ISFSIs) licensed to operate at 57 sites in 33 states. These locations are shown on a map on the NRC website at: <http://www.nrc.gov/waste/spent-fuel-storage/locations.pdf>. Over 1400 casks are stored in these independent facilities.

**Q5:** How much fuel is stored at decommissioned reactors? Is it in pools or casks?

**A5:** There are currently 10 decommissioned nuclear power reactors at 9 sites with no other nuclear operations. According to a 2008 Department of Energy report to Congress, approximately 2800 metric tons of spent fuel is stored at these nine sites. As of the writing of that report, seven of the sites had independent spent fuel storage installations, or ISFSIs. Two additional sites had approximately 1000 metric tons of spent fuel remaining in pool storage.

## ***Questions and Answers – ISFSIs***

**Q6:** What is dry cask storage?

**A6:** Dry cask storage allows spent fuel that has already been cooled in the spent fuel pool for several years to be surrounded by inert gas inside a container called a cask. The casks are typically steel cylinders that are either welded or bolted closed. The steel cylinder provides containment of the spent fuel. Each cylinder is surrounded by additional steel, concrete, or other material to provide radiation shielding to workers and members of the public.

**Q7:** What is an “ISFSI”?

**A7:** An independent spent fuel storage installation, or ISFSI, is a facility that is designed and constructed for the interim storage of spent nuclear fuel. These facilities are licensed separately from a nuclear power plant and are considered independent even though they may be located on the site of another NRC-licensed facility.

**Q8:** What kind of license is required for an ISFSI?

**A8:** NRC authorizes storage of spent nuclear fuel at an ISFSI in two ways: site-specific or general license. For site-specific applications, the NRC reviews the safety, environmental, physical security and financial aspects of the licensee and proposed ISFSI and, if we conclude it can operate safely, we issue a license valid. This license contains requirements on topics such as leak testing and monitoring and specifies the quantity and type of material the licensee is authorized to store at the site. A general license authorizes storage of spent fuel in casks previously approved by the NRC at a site already licensed to possess fuel for or operate a nuclear power plant. Licensees must show the NRC that it is safe to store spent fuel in dry casks at their site, including analysis of earthquake intensity and tornado missiles. Licensees also review their programs (such as security or emergency planning) and make any changes needed to incorporate an ISFSI at their site. Of the currently licensed ISFSIs, 48 are operating under general licenses and 15 have specific licenses.

## ***Questions and Answers – Dry Cask Safety***

**Q9:** How do you know the dry casks are safe? Does the NRC inspect these facilities, or just the reactor and spent fuel pool?

**A9:** The NRC is responsible for inspection of dry cask storage. Before casks are loaded, inspectors with specific knowledge of ISFSI operations assess the adequacy of a “dry run” by the licensee; they then observe all initial cask loadings. The on-site resident inspectors or region-based inspectors may observe later cask loadings, and the regional offices also perform periodic inspections of routine ISFSI operations.

**Q10:** What keeps fuel cool in dry casks?

**A10:** Fuel is often moved to dry cask storage after several years in spent fuel pools, so the residual heat given off by the fuel has significantly decreased. These casks are typically thick, leak-tight steel containers inside a robust steel or concrete overpack. The fuel is cooled by natural airflow around the cask.

### ***Questions and Answers – Spent Fuel Pool Safety***

**Q11:** What do you look at when you license a fuel storage facility? How do I know it can withstand a natural disaster?

**A11:** The NRC's requirements for both wet and dry storage can be found in Title 10 of the Code of Federal Regulations (10 CFR), including the general design criteria in Appendix A to Part 50 and the spent-fuel storage requirements in Part 72. The staff uses these rules to determine that the fuel will remain safe under anticipated operating and accident conditions. There are requirements on topics such as radiation shielding, heat removal, and criticality. In addition, the staff reviews fuel storage designs for protection against:

- natural phenomena, such as seismic events, tornados, and flooding
- dynamic effects, such as flying debris or drops from fuel handling equipment and drops of fuel storage and handling equipment
- hazards to the storage site from nearby activities

**Q12:** How do you know the fuel pools are safe? Does the NRC inspect these facilities, or just the reactor itself?

**A12:** NRC inspectors are responsible for verifying that spent fuel pools and related operations are consistent with a plant's license. For example, our staff inspects spent fuel pool operations during each refueling outage. We also performed specialized inspections to verify that new spent fuel cooling capabilities and operating practices were being implemented properly.

**Q13:** What would happen to a spent fuel pool during an earthquake? How can I be sure the pool wouldn't be damaged?

**A13:** All spent fuel pools are designed to seismic standards consistent with other important safety-related structures on the site. The pool and its supporting systems are located within structures that protect against natural phenomena and flying debris. The pools' thick walls and floors provide structural integrity and further protection of the fuel from natural phenomena and debris. In addition, the deep water above the stored fuel (typically more than 20 feet above the top of the spent fuel rods) would absorb the energy of debris that could fall into the pool. Finally, the racks that support the fuel are designed to keep the fuel in its designed configuration after a seismic event.

**Q14:** Can spent fuel pools leak?

**A14:** Spent fuel pools lined with stainless steel are designed to protect against a substantial loss of the water that cools the fuel. Pipes typically enter the pool above the level of the stored fuel, so that the fuel would stay covered even if there were a problem with one of the pipes. The only exceptions are small leakage-detection lines and, at two pressurized water reactor (PWR) sites, robust fuel transfer tubes that enter the spent fuel pool directly. The liner normally prevents water from being lost through the leak detection lines, and isolation valves or plugs are available if the liner experiences a large leak or tear.

**Q15:** How would you know about a leak in such a large pool of water?

**A15:** The spent fuel pools associated with all but one operating reactor have liner leakage collection to allow detection of very small leaks. In addition, the spent fuel pool and fuel storage area have diverse instruments to alert operators to possible large losses of water, which could be indicated by low water level, high water temperature, or high radiation levels.

**Q16:** How can operators get water back in the pool if there is a leak or a failure?

**A16:** All plants have systems available to replace water that could evaporate or leak from a spent fuel pool. Most plants have at least one system designed to be available following a design basis earthquake. In addition, the industry's experience indicates that systems not specifically designed to meet seismic criteria are likely to survive a design basis earthquake and be available to replenish water to the spent fuel pools. Furthermore, plant operators can use emergency and accident procedures that identify temporary systems to provide water to the spent fuel pool if normal systems are unavailable. In some cases, operators would need to connect hoses or install short pipes between systems. The fuel is unlikely to become uncovered rapidly because of the large water volume in the pool, the robust design of the pool structure, and the limited paths for loss of water from the pool.

**Q17:** Do U.S. nuclear power plants store their fuel above grade? Why is this considered safe?

**A17:** For boiling water reactor (BWR) Mark I and II designs, the spent fuel pool structures are located in the reactor building at an elevation several stories above the ground (about 50 to 60 feet above ground for the Mark I reactors). The spent fuel pools at other operating reactors in the U.S. are typically located with the bottom of the pool at or below plant grade level. Regardless of the location of the pool, its robust construction provides the potential for the structure to withstand events well beyond those considered in the original design. In addition, there are multiple means of restoring water to the spent fuel pools in the unlikely event that any is lost.

**Q18:** How are spent fuel pools kept cool? What happens if the cooling system fails?

**A18:** The spent fuel pool is cooled by an attached cooling system. The system keeps fuel temperatures low enough that, even if cooling were lost, operators would have substantial time to recover cooling before boiling could occur in the spent fuel pool. Licensees also have backup

ways to cool the spent fuel pool, using temporary equipment that would be available even after fires, explosions, or other unlikely events that could damage large portions of the facility and prevent operation of normal cooling systems. Operators have been trained to use this backup equipment, and it has been evaluated to provide adequate cooling even if the pool structure loses its water-tight integrity.

**Q19:** What keeps spent fuel from re-starting a nuclear chain reaction in the pool?

**A19:** Spent fuel pools are designed with appropriate space between fuel assemblies and neutron-absorbing plates attached to the storage rack between each fuel assembly. Under normal conditions, these design features mean that there is substantial margin to prevent criticality (i.e., a condition where nuclear fission would become self-sustaining). Calculations demonstrate that some margin to criticality is maintained for a variety of abnormal conditions, including fuel handling accidents involving a dropped fuel assembly.

### ***Questions and Answers – Waste Confidence & Future Plans***

**Q20:** How long is spent fuel allowed to be stored in a pool or cask?

**A20:** NRC regulations do not specify a maximum time for storing spent fuel in pool or cask. The agency's "waste confidence decision" expresses the Commission's confidence that the fuel can be stored safely in either pool or cask for at least 60 years beyond the licensed life of any reactor without significant environmental effects. At current licensing terms (40 years of initial reactor operation plus 20 of extended operation), that would amount to at least 120 years of safe storage.

However, it is important to note that this does not mean NRC "allows" or "permits" storage for that period. Dry casks are licensed or certified for 20 years, with possible renewals of up to 40 years. This shorter licensing term means the casks are reviewed and inspected, and the NRC ensures the licensee has an adequate aging management program to maintain the facility.

**Q21:** The most recent waste confidence findings say that fuel can be stored safely for 60 years beyond the reactor's licensed life. Does this mean fuel will be unsafe starting in 2059 [60 years after Dresden 1's original license ended]? What if the spent fuel pool runs out of room even before the end of a reactor license? What is the NRC going to do about this?

**A21:** The NRC staff is currently developing an extended storage and transportation (EST) regulatory program. One aspect of this program is a safety and environmental analysis to support long-term (up to 300 years) storage and handling of spent fuel, as well as associated updates to the "waste confidence" rulemaking. This analysis will include an Environmental Impact Statement (EIS) on the environmental impacts of extended storage of fuel. The 300-year timeframe is appropriate for characterizing and predicting aging effects and aging management issues for EST. The staff plans to consider a variety of cask technologies, storage scenarios, handling activities, site characteristics, and aging phenomena—a complex assessment that relies

on multiple supporting technical analyses. Any revisions to the waste confidence rulemaking, however, would not be an “approval” for waste to be stored longer than before—we do that through the licensing and certification of ISFSIs and casks. More information on the staff’s plan can be found in SECY-11-0029.

**Q22:** Does the waste confidence decision mean that a particular cask is safe?

**A22:** Not specifically. When the NRC issues certificates and licenses for specific dry cask storage systems, the staff makes a determination that the designs provide reasonable assurance that the waste will be stored safely for the term of the license or certificate. The Commission’s Waste Confidence Decision is a generic action where the Commission found reasonable assurance that the waste from the nation’s nuclear facilities can be stored safely and with minimal environmental impacts until a repository becomes available.

**Q23:** The waste-confidence revision seems like a long-term effort. What is the NRC doing to improve safety of spent fuel storage now?

**A23:** The NRC staff is currently reviewing its processes to identify near-term ways to improve efficiency and effectiveness in licensing, inspection, and enforcement. We expect to identify enhancements to the certification and licensing of storage casks, to the integration of inspection and licensing, and to our internal procedures and guidance. More information on the staff’s plans can be found in COMSECY-10-0007.

**Q24:** The NRC is reviewing applications for new nuclear power plants. What is the environmental impact of all that extra fuel?

**A24:** Continued use and potential growth of nuclear power is expected to increase the amount of waste in storage. This increased amount of spent fuel affects the environmental impacts to be assessed by the NRC staff, such as the need for larger storage capacities. In the staff’s plan to develop an environmental impact statement for longer-term spent fuel storage, a preliminary scoping assumption is that nuclear power grows at a “medium” rate (as defined by the Department of Energy), in which nuclear power continues to supply about 20 percent of U.S. electricity production.

### ***Questions and Answers – Security***

**Q25:** What about security? How do you know terrorists won’t use all of this waste against us?

**A25:** For spent fuel, as with reactors, the NRC sets security requirements and licensees are responsible for providing the protection. We constantly remain aware of the capabilities of potential adversaries and threats to facilities, material, and activities, and we focus on physically protecting and controlling spent fuel to prevent sabotage, theft, and diversion. Some key features of these protection programs include intrusion detection, assessment of alarms, response to intrusions, and offsite assistance when necessary. Over the last 20 years, there have been no radiation releases that have affected the public. There have also been no known or suspected

attempts to sabotage spent fuel casks or storage facilities. The NRC responded to the terrorist attacks on September 11, 2001, by promptly requiring security enhancements for spent fuel storage, both in spent fuel pools and dry casks.

### ***Questions and Answers – Emergency Planning***

**Q26:** What emergency plans are required for spent fuel storage facilities at nuclear power plants undergoing decommissioning or sites that have completed decommissioning?

**A26:** Decommissioning reactors continue to be subject to the NRC’s emergency planning requirements. For some period of time after the licensee ceases reactor operations, offsite emergency planning will be maintained. This period of time depends on when the reactor was last critical as well as site-specific considerations. Offsite emergency planning may be eliminated when the fuel has been removed from the reactor and placed in the spent fuel pool, and sufficient time has elapsed, such that there are no longer any postulated accidents that would result in offsite dose consequences large enough to require offsite emergency planning. There would be no requirement to maintain offsite systems to warn the public. Onsite emergency plans will be required for both the spent fuel pool and the Independent Spent Fuel Storage Installations, but offsite plans will not be required. If, however, an operating plant is located at the same site as the decommissioning plant, the emergency preparedness plans will still be in effect for the operating plant.

Although offsite emergency planning at a decommissioned site may no longer be required, licensees maintain offsite contacts since any emergency declaration requires notification of state and local officials as well as the NRC. In addition, due to the typically reduced staffs at a decommissioning facility they may rely even more on offsite assistance for fire, security, medical or other emergencies. These reduced EP requirements would remain in effect as long as fuel is onsite.

*(Note: This general description also applies to emergency planning for specifically licensed ISFSIs; those requirements are spelled out in detail in 10 CFR 72.32.)*

April 14, 2011

**From:** McIntyre, David  
**To:** Parker, LaShawn  
**Subject:** RE: Phone Message  
**Date:** Tuesday, April 19, 2011 3:42:00 PM

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Did he say who he is or why he is interested?

---

**From:** Parker, LaShawn  
**Sent:** Tuesday, April 19, 2011 2:57 PM  
**To:** McIntyre, David  
**Subject:** Phone Message

*Hi Dave,*

*Lance Bowden called inquiring about radiation levels in products/materials and food from Japan. He would like to talk to a "radiation expert" and would like to be reached some time tomorrow between the hours of 12-5. He can be reached at 978-922-3461. Should you have any additional questions please feel free to contact me.*

*Thank you,*

*LaShawn Parker  
Office of Public Affairs  
Administrative Assistant  
Phone: 301-415-8200  
Fax: 301-415-3714  
MS: O-16D3  
LaShawn.Parker@nrc.gov*

AB/257

**From:** McIntyre, David  
**To:** Couret, Ivonne; Burnell, Scott  
**Subject:** RE: media inquiry regarding Charles Casto  
**Date:** Wednesday, April 20, 2011 3:49:46 PM

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Ask Eliot if Chuck is back.

---

From: Couret, Ivonne  
Sent: Wednesday, April 20, 2011 3:47 PM  
To: Burnell, Scott; McIntyre, David  
Subject: FW: media inquiry regarding Charles Casto

Who is working with ieee on story? In no one, who want to respond? Ivonne

From: e.strickland@ieee.org [mailto:e.strickland@ieee.org]  
Sent: Wednesday, April 20, 2011 3:46 PM  
To: Couret, Ivonne  
Subject: media inquiry regarding Charles Casto

Dear Ms. Couret,

I'm an editor with the technology magazine IEEE Spectrum. We corresponded briefly about a month ago when I was inquiring about the NRC team that had gone to Japan to provide assistance during the Fukushima Dai-1 crisis. I'm now wondering if the leader of that NRC team, Charles Casto, is back in the U.S., and if he's available for interviews.

In case you're not familiar with our publication, here's a quick overview. IEEE Spectrum is a monthly magazine that goes out to the 400,000 members of IEEE, the Institute of Electrical and Electronics Engineers. It's also a constantly updated website that's free and open to all: <http://spectrum.ieee.org/> It's considered a publication for tech insiders. We're currently working on a special issue about nuclear power in response to the Fukushima Dai-1 incident -- the issue will cover exactly what went wrong, how the plant will be stabilized and cleaned up, and what the implications are for the nuclear power industry.

Please let me know if you need any further information.

Thanks, and best wishes,  
Eliza

-----  
Eliza Strickland  
Associate Editor  
IEEE Spectrum  
<http://spectrum.ieee.org/>  
phone: 212-419-7505  
email: e.strickland@ieee.org

AB/258

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Tuesday, April 12, 2011 5:43:03 PM

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## News

3 new results for **Nuclear Regulatory Commission**

### Senators Accuse **NRC** Chair Of Unnecessarily Invoking Emergency Powers

Forbes (blog)

By JEFF MCMAHON Senate Republicans today accused **Nuclear Regulatory Commission** Chairman Gregory Jaczko of invoking emergency powers and taking authority away from other members of the **NRC**. Sen. Tom Udall (D-New Mexico) said banks will ultimately decide ...  
[See all stories on this topic »](#)

### Capps Testifies on Diablo

Santa Barbara Edhat

Lois Capps (CA-23) testified before the Senate Environment and Public Works Committee and expressed her concerns about safety at the Diablo Canyon Nuclear Power Plant. Capps also renewed her call to the **Nuclear Regulatory Commission** to stay the ...  
[See all stories on this topic »](#)

### Fukushima crisis "static" but not stable-US **NRC**

Reuters Africa

Japanese authorities continue to focus on ensuring they can keep reactors and spent fuel pools cooled at the damaged Fukushima Daiichi plant, said Gregory Jaczko, chairman of the **Nuclear Regulatory Commission**. "The efforts continue to ... transition ...  
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AB/259

**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 13, 2011 7:03:17 AM

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**News**

**2 new results for Nuclear Regulatory Commission**

[Rockland County Executive: It's Time To Shut Indian Point](#)

Patch.com

This has mainly become an issue because officials from the **Nuclear Regulatory Commission** recommended that Americans staying within 50 miles of the Japanese nuclear power plant impacted by the country's recent earthquake should evacuate the area. ...

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[Delaware plans for nuclear incident](#)

The News Journal

Tom Carper, D-Del., a proponent of nuclear power. Prompted by the escalating disaster in Japan, Carper and EPW Chairwoman Barbara Boxer asked the **Nuclear Regulatory Commission** to review the nation's 104 nuclear power plants, which generate one-fifth of ...

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**From:** [Google Alerts](#)  
**To:** [McIntyre, David](#)  
**Subject:** Google Alert - Nuclear Regulatory Commission  
**Date:** Wednesday, April 13, 2011 8:06:36 AM

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**News**

**2 new results for Nuclear Regulatory Commission**

[U.S. reassesses \*\*nuclear\*\* plant risks](#)

Charlotte Observer

David Guttenfelder - AP The United States will study expanding evacuation zones near power plants as part of the safety review triggered by Japan's reactor crisis, **Nuclear Regulatory Commission** Chairman Gregory Jaczko said. The **NRC**, which requires ...

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[Charlotte  
Observer](#)

[Nuclear regulatory meeting today at plant in St. Lucie County](#)

WPTV

The **Nuclear Regulatory Commission** plans a public meeting today with Florida Power & Light officials. The St. Lucie plant's 2010 safety performance will be the topic of discussion. Fears, questions, concerns and general public interest has been ...

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[WPTV](#)

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**News**

**1** new result for **Nuclear Regulatory Commission**

[Michigan \*\*nuclear\*\* plants — are they safe?](#)

Fenton Tri County Times

According to the US **Nuclear Regulatory Commission (NRC)**, the combined effects of the earthquake and tsunami in Japan exceeded the Fukushima Daiichii nuclear plant's design limits. Natural environmental disasters, as well as the Sept. ...

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**News**

**2** new results for **Nuclear Regulatory Commission**

[Japan's Nuclear Crisis is Yet to Stabilize, \*\*NRC\*\* Chairman Says](#)

BusinessWeek

"Currently the situation is static," **Nuclear Regulatory Commission** Chairman Gregory Jaczko said at a hearing of the Senate Environment and Public Works Committee yesterday, after Japan raised the severity rating of the accident to the same level as ...

[See all stories on this topic »](#)

[Limerick \*\*nuclear\*\* re-fueling worker hurt in fall](#)

The Mercury

According to Neil Sheehan, a spokesman for the **Nuclear Regulatory Commission**, the worker, whose name was not released, was working in the "secondary containment area" of Limerick's Unit 2, which is shut down for re-fueling. ...

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**News**

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[Fukushima crisis "static" but not stable: U.S. \*\*NRC\*\*](#)

Reuters

Senator Barbara Boxer of California, chairman of the Senate Environment and Public Works Committee, pressed the **Nuclear Regulatory Commission** to do extra inspections in her state. Boxer, a Democrat, conceded at a hearing that it was unlikely her state ...

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[Reuters](#)

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**News**

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State's **nuclear** plants recover from shaky ratings

Milwaukee Journal Sentinel

Like all US nuclear plants, they'll get a fresh safety review by the **Nuclear Regulatory Commission** during the next six months in response to the problems that followed the earthquake and tsunami in Japan, said agency spokeswoman Viktoria Mytling - a ...  
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**News**

**2** new results for **Nuclear Regulatory Commission**

[Hold off on new \*\*nuclear\*\* plants, NC \*\*regulatory\*\* staff says](#)

Charlotte Business Journal

Robert Gruber, executive director of the Public Staff of the NC Utilities Commission, says new design regulations and safety requirements are likely to be imposed by the US **Nuclear Regulatory Commission** once officials determine what happened at the ...

[See all stories on this topic »](#)

[Japan's \*\*Nuclear\*\* Crisis Prompts Petition for US Inquiry, Licensing Suspension](#)

Environment News Service

WASHINGTON, DC, April 14, 2011 (ENS) - In view of the month-long and ongoing nuclear crisis at Japan's Fukushima Daiichi nuclear power plant, 45 groups and individuals from across the nation today formally asked the US **Nuclear Regulatory Commission** to ...

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**News**

**1** new result for **Nuclear Regulatory Commission**

**Nuclear** [Inspectors' May be Limited on US Review, Markey Says](#)

Bloomberg

The US **Nuclear Regulatory Commission** is reviewing how the reactors would cope if struck by a natural disaster. The 90-day review was triggered when Tokyo Electric Power Co.'s Fukushima Dai-ichi plant in Japan was crippled by fires, explosions and ...

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**News**

**2** new results for **Nuclear Regulatory Commission**

[Markey criticizes \*\*nuclear\*\* inspections in letter](#)

Boston Globe

By Theo Emery, Globe Staff WASHINGTON -- US Representative Edward J. Markey accused the **Nuclear Regulatory Commission** today of concealing inspection results at US nuclear power plants and limiting the scope and length of reactor inspections. ...

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[Japan Horror Sparks Fears of Aging Millstone \*\*Nuclear\*\* Plant in Connecticut](#)

Patch.com

And he would like to host a meeting with representatives of the **Nuclear Regulatory Commission** as well as federal and state representatives in Southold to discuss an emergency plan. Councilwoman Louisa Evans asked that the meeting could be ...

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**News**

**2 new results for Nuclear Regulatory Commission**

**US commission: Japan's nuclear plants not stable**

WCSH-TV

By Oren Dorell More than a month after a massive earthquake and tsunami hit Japan, crippling four nuclear power reactors, the situation at the power plants is still unstable, according to Gregory Jaczko, chairman of the US **Nuclear Regulatory Commission ...**

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**TMI drill shows positive results**

CBS 21

The TMI drill was watched over evaluators by the **Nuclear Regulatory Commission** and by the Federal Emergency Management Agency. On Friday they released their preliminary findings. Overall they felt that there was a good coordinated response effort. ...

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**Q&A: Japan nuclear crisis**

04/12/11 01:54 PM, EDT

Japan raised the severity level of its nuclear crisis to the maximum level seven on Tuesday, putting the Fukushima Daiichi power plant disaster on a par with the Chernobyl accident in 1986.

**FULL STORY**

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**News**

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[Ed Markey blasts \*\*nuclear\*\* watchdog](#)

Boston Herald

Edward Markey, D-Mass., is questioning the response of the **Nuclear Regulatory Commission** to the ongoing nuclear crisis in Japan, including claims that the agency is keeping important information about potential safety issues secret. ...

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**News**

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**"Post-Fukushima" Nuclear Report Due on Chernobyl Anniversary**

Suite101.com

The Fukushima Daiichi nuclear plant in Japan suffered a partial meltdown following a March 11, 2011 earthquake and tsunami. Radiation build-up around the plant prompted the US **Nuclear Regulatory Commission (NRC)** to warn all Americans within 50 miles of ...

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## News

2 new results for **Nuclear Regulatory Commission**

### [Prairie Island makes improvements](#)

Republican Eagle

Prairie Island nuclear plant is operating safely and has made improvements, though there are still some areas of concern, US **Nuclear Regulatory Commission** officials said Thursday. Prairie Island nuclear plant is operating safely and has made ...

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### [New York City's Deadly Game of \*\*Nuclear\*\* Roulette](#)

Forbes (blog)

A month before the 9.0 magnitude earthquake in Japan triggered the crisis at the Fukushima nuclear power reactors, New York Attorney General Eric Schneiderman sued the federal **Nuclear Regulatory Commission (NRC)** for approving a regulation that would ...

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**News**

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[Two \*\*nuclear\*\* power plants within 50 miles of RI](#)

Providence Journal

Harold Denton, a retired official at the US **Nuclear Regulatory Commission** who led the response to the partial meltdown at Pennsylvania's Three Mile Island in 1979, said the disaster in Japan demonstrates that nuclear plants must have plenty of back-up ...

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**News**

**2 new results for Nuclear Regulatory Commission**

[Progress Energy emerges as one of most troubled \*\*nuclear\*\* plant operators in US](#)  
Winston-Salem Journal

The **Nuclear Regulatory Commission** is widely expected to impose stricter safety standards in the wake of the Japanese crisis. The changes would make nuclear plants more costly to operate in this country. Progress executives acknowledge they are facing ...

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[Japan crisis raises doubts about \*\*nuclear\*\* fuels plant at SRS](#)

Greenville News

Environmental groups opposed to the MOX factory at SRS likely will use the accident to request more studies from the US **Nuclear Regulatory Commission**, which must license the plant and the use of the fuel, an official with one of the groups said. ...

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**News**

**1** new result for **Nuclear Regulatory Commission**

[Plan Set for Crippled Japanese \*\*Nuclear\*\* Plant](#)

New York Times

Experts from the United States **Nuclear Regulatory Commission** have been in Japan advising Tokyo Electric and the government. In the days after the crisis began, the **NRC** said that radiation levels at the Daiichi plant were higher than those reported by ...

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**News**

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**Nuclear** disaster: Who's at risk in York County the day after an event?

York Daily Record

York, PA - Despite the crisis that has unfolded at the Fukushima Dai-ichi Nuclear Power Station in Japan, the US **Nuclear Regulatory Commission** will continue to mandate that the emergency planning zone around a plant will hold to 10 miles, said Darrell ...

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## News

5 new results for **Nuclear Regulatory Commission**

### US **nuclear** regulator a policeman or salesman?

CNET

by Reuters The **Nuclear Regulatory Commission** exists to police, not promote, the domestic nuclear industry--but diplomatic cables show that it is sometimes used as a sales tool to help push American technology to foreign governments. ...

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[CNET](#)

### Committee to review whether proximity to **nuclear** power plants boosts cancer risk

Superior Telegram

A national committee looking at cancer risks near nuclear power plants will hold a public meeting in the Midwest today. The **Nuclear Regulatory Commission (NRC)** recently asked the National Academy of Sciences to look at the possibility that living near ...

[See all stories on this topic »](#)

### Entergy Sues To Keep Vermont **Nuclear** Plant Running

Wall Street Journal

The complaint, filed in US District Court, escalates a dispute between state officials and the second-largest US nuclear-power company over the future of the 39-year-old reactor. Entergy has won approval from the US **Nuclear Regulatory Commission** to ...

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### Alexander visits Tennessee **nuclear** plant, says US plants are safe

Chattanooga Times Free Press

by Pam Sohn Victor McCree, and Bill Ostendorff of the **Nuclear Regulatory Commission (NRC)** along with Sen. Lamar Alexander (R-Tenn.) and TVA's COO Bill McCollum, from left, visit the Watts Bar nuclear plant to discuss reactor and nuclear material safety ...

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[Chattanooga  
Times Free  
Press](#)

### What about that 50-mile zone around the **nuclear** power accident in Japan?

The Keene Sentinel

Less than a week after the March 11 tsunami hit Japan, causing the ongoing crisis at the Fukushima nuclear power plant, the US **Nuclear Regulatory Commission** recommended: "Under the guidelines for public safety that would be used in the United States ...

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**News**

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[More than 100 people protest Diablo Canyon \*\*Nuclear\*\* Power Plant](#)

KSBY San Luis Obispo News

A local activist group hit the beach Saturday, demanding the **Nuclear Regulatory Commission** suspend the licensing operations for all 104 nuclear power plants in the US until it has better studied the Fukushima crisis. The group Mothers for Peace hosted ...

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**News**

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**Nuclear industry will learn from Japan**

Greenville News

That's true for existing plants and the next generation of plants that are being proposed and licensed; and it speaks well of the US nuclear industry and the agency that oversees it. The

**Nuclear Regulatory Commission** and the companies that operate ...

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[NRG Energy Provides Clarity on \*\*Nuclear\*\* Project: No More Money](#)

GigaOm

The design work for the project had already essentially been halted, as NRG Energy waited for a review of the industry by the **Nuclear Regulatory Commission (NRC)** in the wake of the incident at the Fukushima reactors in Japan. The **NRC** is reviewing all ...

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**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 ...

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[Christian Science Monitor](#)

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

...

eNews Park Forest

TAKOMA PARK, MD--(ENEWSPPF)--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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**News**

**1** new result for **Nuclear Regulatory Commission**

**[NRC says US nuclear plants can withstand earthquakes, tornadoes, hurricanes ...](#)**

Mid-Hudson News

WASHINGTON – The **Nuclear Regulatory Commission** says US nuclear reactors are designed to withstand natural events, including earthquakes, tornadoes, hurricanes and floods, "based on the specific site where the reactor is located, without loss of ...

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**News**

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[Should Radiation from Japan Scuttle Spring Break in Hawaii? A Mom Agonizes](#)  
TIME

Bananas are a mainstay in my household and will continue to be, but I will never look at them the same now that I know, thanks to the US **Nuclear Regulatory Commission (NRC)** , that they, along with brazil nuts, "contain higher levels of radiation than ...

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[Situation at Fukushima \*\*nuclear\*\* complex not to affect Armenia's energy policy](#)

Information-Analytic Agency NEWS.am

Armenian authorities do not intend to give up their energy programs and the situation at Japan 's nuclear power plant will not affect Armenia 's energy policy, Chairman of the State **Nuclear Regulatory Commission** Ashot Martirosyan told reporters on

  
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**News**

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[Senator calls for new step in \*\*nuclear\*\* relicensing](#)

Reuters

The **Nuclear Regulatory Commission** is scrutinizing the United States' 104 plants after an earthquake and tsunami wrecked Japan's Fukushima Daiichi nuclear plant in March. Under existing rules that cover their relicensing, it does not need to reassess ...

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[VA \*\*Nuclear\*\* Power Plant Recovers from Tornado](#)

WTVR

The weekend storm that produced deadly tornadoes over parts of North Carolina and Virginia knocked out electricity to two nuclear units at Dominion Virginia Power's Surry Power Station near Newport News. The US **Nuclear Regulatory Commission** is no ...

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